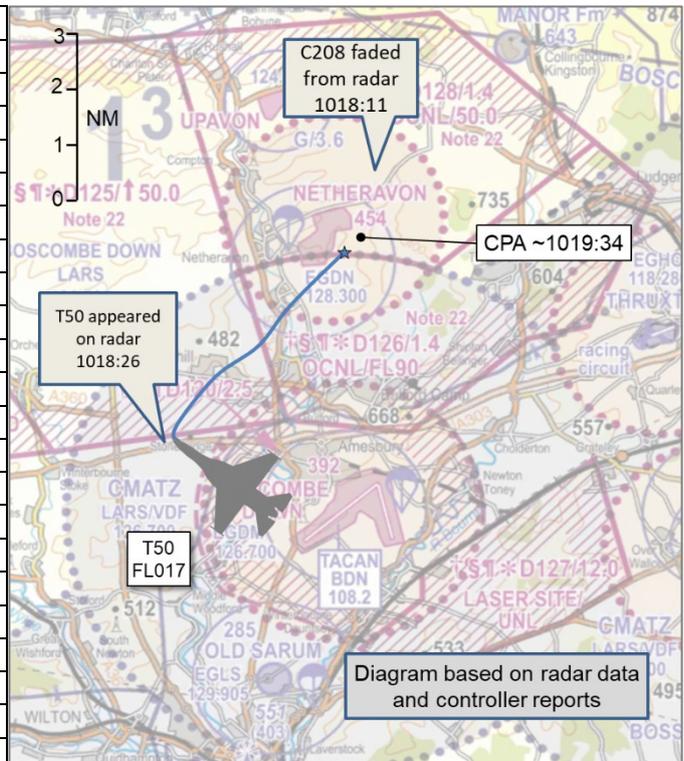


## **AIRPROX REPORT No 2022128**

Date: 04 Jul 2022 Time: 1019Z Position: 5113N 00145W Location: IVO Boscombe Down

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	T50	C208
Operator	Foreign Mil	Civ FW
Airspace	RA(T)	RA(T)
Class	G	G
Rules	VFR	VFR
Service	ACS	Basic
Provider	Boscombe Down	Boscombe Down
Altitude/FL	NK	NK
Transponder	A, C, S	A, C
<b>Reported</b>		
Colours	Black, Yellow	Blue, White
Lighting	Strobes, Nav	Beacon, Strobe
Conditions	VMC	VMC
Visibility	NR	>10km
Altitude/FL	NR	NK
Altimeter	QNH (1022hPa)	QFE
Heading	NR	NK
Speed	NR	NK
ACAS/TAS	Unknown	Not fitted
<b>Separation at CPA</b>		
Reported	Not Seen	Not Seen
Recorded	NK	



**THE BOSCOMBE SUPERVISOR** reports they were the Supervisor in the Approach Control Room (ACR) at the time of the incident, there was also a Supervisor in the Visual Control Room (VCR) that they were liaising with due to the display practises that were being conducted. An Aeronautical Information Circular M 055/2022 had been published on 30 Jun 22 by NATS and the CAA, describing the Restriction of Flying Regulations at MOD Boscombe Down. At 0920 the Display Team leader called for start for the formation. At this time they started their liaison with various local agencies informing them the Restricted Airspace (Temporary) (RA(T)), 5NM radius up to 10500ft AMSL, was becoming active at 0940 for the display practise to start at 0950. These external agencies were: Old Sarum, Salisbury Operations (SAL OPS) and Thruxton. Due to no direct communication with Netheravon DZ, a short time later they asked SAL OPS if they could inform them. At the time [C208 C/S] was working Boscombe Zone on VHF and the pilot was advised of the RA(T) being active, to manoeuvre to the north and to remain outside the RA(T). At 0950 the display team took-off with the lead aircraft squawking 2601 and commenced the display practise. Part way through the display the controllers in the ACR noticed that [C208 C/S] was manoeuvring to the south towards the RA(T), climbing, and a call was made on the Boscombe Zone frequency issuing a warning, but there was no response from the pilot. They also informed the VCR Supervisor. Further attempts to raise the pilot were made without success by the Zone controller while the ACR Supervisor called SAL OPS to pass the message to the pilot and to get the pilot to call on the Zone frequency. The pilot subsequently called and was informed they were inside the RA(T) and to move north and remain clear. At the time the aircraft was 1NM inside the northern portion of the RA(T) climbing and indicating FL041 on Mode C with no display aircraft in the immediate vicinity. Once clear of the airspace the pilot remained to the north and was instructed to report 1min to drop. The pilot asked how long the restriction was going to remain in place and was informed until 1030. At this point the pilot asked if they could descend back in to Netheravon to land and would remain on the ground until the display was complete. The aircraft at this time was 2NM east abeam Netheravon and was informed they could recover to land as long as they remained no further south than their current position and remained outside the RA(T). They continued to monitor the recovery of [C208 C/S] and observed the aircraft turn to the south a short time later. The Zone controller

