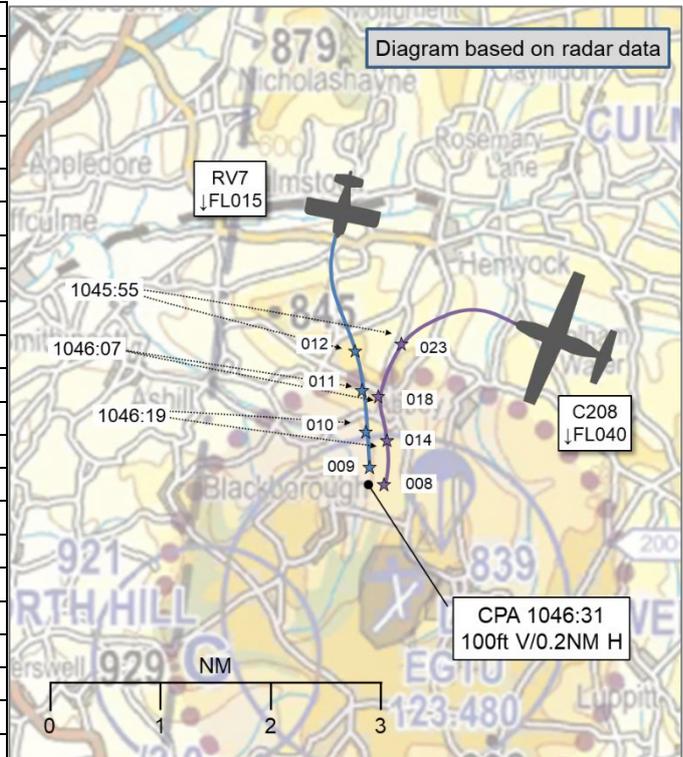


AIRPROX REPORT No 2021063

Date: 31 May 2021 Time: 1046Z Position: 5052N 00314W Location: Dunkeswell

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Vans RV7	C208
Operator	Civ FW	Civ Para
Airspace	Dunkeswell ATZ	Dunkeswell ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Dunkeswell	Dunkeswell
Altitude/FL	FL009	FL008
Transponder	A, C, S	A, C, S
Reported		
Colours	Red, White	White, Blue
Lighting	Strobes	Nav, Landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	NK	800ft
Altimeter	QFE	QFE
Heading	170°	NK
Speed	80kt	90kts
ACAS/TAS	Unknown	Unknown
Alert	Unknown	None
Separation		
Reported	0ft V/100m H	NK
Recorded	<100ft V/0.2NM H	



THE RV7 PILOT reports they had obtained PPR for Dunkeswell by telephone. They tuned into Dunkeswell Radio frequency, and were given the QFE and that the runway in use was RW17. They were approaching from the north, so favoured a straight in approach to RW17, but heard that an aircraft was on a left downwind for a full-stop landing. Approximately 5NM north of the airfield they made a clockwise orbit to allow the downwind aircraft to join final, then joined final after that aircraft. They informed Dunkeswell Radio of their position and intentions. Once established on long final they heard a second aircraft (which they later understood to be a training C152) call downwind so they again called to confirm their position on final (they were now on a 2-3NM final). Whilst focussing ahead on the displaced threshold for RW17, the passenger tapped the pilot and pointed to a parachute aircraft which was higher than and behind their port quarter. At this point someone on the radio said words to the effect of "you could cause an accident joining the circuit like that". The parachute plane then swooped steeply down to below the RV7, whilst still off to their port side. Their impression was that it had dived to gain speed to pull in front of them on what was now a short final for RW17. The RV7 pilot moved the aircraft to the right of the extended centreline, intending to go round, and called on the radio to declare their intentions. They were maybe only 500m from the threshold when the aircraft cut in front. They completed a go around, continued with a left-hand circuit and landed normally. They taxied to the pumps for fuel where a C152 taxied up, the pilot commented on the behaviour of the pilot in the parachute aircraft and asked whether the RV7 pilot intended to file an Airprox report. The parachute aircraft had loaded up with parachutists again and was taxiing for another departure before they got out of the RV7 after taxiing to the pump. The pilot opined that, had the passenger not seen this aircraft descending from above on their port side, there would have been a high degree of risk of a collision as their attention was focussed completely ahead on the displaced threshold as they were on short final to land. They did not recall hearing a radio transmission from the parachute aircraft but were aware that parachuting was taking place at Dunkeswell that day.

