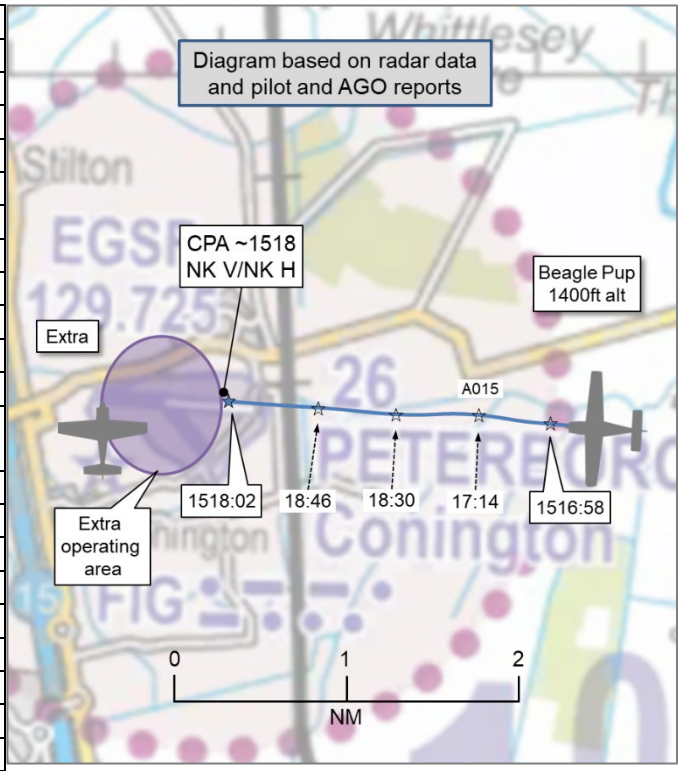
AIRPROX REPORT No 2022203

Date: 02 Sep 2022 Time: 1518Z Position: 5228N 00015W Location: Conington Airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Beagle Pup	Extra
Operator	Civ FW	Civ FW
Airspace	Conington ATZ	Conington ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS[1]
Provider	Conington Radio	Conington Radio
Altitude/FL	1400ft	NK
Transponder	A, C, S	None[2]
Reported		
Colours	White, Green	Red, White
Lighting	Strobe, Beacon Landing/Taxy	Strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1500ft	NR
Altimeter	NK (NK hPa)	QFE (NK hPa)
Heading	280°	NK
Speed	83kt	NK
ACAS/TAS	Not Fitted	Not fitted
Separation at CPA		
Reported	Not seen	0ft V/500m H
Recorded	NK V/NK H	



THE CONINGTON AIR/GROUND RADIO OPERATOR reports that there was an aerobatics competition in progress overhead Peterborough Conington airfield. NOTAMs and details had been issued, and other visitors were compliant. A prospective visitor [the Beagle Pup pilot] rang ahead to gather more information and advice and, like all others, was suggested to join straight in or on a right base, maximum 500ft in the ATZ. [Once en-route, the Beagle Pup pilot] called from far out saying roughly they *"weren't sure if they were overhead the correct field, we're overhead a runway somewhere, but SkyDemon says they're still 4NM away*". The Air/Ground radio operator passed airfield information, reminding them of the restrictions that day, and (if they recall correctly), suggested they report entering the ATZ. Shortly after, [the Beagle Pup pilot] called again saying they were almost overhead of somewhere else, and were still uncertain if it was the right place. The Air/Ground radio operator suggested [the Beagle Pup pilot] put their landing light on to aid visibility (it was not on at this point). When the light came on, it was immediately visible to all on the ground that the pilot was, at most, a mile from the field and flying straight down RW28. From the ground, the aircraft appeared much higher than 500ft and, either way, was clearly too high to now make a safe straight in approach (too steep a dive to the threshold). At the time, the aerobatic box was live with a competition aircraft [the Extra] in the middle of its routine and operating on a different competition frequency. Instead of turning around to remain to the east and make another approach, or even being at 2000ft to circle in the overhead whilst ascertaining the identity of the field before leaving and returning straight in, [the Beagle Pup pilot] just continued straight ahead down RW28, through the aerobatics box. [The Extra pilot] was mid-manoeuvre and seemed to have no visual contact with the infringing [sic] aircraft until almost too late - rolling out with very little distance on a converging course. [The Extra pilot] immediately broke upwards and to the right away from [the Beagle Pup], terminating their routine and immediately returning to land. Despite this, [the Beagle Pup pilot] simply continued straight on upwind until the end of RW28 as though they hadn't even seen [the Extra]. [The Beagle Pup pilot] eventually made a 'standard' (but not published

[1] The Extra pilot was also in communication with the British Aerobatic event coordinator.
[2] The pilot reported having a Mode S transponder however this was not detected by the NATS radar.

noise abatement) right-hand circuit, through crosswind/downwind/base and also landed. The pilot of [the Beagle Pup] was spoken to by both event and airfield management, before apologising to the pilot of [the Extra]. [The Beagle Pup pilot] later departed without incident and [the Extra pilot] continued to compete for the remainder of the weekend. The competition weekend continued without further incident.

The Air/Ground Radio operator perceived the severity of the incident as 'High'.