immediately issued a further warning to the pilot, again without response. The Supervisor again urgently spoke to SAL OPS asking if they had the C208 on frequency. They said they did, to which the Supervisor responded that the C208 was to turn north immediately and to contact Boscombe Zone. At the time the C208 was inside the RA(T) and they observed one of the display aircraft in a right-hand turn in the northern portion of the RA(T) in close proximity to [C208 C/S] and they estimated the closest point of conflict was a quarter of a mile. With the lower display being practised and only the lead aircraft wearing a squawk they could not estimate the vertical separation at the time. The C208 was then observed to move north and landed at Netheravon without further incident.

On completion of the display all agencies were informed. The pilot of [C208 C/S] subsequently called ATC and spoke to the Deputy Senior Air Traffic Controller about the incident. Shortly thereafter the Chief Pilot called [the Supervisor] and they spoke about the incident and how to prevent a further incident on 5 Jul when there was to be a second display practice. They agreed that they would call them with timings for the 2nd practice and when the display team were on start. They would also endeavour to start their serials early and remain on the ground during the 2nd practice slot.

**THE BOSCOMBE VCR SUPERVISOR** reports they were in the VCR whilst the [T50 display team] display practise was taking place. The Netheravon paradrop aircraft was seen on the ATM getting airborne and penetrating the RA(T). They spoke to the ACR Supervisor who informed them that the aircraft had been instructed to hold to the north of the airspace. On looking at the ATM, it appeared to be complying with this instruction. They continued to watch the display and, when they looked at the ATM a few minutes later, the paradrop aircraft was back inside the RA(T) and heading south, the Mode C was above the expected level of the display aircraft, but was descending. One of the [T50 display team] was heading north, which one or exact height was unknown as only the lead was wearing a squawk, there was no opportunity for traffic to be called before it turned away. The [T50 display team] completed their display and landed without further incident.

**THE T50 RAF LIAISON OFFICER** reports that on completion of the [T50 display team]'s practise display at MoD Boscombe Down, ATC reported the near miss directly to the RAF Liaison Officer. On hearing this news, they discussed the infringement with the [T50 display team] during their post-flight debrief. The [T50 display team] had no comments to add about the matter, and were happy for the process of investigation to be carried out accordingly. At no time did the T50 pilots see the other aircraft.

**THE C208 PILOT** reports that they were conducting paradropping at Netheravon. They booked-out with Salisbury Ops prior to the first lift of the day and were given a danger area brief. The RA(T) was not mentioned, they also attempted to phone Boscombe ATC prior to take-off but there was no answer. The first lift took-off at 0830 Local and they contacted Boscombe Zone as soon as they got airborne and received a Basic Service, that lift landed at 0855. The second lift took-off at 1035L and again they contacted Boscombe Zone and received a Basic Service. The lift profile was 15 jumpers who were to leave the aircraft at 5000ft which would require three passes. The winds were from 290°. While setting up for the jump run, they positioned the aircraft on a heading of 290°. At this time they had Boscombe on box 2 but were speaking with DZ control to get a clearance to drop. Salisbury then told them to clear to the north immediately. They complied with Salisbury's instruction and then requested clearance from Boscombe to land. When descending for RW22, they carried out a left-hand circuit to avoid gliders at Upavon to the north. The circuit was within Netheravon ATZ however it may have been in the section of the RA(T) that overlapped with the ATZ.

The pilot assessed the risk of collision as 'High'.