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

THE C152 PILOT (witness) reports that they were teaching early student circuits, on left-base they were aware of radio calls from a para plane stating they were No2, but there was one aircraft touching down, one on less than a mile final, and their aircraft on base. The C152 has roof windows so they saw the para plane making a high curving descending turn onto a base-to-final, they were not at all convinced that they had been seen and were very sure the RV on short final was not seen at all. Their student was unaware of the para aircraft and so was taken by surprise. The Instructor made an RT call to the Vans to ask whether they had seen the C208 as it looked like it was about to collide, they stated nervously 'yes going around', they also extended the C152 through final and went around, avoiding the parachutes. The Instructor told the para pilot on the RT that that their actions were not acceptable.

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

THE C208 PILOT reports that after dropping the parachutists they were descending to land, they had reported on a left base for RW17 at the same time as traffic reported long finals RW17 (the other pilot had reported 5NM out shortly before, so they believed them to be some distance away). They asked the traffic on finals if they had their aircraft visual and for their distance. They replied they had it visual and that the C208 could go ahead and land. There was one other aircraft in the circuit, a flying lesson, they were looking for that traffic and did not know its position. They believed that the instructor of that lesson instigated this Airprox.

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

DUNKESWELL operates an Air/Ground radio service using members of the flying club. There were no witnesses to this incident on the ground, although the club was later informed about the event.

Factual Background

The weather at Exeter was recorded as follows:

METAR EGTE 311020Z 17010KT CAVOK 18/11 Q1020=

Analysis and Investigation

UKAB Secretariat

Analysis of the NATS radar replay showed both aircraft in the Dunkeswell circuit, the radar screenshots show height in flight-level and the 7000 squawks of aircraft in the circuit are converted to 'V' (VFR). At 1045:39 (Figure 1) the RV7 was on a long straight-in approach at FL014. The C208, squawking 0033 (para-drop), had circled, descended from FL150, and by Figure 1 was passing through FL34.

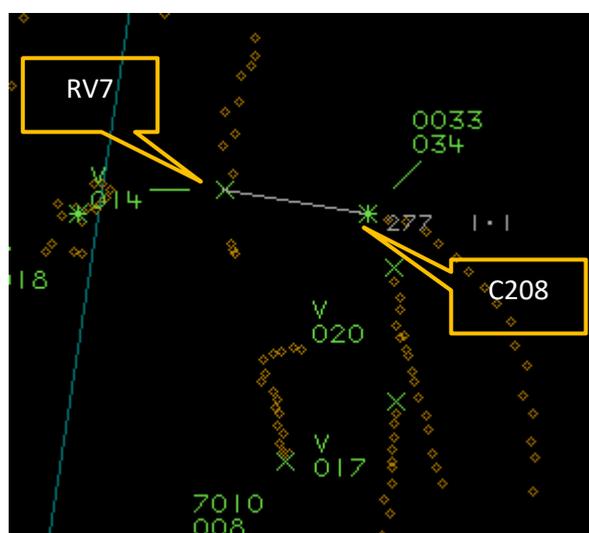


Figure 1:1045:39

At 1045:51 (Figure 2) the C208 was passing through FL025, 0.6NM from the RV7 which was at FL012. The C208 continued to turn onto a final position, still above the RV7, until by 1046:15 (Figure 4) it was ahead of the RV7 and 400ft above. The C152, who's instructor provided the witness statement, was on a base leg, also indicating FL015. The C208 continued to maintain 0.2NM ahead of the RV7, indicated 200ft above the RV7 the radar sweep before CPA, and had descended through the level of the RV7 at 1046:31 (Figure 5 - CPA) when the C208 indicated 100ft below the RV7 and the two aircraft were 0.2NM apart.

