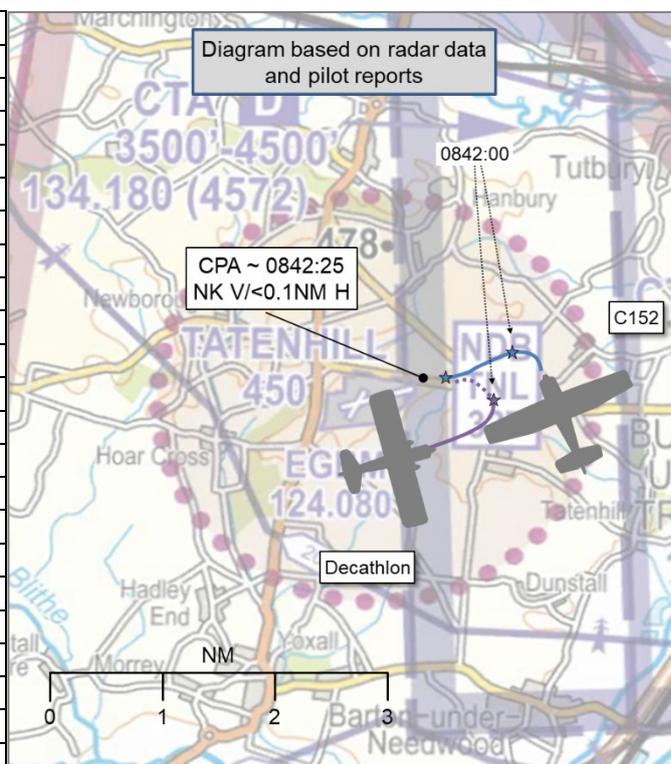


AIRPROX REPORT No 2021208

Date: 10 Oct 2021 Time: 0842Z Position: 5249N 00144W Location: Tatenhill

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	Decathlon
Operator	Civ FW	Civ FW
Airspace	Tatenhill ATZ	Tatenhill ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Tatenhill	Tatenhill
Altitude/FL	NK	NK
Transponder	A, C	A ¹
Reported		
Colours	White	Blue, Green
Lighting	Beacon	None
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	150ft	300ft
Altimeter	QFE (1015hPa)	QNH
Heading	260°	260°
Speed	65kt	65kt
ACAS/TAS	Not fitted	Not fitted
Separation at CPA		
Reported	0ft V/5m H	0ft V/50-100ft H
Recorded	NK V/ <0.1NM H	



THE C152 PILOT reports that they were commanding a dual flight exercise, demonstrating and patterning the first circuit in a planned circuit detail for their student. They were aware of several aircraft in the circuit and were confident that they were number one on the approach to RW26. There was quite a lot of RT chatter so their final call was late because they were waiting for a break in transmissions. [Decathlon C/S] called final before them, so when they transmitted their call, they emphasised that they were No1 on final for situational awareness. On completion of their call another (unknown) station called "caution, too close on final" or words to that affect. A moment later the Decathlon overtook them and missed their starboard wingtip by a matter of feet. They had no idea the aircraft was so close and the startle factor was high. The Decathlon then proceeded to swerve in front and align with the runway, as if this was an intentional manoeuvre to overtake. The C152 pilot went around and turned right towards the dead side so that the student, seated in the left seat, could monitor the Decathlon. The Decathlon landed. They requested via RT that they speak with the Decathlon pilot. By the time they landed the other pilot had left the airfield apparently stating (to the office) that they were in a hurry to drive to Cornwall. There was a significant risk of collision and the pilot opined that it was nothing short of miraculous that an accident did not occur.

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

THE DECATHLON PILOT reports that they don't live close to the airfield, but fly the Decathlon when they are visiting relatives in the area. They have been training with the British Aerobatics Academy this year and have flown 15 hours on the Extra 200. This was an aerobatic flight with a friend prior to returning home. They had the Decathlon booked from 9.00 till 10.30 for 2 flights. They flew out to Blithfield reservoir climbed to 4000ft and flew around 45min of aerobatics before heading back to the field. They were aware that the circuit was active but flying the route from Blithfield back to Tatenhill was downwind and it looked clear ahead, so they re-joined downwind at 1000ft and left-hand for RW26. They were having intercom problems with the passenger from just after take-off and were really unable