**THE SALISBURY OPS OPERATOR** reports that SPTA Air Ops did not receive the notification of booked airspace and at no point did anyone consult or inform them about the booking. Subsequently, it was not on their daily publication of notified activity on SPTA which Netheravon receives. SPTA generally only manage airspace below 1400ft in D126 unless they NOTAM higher. The paradrop aircraft would usually only speak to Salisbury Ops on departure and arrival. Above 1400ft it is Class G airspace and pilots speak to Boscombe when above that level. A lack of communication with SPTA when the restriction was put in place meant that they were out of the loop. They were informed that [C208 C/S] (parachuting aircraft) was encroaching into the RA(T) and they attempted to call the pilot on

128.750MHz with no answer, as pilots do not routinely monitor [the Salisbury Ops] frequency above 1400ft AMSL. They managed to get a message to the pilot by other means and asked them to contact Boscombe.

## Factual Background

The weather at Boscombe Down was recorded as follows:

METAR EGDM 040920Z 29009KT 9999 SCT028 SCT030 16/10 Q1022 NOSIG RMK BLU BLU=  
 METAR EGDM 040950Z 30008KT 9999 SCT028 SCT032 17/11 Q1022 NOSIG RMK BLU BLU=

The following NOTAM was issued:

(J1951/22 NOTAMN

Q) EGTT/QRTCA/IV/BO /AW/000/105/5109N00145W006

A) EGDM B) 2207040700 C) 2207051700

D) 0700-1700

E) RESTRICTED AREA (TEMPORARY) AT BOSCOMBE DOWN, WILTSHIRE.

RESTRICTION OF FLYING REGULATIONS AREA ESTABLISHED UNDER ARTICLE 239 OF THE AIR NAVIGATION ORDER 2016. AIC M055/2022, WHICH INCLUDES A CHART, WILL REFER. NO ACFT IS TO FLY WI 5NM RADIUS 510920N 0014506W EXCEPT ACFT FLYING IN ACCORDANCE WITH A PERMISSION ISSUED BY THE ATC UNIT AT BOSCOMBE DOWN CTC ON TELEPHONE NUMBER 01980-663246 OR VIA 126.7MHZ OR 256.500MHZ. 2022-07-0047/AS6

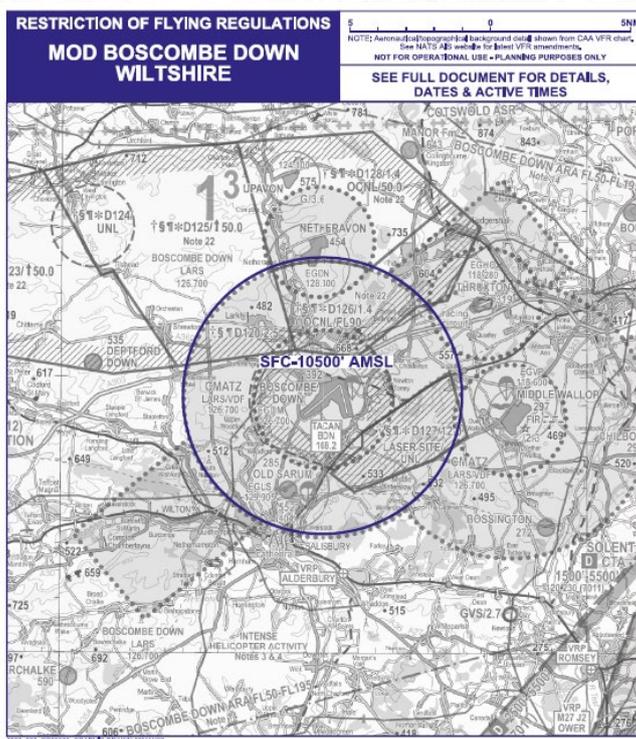
F) SFC G) 10500FT AMSL)

The following AIC was issued:

AERONAUTICAL INFORMATION CIRCULAR M 055/2022		
UNITED KINGDOM		
 UK Aeronautical Information Services NATS Swanwick Room 3115 Sopwith Way Southampton SO31 7AY aissupervisor@nats.co.uk http://www.nats.aero/ais Content - stephen.maxted@caa.co.uk	Date Of Publication 30 Jun 2022  Subject Airspace Restrictions	 Civil Aviation Authority