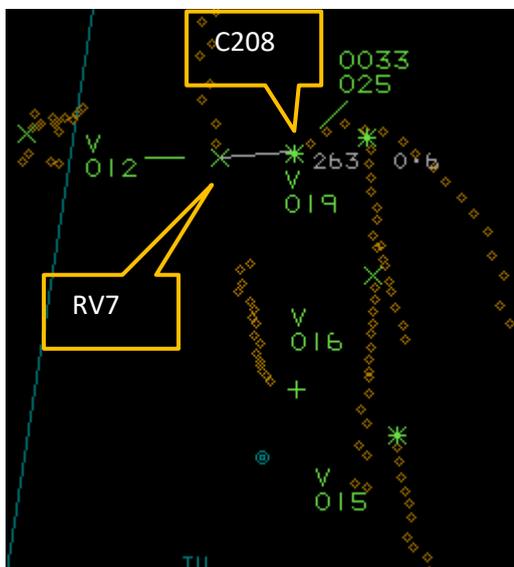


Figure 2: 10:45:51



Figure 3: 10:46:03

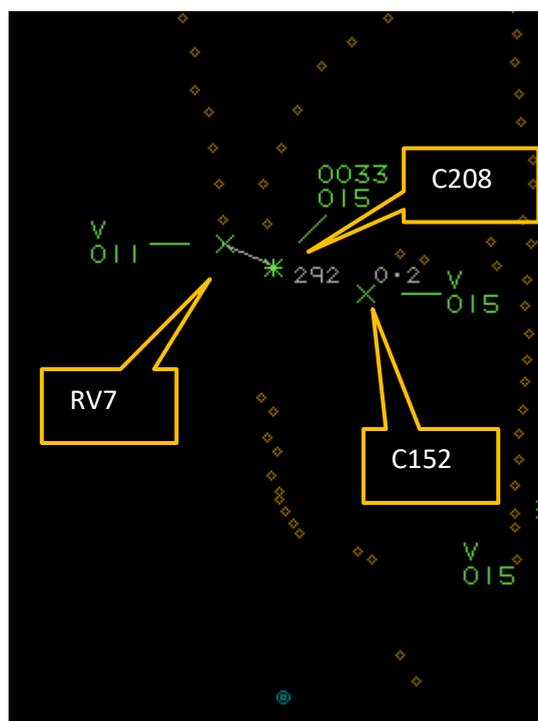


Figure 4: 10:46:15

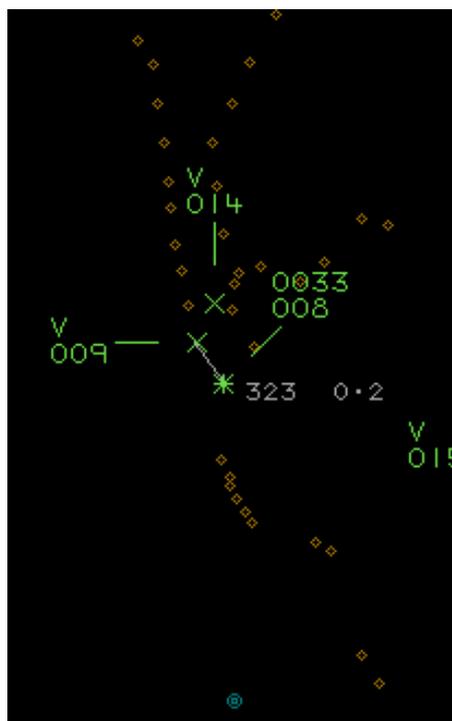


Figure 5: CPA, 10:46:31

The RV7 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.¹ An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in

¹ (UK) SERA.3205 Proximity.

operation.² When two or more heavier-than-air aircraft are approaching an aerodrome or an operating site for the purpose of landing, aircraft at the higher level shall give way to aircraft at the lower level, but the latter shall not take advantage of this rule to cut in front of another which is in the final stages of an approach to land, or to overtake that aircraft.³

Summary

An Airprox was reported when an RV7 and a C208 flew into proximity whilst on final for RW17 at Dunkeswell, at 1046Z on Monday 31st May 2021. Both pilots were operating under VFR in VMC and both were in receipt of a AGCS from Dunkeswell.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers involved and reports from the appropriate operating authorities. 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first looked at the actions of the RV7 pilot. Noting that Dunkeswell was complex in its operations, with parachuting as well as fixed wing operations, and that the radar indicated that it was very busy that day, they commented that in fact the AIP entry for Dunkeswell states that straight-in approaches are not permitted. By joining straight-in, the RV7 pilot made it difficult for himself to fit into the circuit and they opined that a downwind join may have been more appropriate (**CF1, CF2**). Once on final, the RV7 pilot reported that they had no knowledge about the C208 making their steep approach (**CF5**), and whilst no-one would have expected an aircraft to appear from overhead when on finals, noting that the RV7 has good all round visibility, some members wondered whether the RV7 pilot should have heard the C208 pilot's finals call and been cued to look for it. As it was, they saw the C208 late (**CF6**) but were able to execute a go-around.