¹ The pilot reported the transponder as 'Off' but Mode A was detected on the NATS radars.

to hear them. They recalled approaching the field and flying downwind, they did not see (or hear) any traffic ahead, and they continued to left-base and final, making calls at each point. They were on final approach, very low at this point and probably very near the road when they heard a radio call of 'too close', but no other detail. They were unsure what was happening, but ahead was clear and the runway was empty so they landed. As they landed a Cessna 152 flew overhead and went around. There were calls that there had been a near miss, and that the pilot of the Cessna 152 would catch up on the ground. The pilot noted that they were shaken, but not sure of what had happened, so went straight to the tower and asked them. They said that they knew something has happened but admitted that they were both looking the other way, they had heard the "too close" call and turned round to see 2 aircraft close together on final but weren't able to offer anything more. The pilot went to the office and asked if anyone there has seen or knew anything, the answer was no. They hung around till probably 10.15-10.30 for the Cessna 152 to land, but they were still flying. They went back to the office and said that they had to leave, but wrote their name and number down for the Cessna 152 pilot to call so they could discuss it. From their perspective, as they flew back to the airfield from Blithfield it looked clear ahead. The cloud base was low, and whilst there were blue holes and 4000ft was achievable at Blithfield cloudbase was much lower at the airfield, around 1200-1500ft. They made their calls and had acknowledgement to land, and considered that they had flown a normal circuit with a usual sideslip approach for the crosswind component that day. They were unsure how a Cessna 152 got from being ahead to being behind, did they fly an extended downwind, or long final approach? They did not fly again that morning, although they had time booked still and had planned to, they were shaken by this and struggled to understand what had happened and how, not helped by nobody being able to give view of it. When reflecting what could be done differently the pilot opined that better comms would have helped, both radio and intercom, as the intercom problems definitely added to workload and ensuring the passenger was ok and ready for landing etc required turn of the head and shout backwards as they could barely hear each other. They could have/should have/will in future fly a standard overhead join – they didn't this time because they could see (or so they thought) a long way downwind. The Tower looking towards landing aircraft to alert – although not their responsibility - but would have helped and alerted to this earlier. They did wonder afterwards why no calls from tower were made i.e. 2 aircraft on final, but then they didn't hear the Cessna 152 either and 2 aircraft on finals was not picked up by either aircraft or tower [they believed]. A follow up call from the Cessna 152 pilot/Tatenhill Aviation the same day would have been helpful to discuss this promptly. When reflecting on lessons learnt – check, check, and check again visually and over the radio for traffic and their position, particularly on days where the vis isn't perfect. They hoped that sharing these experiences could make it safer for everyone.

THE TATENHILL AGO reports that they were on duty as Tatenhill AGO, there were two AGOs in the tower at the time. A Cessna 152 with a student pilot and an instructor were doing circuits on RW26 and the Decathlon joined downwind for the same runway. They saw the C152 on final and the Decathlon downwind, noting that the latter's circuit was closer to the runway than normal. They could not recall what calls were made at that time, but assumed that the Decathlon was aware of the C152 and would follow it around the circuit. They were briefly distracted by traffic wanting to backtrack from the intersection, and when they looked back towards final approach, they saw two high-wing aircraft very close together. They did not issue a warning because they could not distinguish which aircraft was which, and they were afraid that it might provoke the lower aircraft to pull up into the path of the higher one. At this point, they heard a transmission from the C152 saying something like "my, that was close" and it appeared that the Decathlon had overtaken the C152, who subsequently went around. They asked the C152 pilot if they wanted to declare an Airprox and they said something like "no, we'll discuss it on the ground".

Factual Background

The weather at Birmingham was recorded as follows:

METAR EGBB 100820Z 34008KT 9999 BKN012 13/11 Q1031=

Analysis and Investigation

UKAB Secretariat

Tatenhill does not record its RT and so a transcript was not available. Blithfield reservoir is situated 5NM west of Tatenhill; analysis of the NATS radars showed the Decathlon operating in the vicinity of the reservoir at 0838, squawking 7000 but with no Mode C. By 0839 the Decathlon had set course for returning to Tatenhill, the C152 was downwind at this point, with other circuit traffic ahead (Figure 1). By 0840:59 (Figure 2) the Decathlon was established downwind, although on a tighter circuit than the one flown by other circuit traffic and the C152 had turned onto a base leg.