### RESTRICTION OF FLYING REGULATIONS: MOD BOSCOMBE DOWN, WILTSHIRE, 4-5 JULY 2022

- 1 The Republic of Korea Air Force Aerobatic Team, The Black Eagles, will conduct flying display rehearsals at MoD Boscombe Down, Wiltshire, on 4 and 5 July 2022. The Secretary of State for Transport has decided that it is necessary, to protect the display aircraft and other air traffic, to introduce Restriction of Flying Regulations under Article 239 of the Air Navigation Order 2016.
- 2 Subject to paragraph 3, daily between 0700 hours and 1700 hours on 4 and 5 July 2022, no aircraft is to fly below 10,500 FT AMSL within the area of a circle of 5 NM radius centred at 510920N 0014506W.
- 3 Paragraph 2 does not apply to any aircraft flying with the permission of the air traffic control unit at MOD Boscombe Down who may be contacted on 126.700 MHz or 256.500 MHz or via telephone number 01980-663246.
- 4 The times mentioned in paragraph 2 are Co-ordinated Universal Time (UTC), which is one hour behind British Summer Time (BST).
- 5 Details of Restricted Airspace feature in the daily AIS Information Line message 08085-354802 and 01489-887515 and will be included on the Pre-flight Information Bulletins (PIB) through the AIS Web site at [www.nats.aero/ais](http://www.nats.aero/ais).
- 6 The point of contact within the Civil Aviation Authority is Mr S J Maxted, Airspace Regulator, Safety and Airspace Regulation Group, on telephone number 03301-383216.



## Analysis and Investigation

### Military ATM

An Aeronautical Information Circular M 055/202 was published on 30 Jun 2022, detailing the RA(T) dimension and activation details in support of the T50Bs' activity.

Due to the display practises, Boscombe Down was operating with dual Supervisors, positioned in the Approach Control Room (ACR), and the Visual Control Room (VCR). Prior to the departure of the eight T50s, the Boscombe Down ACR Supervisor liaised with Old Sarum, Salisbury Ops (SAL OPS) and Thruxton regarding the RA(T) activation, with SAL OPS being requested to inform Netheravon Drop Zone due to no direct communication. The Supervisor confirmed the dimensions and the height of the RA(T) during the activation call. When the C208 pilot could not be contacted by the Boscombe Down LARS controller, the Boscombe Down ACR Supervisor contacted SAL OPS, who confirmed they were in communication with the C208 pilot. The Boscombe Down ACR Supervisor requested the C208 pilot contact the Boscombe Down LARS controller immediately and reverse course to the north as the C208 pilot was about to penetrate the Boscombe Down RA(T). A further conversation between SAL OPS and the Boscombe Down ACR Supervisor was required due to the C208 aircraft manoeuvring within the Boscombe Down RA(T) to request the C208 pilot to position further north. Final contact with Boscombe Down LARS was established when the C208 pilot had landed at Netheravon.

There was no report from the Boscombe Down ADC, however it is believed the formation of T50s was the only traffic on frequency at the time. No Traffic Information was passed to the T50 lead pilot regarding the C208 and the T50 display was not halted.

The Boscombe Down LARS controller had been in position for 30min and was providing a Basic Service to four aircraft which included the C208, with a self-assessed medium workload. The C208 requested a climb to FL150 and the Boscombe Down LARS controller made several attempts to notify the C208 pilot of the active RA(T), however the pilot did not acknowledge the information. The Boscombe Down LARS controller requested the C208 pilot to remain north, due to a display taking place in the Boscombe Down overhead, which was acknowledged. The Boscombe Down LARS controller observed the C208 transit towards the RA(T) and tried to raise contact with them with no success. The C208 pilot contacted Boscombe Down LARS controller, who then requested the C208

pilot operate no further south of their current position and requested a one-minute warning prior to their drop. The C208 pilot informed they were about to drop and requested permission to continue, however, they were instructed to hold the drop and maintain frequency due to the on-going T50 display. Due to the delay, the C208 pilot requested to land at Netheravon which was approved by the Boscombe Down LARS controller stipulating the requirement to manoeuvre no further south than their current position. As the C208 aircraft descended, it appeared to alter its course to the south, subsequently penetrating the RA(T). The Boscombe Down LARS controller again made several attempts to contact the C208 pilot, however, was unsuccessful.