Turning to the C208 pilot, members were aware that it was normal practise to make such steep descending turns to final after para-dropping from high-level in order to ensure a quick turn-around of the parachutists. However, they thought that on this occasion, with the busy circuit and traffic on finals and base-leg, the decision to conduct the approach and cut in front of the RV7 meant that they had not integrated with the circuit traffic, effectively cutting in front of the RV7 to make their own approach (**CF1, CF3, CF4**). Although visual with the RV7 throughout, members agreed that the C208 pilot had flown close enough to make the other pilot feel uncomfortable with the separation and that had the other pilot manoeuvred unpredictably, the C208 pilot would have had little room to avoid (**CF7**).

Looking briefly at the wider aspects of the Airprox, members wondered whether there was sufficient oversight of the visual circuit from the ground. Dunkeswell did not operate with a dedicated AGO despite the complex nature of the operations. Members noted that that throughout the September Board meeting there were a number of Airprox in visual circuits, often with a lack of airmanship at the root and they wondered whether in general this was down to the lack of flying practise due to the lock-down. However, members commended the C152 pilot for their part in alerting both pilots to the situation.

In determining the risk, members took into consideration both pilots' assessment of the incident and the radar separation. Some members thought that because the C208 pilot was visual with the RV7 there had been no risk of collision. However, others felt that because the RV7 pilot was not aware of the C208 approaching from behind and descending through their level, the separation was close enough that had

² (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

³ (UK) SERA. 3210 right of Way 4 (i) Landing.

they made an unexpected manoeuvre the outcome could have been different. In the end the latter view prevailed and the Board agreed that safety had not been assured, Risk Category B (CF8).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021063			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Regulations, Processes, Procedures and Compliance				
1	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
• Tactical Planning and Execution				
2	Organisational	• Flight Planning Information Sources	An event involving incorrect flight planning sources during the preparation for a flight.	
3	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
• Situational Awareness of the Conflicting Aircraft and Action				
4	Human Factors	• Incomplete Action	Events involving flight crew performing a task but then not fully completing that task or action that they were intending to carry out	Pilot did not sufficiently integrate with the other aircraft despite Situational Awareness
5	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
• See and Avoid				
6	Human Factors	• Identification/Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
7	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern
• Outcome Events				
8	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: B.

Safety Barrier Assessment⁴

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

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the C208 pilot did not integrate with the traffic in the visual circuit and the RV7 pilot made a straight-in approach.

⁴ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Tactical Planning and Execution was assessed as **partially effective** because the C208 pilot did not confirm with or avoid the visual circuit traffic.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because both pilots had only generic situational awareness about the other.

See and Avoid were assessed as **partially effective** because the C208 flew close enough to cause the RV7 pilot concern and it was a late sighting by the RV7 pilot.

Airprox Barrier Assessment: 2021063		Outside Controlled Airspace						
Barrier	Provision	Application	Effectiveness					
			Barrier Weighting					
			0%	5%	10%	15%	20%	
Ground Element	Regulations, Processes, Procedures and Compliance	●	●					
	Manning & Equipment	●	●					
	Situational Awareness of the Conflicting Aircraft & Action	●	●					
	Electronic Warning System Operation and Compliance	●	●					
Flight Element	Regulations, Processes, Procedures and Compliance	●	●					
	Tactical Planning and Execution	●	●					
	Situational Awareness of the Conflicting Aircraft & Action	●	●					
	Electronic Warning System Operation and Compliance	●	●					
	See & Avoid	●	●					
Key:			Full	Partial	None	Not Present/Not Assessable	Not Used	
Provision	●	●	●	●	●	●	●	
Application	●	●	●	●	●	●	●	
Effectiveness	■	■	■	■	■	■	■	