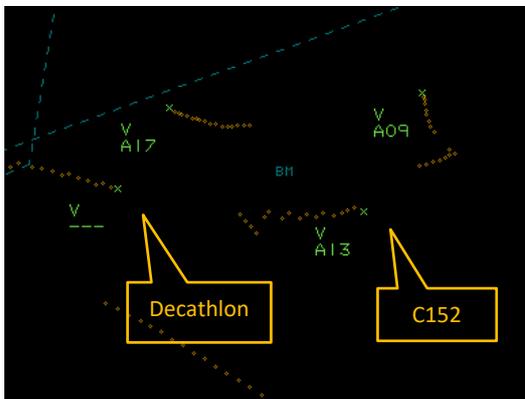


Figure 1 - 0839:19

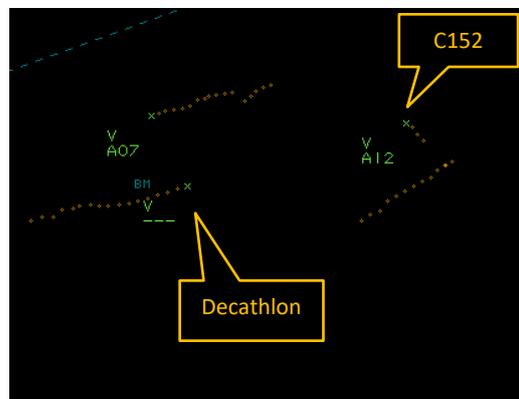


Figure 2 - 0840:59

At 0842:00 (Figure 3) the C152 was established on final and begun their decent, the Decathlon was late downwind. The radar was then subjected to some jitter and the Decathlon did not display on the radar until at 0842:15 (Figure 4) when it reappeared 0.1NM away from the C152, which was indicating 700ft.

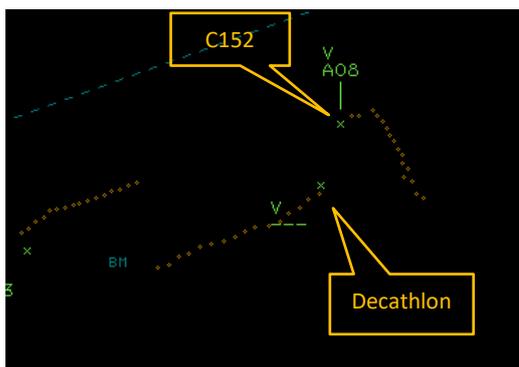


Figure 3 - 0842:00

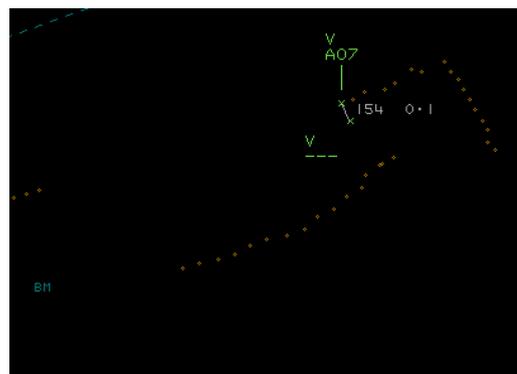


Figure 4 - 0842:15

The C152 crossed ahead of the Decathlon and both aircraft continued on finals in close proximity, although the radar returns again suffered from jitter (Figure 6) and the SSR labels appeared to switch positions, until the C152 could be seen going around (Figure 7).