Figures 1 - 4 show the positions of the C208 and lead T50 at relevant times during the Airprox. The screenshots are taken from a radar replay using the NATS radars which are not utilised by the Boscombe Down controllers, therefore, may not be a true representation of the picture available to them.

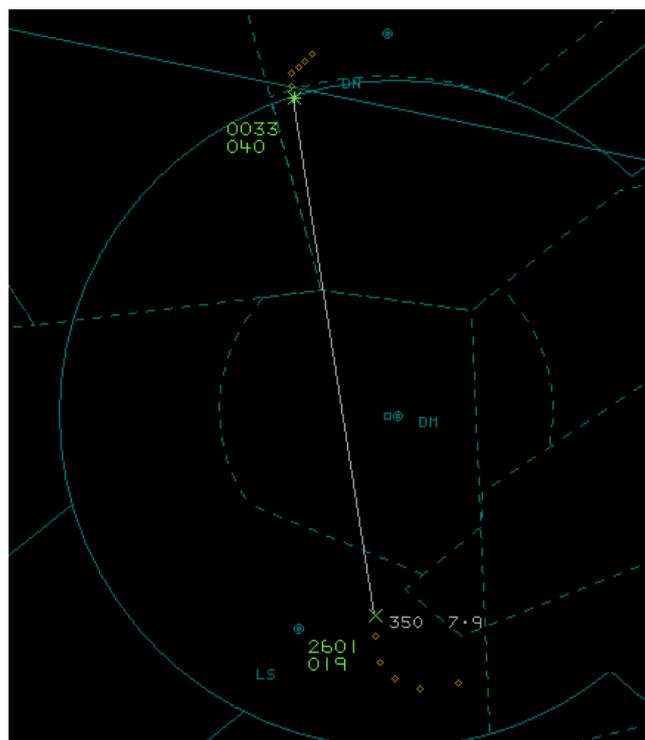


Figure 1:  
1015:06 C208 enters Boscombe Down RA(T).

The C208, squawking 0033, 6min 42sec after being informed, entered Boscombe Down RA(T). No Traffic Information was passed to either the C208 pilot or the T50 lead pilot. Separation was measured as 7.9NM and 2100ft from lead T50 aircraft squawking 2601. No other aircraft from the formation were visible.

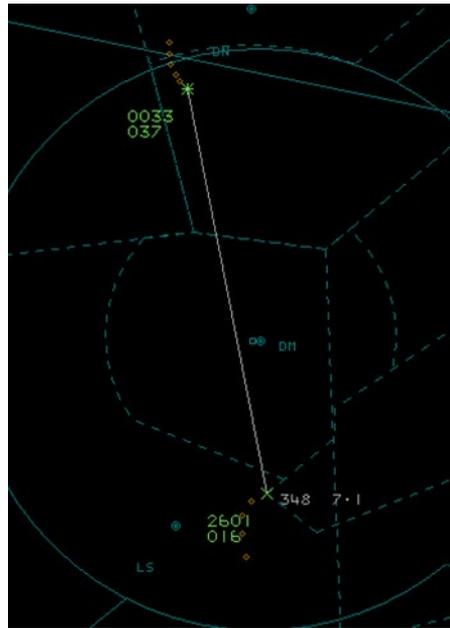


Figure 2:  
1015:20 last known separation between C208 aircraft and lead T50 aircraft.

Figure 2 is the last known separation between the C208 and lead T50. Separation was measured at 7.1NM and 2100ft. No other aircraft from the formation were visible. No transmissions were made to the C208 pilot by the Boscombe Down LARS controller.

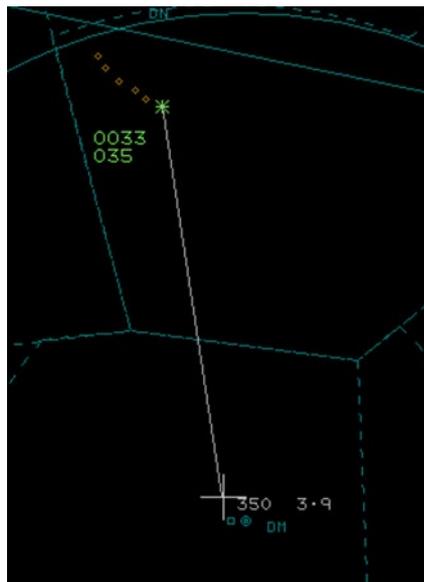


Figure 3:  
1015:30 C208 distance from Boscombe Down Aerodrome Reference Point (ARP)  
N51 09.20 W001 45.06.

By Figure 3, the T50 formation was no longer visible on radar. The C208 continued to transit south-easterly for 24sec upon entry of the Boscombe Down RA(T) prior to turning north. Separation from the ARP was 3.9NM at 3500ft. No transmissions were made to the C208 pilot by the Boscombe Down LARS controller.

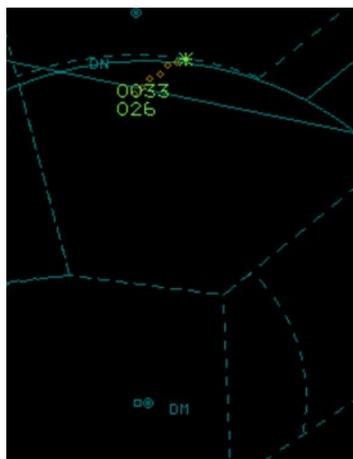


Figure 4:

1016:14 C208 departs the Boscombe Down RA(T).

It was a further 44sec before the C208 aircraft departed the Boscombe Down RA(T), having descended a further 900ft. No transmissions were made to the C208 pilot by the Boscombe Down LARS controller throughout this period.

## ANALYSIS

The decision by the unit to operate with two Supervisors during the display practise is seen as good practice which enabled the controllers to focus on core controlling, with the Supervisors able to support with administrative taskings. The Boscombe Down ACR Supervisor supported the LARS controller, conducting liaison calls with the VCR Supervisor and SAL OPS. The situation was hampered by the lack of direct communications with Netheravon, and it was felt that there were continued assumptions that SAL OPS were fully aware of the RA(T) activation timings and dimensions. The Boscombe Down VCR Supervisor's utilisation of the ATM ensured that they were able to monitor the RA(T) infringement and noted that although one of the T50s transited towards the C208 there was insufficient time to pass specific Traffic Information before the aircraft turned away from the confliction.

The Boscombe Down LARS controller did not appear to be working at capacity and was able to maintain good liaison with the ACR Supervisor. They tried to contact the C208 pilot on several occasions to provide information on the RA(T) with no success, therefore it was unclear whether the C208 pilot was fully aware of the RA(T) and the dimensions. At no time was the C208 pilot provided with Traffic Information despite there being suitable time to do so, however, it is uncertain as to whether the C208 pilot would have received any given information.

Although it was noted by the Boscombe Down VCR Supervisor that there was insufficient time to pass specific Traffic Information to the T50 pilot, general Traffic Information could have been passed to the lead T50 pilot when the C208 first encroached the RA(T) which could have been updated. This would have given some situational awareness which could have been updated as the situation developed. It is possible that the Aerodrome controller was liaising with the Duty Pilot, however, due to lack of an Aerodrome controller report it could not be confirmed.

## UKAB Secretariat

The T50 and C208 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.<sup>1</sup> Information on the rules and regulations pertaining to flying within a RA(T) are contained within UKAIP Pt2 En-route ENR1.1 General rules section 5.1 (Airspace restrictions).

<sup>1</sup> (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

## Boscombe Down Occurrence Investigation

The following information was provided by Netheravon:

The [C208] pilot attempted three times to contact Boscombe ATC by phone prior to take-off for the first lift of the day but there was no answer, they then contacted them on 126.700MHz once airborne but was not informed of the RA(T) or the display team activity.

The incident occurred on the second parachuting lift which took off at 0935. The pilot was in receipt of a Basic Service and again does not recall any mention of the RA(T) or instruction to remain clear. The pilot was communicating with DZ control on 128.800MHz while Boscombe ATC was trying to contact them. Salisbury then relayed the instruction to clear the RA(T) however, as the pilot had not been briefed by either Boscombe or Salisbury about the RA(T), was unaware of the dimensions of the restricted area. When cleared to descend, they then carried out a left-hand circuit for RW22 which took them into the RA(T). They were within the Netheravon ATZ, believing they did not need any special clearance for that descent.