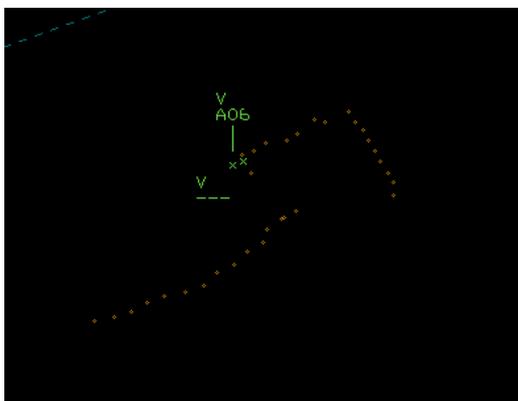


Figure 5 - 0842:19

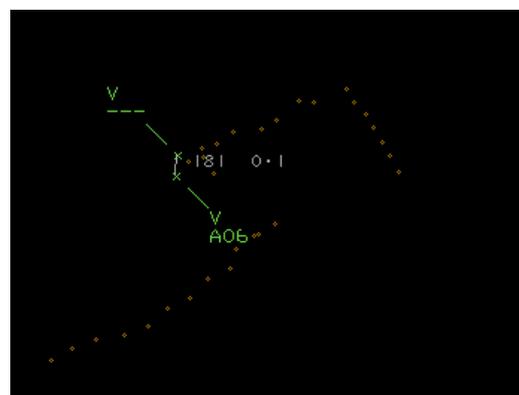


Figure 6 - 0842:25

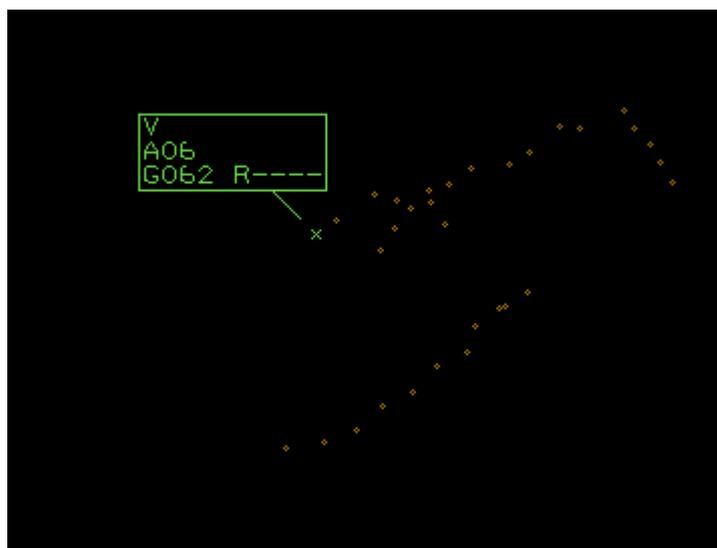


Figure 7 - C152 go around 0842:36

The C152 and Decathlon pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.² 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 operation.³

Summary

An Airprox was reported when a C152 and a Decathlon flew into proximity in the Tatenhill visual circuit at 0842Z on Sunday 10th October 2021. Both pilots were operating under VFR in VMC, both were in receipt of a ACGS from Tatenhill.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the AFISO 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 looked at the actions of the C152 pilot. They were established on final and were not expecting to see another aircraft at that point (**CF5**). Some members wondered whether the pilot could have done more to make it obvious that they were on final when they heard the Decathlon pilot also call final, but acknowledged that when teaching visual circuits there was a lot of in-cockpit communication required and that the instructor may not have had the time to do so and clearly did not realise that the Decathlon was so close. They did not see the Decathlon until it overtook them from behind, making it effectively a non-sighting (**CF6**).

Turning to the Decathlon pilot, members noted that the pilot had reported that the internal comms were poor and causing a distraction, and they also wondered whether this had a negative effect on the radio as well. Certainly, the pilot reported that they were unaware of the C152 ahead of them in the circuit and did not hear the C152 pilot call final (**CF4**). Members stressed the need to ensure all equipment was serviceable prior to flight, because, as happened here, what might seem like a minor unserviceability could quickly become a distraction. They noted that the Decathlon pilot had joined downwind, and flown a tight visual circuit in comparison to the other circuit traffic. Members opined that whilst joining downwind was the quicker option from the direction that the Decathlon had been operating, it did not allow the pilot time to fully assimilate the position of the circuit traffic prior to joining the circuit (**CF3**). They noted that it was not the only Airprox presented to the Board this month in which

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

pilots had eschewed joining through the overhead and caused themselves problems integrating with established circuit traffic⁴. In joining as they did, the Decathlon pilot did not have visual contact with the C152 ahead in the circuit, which was compounded by the poor radio comms. The Decathlon pilot then conducted a much tighter visual circuit with a continuous turn onto final, putting them in direct conflict with the C152 on long final (**CF3**). Members reminded pilots that when turning onto base-leg they should always conduct a scan up the approach path to check for traffic, whether the Decathlon pilot did and simply did not see the C152 was not known, but they had no situational awareness that the C152 was also on final (**CF5**) and did not integrate with it (**CF1**). The Decathlon pilot's report made it clear that they were unsure how the event occurred, even after landing, although both aircraft were in close lateral proximity for some time on final, they did not see the C152 prior to the warning over the RT, after which the C152 pilot went around (**CF6**).