The display aircraft passed through the Netheravon ATZ toward the end of their display along the northern edge of the RA(T). It appeared from the ground that they were in fact further north than expected, possibly flying directly through the centre of the parachute landing area.

Statement from Netheravon Ops:

[It] can [be] confirmed that STANOPS followed the SOPs and good working practices for this department, and on Friday the 1st July 22, collated, processed and distributed the relevant NOTAMS and local information (LFA 1A & Netheravon Brief sheet for 4th July). This included the BD Restricted Area No Fly within 5NM of BD Airfield. This information, along with a copy of the SPTA Airspace Allocation sheet for the 4th July was displayed on the noticeboard in the corridor outside STANOPS office, additionally, for outside normal hours, it was displayed on the window of this office, mainly for Flying Club members.

As is the normal practice as a 'belt and braces' safety measure, these sheets were faxed to the Army Adventurous Training Air Wing (Netheravon) and Army Parachuting Association (APA). The APA fax failed to pick up (as has been the case for the past month), so ops emailed these to the APA Sec, timed at 1440A Fri 1st July 22. In addition, the relevant AIC Mauve 055/22 was available in STANOPS for further information if required.

## Summary

An Airprox was reported when a T50 and a C208 flew into proximity in the vicinity of Boscombe Down at approximately 1019Z on Monday 4<sup>th</sup> July 2022. Both pilots were operating under VFR in VMC, the T50 pilot was in receipt of an ACS from Boscombe Down and the C208 pilot was in receipt of a Basic Service also from Boscombe Down.

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

Information available consisted of reports from the C208 pilot and on behalf of the T50 pilot, radar photographs/video recordings and reports from the air traffic controllers involved. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first discussed the actions of the T50 pilots, they had been practising their display at Boscombe Down and a RA(T) had been put in place to protect them. They had not received any Traffic Information from Boscombe ATC and so would have had no knowledge that the C208 had been in the vicinity (**CF9**) and it was reported that they had not been visual with it. Members agreed that the T50 pilots could have expected to be operating within a protected environment and therefore could have done little more in the circumstances.

Turning to the actions of the C208 pilot, members were uncertain whether the C208 pilot had no knowledge about the RA(T), or knew it had been active but had thought that it did not affect their operation at Netheravon; they believed it was the latter due to the pilot reporting that they had tried to contact Boscombe ATC that morning by telephone. However, they also agreed that it was for the pilot to ensure they had been fully briefed on all available NOTAMs prior to flight and it appeared that the information had been available to view at Netheravon (**CF8**). Without the correct information about the RA(T), the C208 pilot appeared to have believed that they could continue with their normal operations and paradrop, when in fact their route took them into the RA(T) which encompassed part of the Netheravon ATZ (**CF5, CF6**). Members were aware that the gliding site at Upavon, together with the prevailing wind, meant that the C208 pilot needed to route to the south of Netheravon in order to make their approach and remain out of the way of Upavon, but thought that the pilot probably could have articulated that to the controller. Furthermore, the RT transcript provided showed that the Boscombe Zone controller had tried to call the C208 pilot on a number of occasions to warn them about the RA(T), and these calls had not been answered by the C208 pilot. Whilst members were aware that the C208 pilot had probably been listening to the DZ controller, still they thought the pilot should have ensured that they had the capacity (or had another crew member to assist) to actively listen to ATC (**CF7**). Although the C208 pilot would have had generic information that the T50s were displaying at Boscombe, they were not given specific Traffic Information by ATC (**CF9**) and therefore had not assimilated the presence of the T50 formation (**CF10**).

The Board then discussed the See-and-Avoid barrier and agreed that it was not possible to assess whether this barrier had been effective or not, because it was not known how close together the two aircraft had become, or whether any of the pilots had been visual with the other aircraft at all.

Turning to the role of ATC, the Board was disappointed by the lack of information from the Boscombe investigation. A report from the Tower controller had not been provided and so it was not known at what point they had been made aware of the C208. There had been the additional VCR Supervisor and so members thought that there had probably been a discussion about whether the display should have been aborted and whether Traffic Information could have been passed to the T50 pilots or not. Although it would have been a last resort to stop the display practise, and members were aware that the controllers would have been loath to step-in on the frequency and disrupt the display, that Traffic information had not been passed probably meant that the team in the VCR had not been overly concerned by the proximity of the C208. By way of contrast, the controllers in the ACR had only had Mode C information on the lead T50, and therefore they had only had generic information; they had not known the heights of the other elements of the formation (**CF4**). However, despite being concerned enough to report the incident as an Airprox, Traffic Information on the T50s had not been passed to the C208 pilot (**CF1, CF2**) and members wondered whether the controller had become fixated on managing the C208's exit out of the RA(T) to the detriment of passing Traffic Information to the pilot (**CF3**).

Members then discussed the organisational issues which led to the Airprox. The Boscombe investigation did not detail exactly what the process had been when instigating the RA(T). It appeared from statements from SAL OPS and from Netheravon that they had not been involved at the planning phase and had been taken by surprise at the extent by which the RA(T) affected their operations. Members were also dismayed to learn that Boscombe Down ATC did not have a direct line to Netheravon, or in fact have a telephone number readily available, which seemed unusual given the close proximity of the two airfields.

UKAB Secretariat Note: It has since been confirmed that Boscombe ATC does have a direct line to Netheravon, but it had been unserviceable on this day.

When assessing the risk of collision, the Board considered the radar replay together with the reports from the pilots and ATC. The radar replay had not shown the two aircraft in close proximity and the C208 pilot had not reported whether they were visual or not. The only report of any proximity had been from the ACR Supervisor who reported 0.25NM horizontally, but no height information had been available to the controllers on the T50s. Given this lack of any firm assessment of separation, members discussed whether they could assess the risk of collision or not. In the end it was agreed that they could

not make a reliable assessment and they reluctantly agreed that the risk was unassessable; Risk Category D.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

	2022128			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
<b>• Regulations, Processes, Procedures and Compliance</b>				
1	Human Factors	• ATM Regulatory Deviation	An event involving a deviation from an Air Traffic Management Regulation.	Regulations and/or procedures not fully complied with
<b>• Situational Awareness and Action</b>				
2	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
3	Human Factors	• Conflict Resolution-Inadequate	An event involving the inadequate provision of conflict resolution	
4	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
<b>Flight Elements</b>				
<b>• Regulations, Processes, Procedures and Compliance</b>				
5	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with
<b>• Tactical Planning and Execution</b>				
6	Human Factors	• Airspace Infringement	An event involving an infringement / unauthorized penetration of a controlled or restricted airspace.	E.g. ATZ or Controlled Airspace
7	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
8	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
9	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
10	Human Factors	• Understanding/ Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information

Degree of Risk: D.

### Safety Barrier Assessment<sup>2</sup>

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

#### **Ground Elements:**

**Regulations, Processes, Procedures and Compliance** were assessed as **partially effective** because the Boscombe Down controllers did not pass Traffic Information to either the C208 or the T50 pilots.

**Situational Awareness of the Confliction and Action** were assessed as **ineffective** because the Boscombe Down controllers focused on getting the C208 to clear the RA(T) and did not pass Traffic Information, nor stop the flying display. The LARS controller only had generic situational awareness

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

about the T50s because they could only see the height information on the lead T50 aircraft and did not know the height and position of the other T50s in the formation.

**Flight Elements:**

**Regulations, Processes, Procedures and Compliance** were assessed as **ineffective** because the C208 pilot entered the RA(T) without the permission of the controlling authority.

**Tactical Planning and Execution** was assessed as **ineffective** because the C208 pilot was not aware of the full extent of the RA(T) and that it extended over the Netheravon ATZ.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the C208 pilot had generic situational awareness about the T50s, but was not given specific information on their position and the T50 pilots were not aware of the presence of the C208.

**Electronic Warning System Operation and Compliance** were assessed as **unassessable** because it was not known whether the T50s were fitted with a CWS.

**See and Avoid** were assessed as **unassessable** because it was not known whether either pilot had seen the other aircraft.