The Board briefly looked at the actions of the AFISO. They were told that the AFISO was positioned in a visual control tower at Tatenhill, so it was unfortunate that they had not seen the situation develop. However, AFISOs are not required to sequence airborne traffic and controlling members agreed with the AFISO's assessment that if not sure which aircraft was below the other, a call could have compounded the situation. That being said, members also noted that someone in the circuit had made a generic call which probably first alerted the pilots to the situation.

When assessing the risk, members considered the reports from both pilots and the AFISO, together with the radar screenshots. It was unfortunate that the radar contacts had become unstable at the final stages of the Airprox, probably due to the height of the aircraft, and that the Mode C on the Decathlon was not displaying so that the exact separation could not be determined. However, all of the reports were in agreement and given that neither pilot had been visual, or were aware that the other aircraft was in close proximity, members agreed that they described a situation where providence had played a major part in events and separation had been reduced to the bare minimum. Risk Category A (**CF7**).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021208			
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	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
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	• Monitoring of Communications	Events involving flight crew that did not appropriately monitor communications	
5	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
• See and Avoid				
6	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
• Outcome Events				

⁴ See also Airprox 2021199

7	Contextual	<ul style="list-style-type: none"> Near Airborne Collision with Aircraft 	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	
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Degree of Risk: A

Safety Barrier Assessment⁵

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

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **not used** because the AGO was not required to sequence the aircraft.

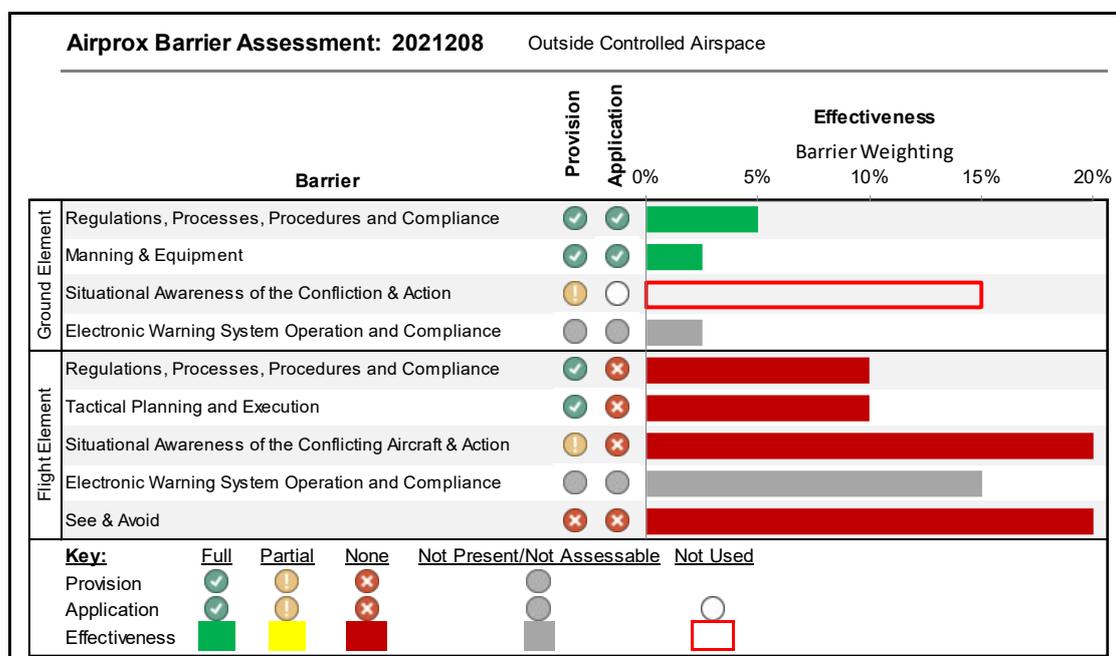
Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the Decathlon pilot was required to integrate with the C152 established in the circuit.

Tactical Planning and Execution was assessed as **partially effective** because the Decathlon pilot did not conform with the pattern of traffic formed by the C152.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any prior situational awareness that the other was in the immediate vicinity.

See and Avoid were assessed as **ineffective** because neither pilot saw the other aircraft until after the Airprox.



⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).