THE BEAGLE PUP PILOT reports that they called the airfield [in advance, by telephone, and were] told there was an aerobatics air show at Conington. [The Conington representative] said that they avoid accepting students [during these events] but that they could come, and asked for an estimated approach time[3]. [The Conington representative] said to join straight in, no overhead join, no circuit, and to watch out left, right, up and down. As [the Beagle Pup pilot] was at Ramsey, their last waypoint, they changed frequency to Conington Radio and [when they checked in, they noted that the Air/Ground radio operator had a strong accent]. [The Beagle Pup pilot] said [they were at] 4NM, not visual with the airfield, at 2000ft. They dropped power and descended to 1500ft at 2NM. They were asking where the airfield was as they were not visual but the Air/Ground operator was not answering their question. Then, in their 12 o'clock, [they saw] the airfield but no traffic at all. When the airfield was inside 1NM and they were at 1000ft, the Air/Ground operator told them to immediately descend to 500ft and turn right. They did a semi-circuit and aligned with RW28 and landed smoothly. After parking they went in to pay and the [Conington representative] said that they had delayed a take-off. They went to the pilot and apologised. [They recall that] everyone said "don't worry, no problem, all good". They later found out that an Airprox had been filed.

THE EXTRA PILOT reports that they were the captain and safety pilot of [the Extra] during the British Aerobatic Championships. [They had been] flying in the aerobatic box in the Conington overhead which was NOTAM'd as active. The Conington Air/Ground Radio operator had also told the Beagle pilot that the box was active. [They opine] that the Beagle pilot flew through the box unaware of the aerobatic competition. [The Beagle Pup pilot] approached [the Extra pilot] and apologised afterwards. There was no significant risk of collision.

The pilot assessed the risk of collision as 'None'.

THE AEROBATIC EVENT DIRECTOR reports that the joining aircraft pilot was unable to locate the airfield until they were overhead the main runway at approximately 1000ft when they were contacted by the tower [sic].

At this time, there was a competition flight just finishing and the joining aircraft pilot was able to perform their circuit pattern and land followed by the competition aircraft without event.

If there had been cause for concern there are established procedures in place for the chief judge to halt the competition flight and warn the competitor of any danger, but this was not employed as there was no perceived risk.

Factual Background

The weather at Cambridge was recorded as follows:

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METAR EGSC 021520Z 15007KT 120V180 9999 FEW045 26/11 Q1010
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[3] The Conington representative later informed UKAB that they have no recollection of the Beagle Pup pilot informing that they were a student.

Relevant NOTAM data:

EGSF (PETERBOROUGH / CONINGTON)

Q)EGTT/QWBLW/IV/M/AW/000/050/5228N00015W003
B)2209020930 C)2209041900
D)02 0930-1900, 03 04 0730-1900
E)AEROBATICS WI 2NM RADIUS 522805N 0001503W (PETERBOROUGH CONINGTON AD, CAMBRIDGESHIRE). ACFT MAY NOT BE ABLE TO COMPLY WITH RAC. AIC Y 028/2022 REFERS. FOR INFO 07885 363187. 2022-09-0012/AS2.
F)SFC G)5000FT AMSL

END.

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and the Beagle Pup was detected and identified using Mode S data. There were a number of intermittent primary only returns in the vicinity of the aerobatic box at Conington which, as it is not uncommon for radars to not consistently detect aircraft engaged in high energy manoeuvres, are likely to have been from the Extra. As such, the operating area of the Extra, as depicted on the diagram, is the area in which the primary-only returns were received.

The Beagle Pup and Extra pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.[4] If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.[5] If the incident geometry is considered as converging then the pilot which had the other aircraft to their right was required to give way.[6] 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.[7] When an aircraft carries a serviceable SSR transponder, the pilot shall operate the transponder at all times during flight, regardless of whether the aircraft is within or outside airspace where SSR is used for ATS purposes.[8]

Summary

An Airprox was reported when a Beagle Pup and an Extra flew into proximity at Conington Airfield at approximately 1518Z on Friday 2nd September 2022. Both pilots were operating under VFR in VMC, both pilots in receipt of an AGCS from Conington Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the Air/Ground Radio operator 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.

The Board first considered the actions of the Beagle Pup pilot and, noting that they had been a student, members had a discussion regarding whether it had been appropriate for the instructor to have authorised the flight to Conington during the aerobatics competition. Members appreciated that the

[4] (UK) SERA.3205 Proximity.
[5] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.
[6] (UK) SERA.3210 Right-of-way (c)(2) Converging.
[7] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.
[8] (UK) SERA.13001. Operation of an SSR transponder.

student had been told by a Conington representative that they would be accepted and that weather conditions had been favourable, however, agreement was reached that, given the unusual activity planned at Conington, and that aircraft there might not be able to comply with the rules of the air, it would have been prudent for the instructor have assigned another task to the student (**CF5**). The Board discussed that the pilot had had some difficulty in identifying Conington and they had been unsure of their position (**CF3**), and members were encouraged that they had asked the Conington AGO for assistance, however, it was agreed that, after becoming aware that they had not been in the correct place, the Beagle Pup pilot had not adapted their plan sufficiently (**CF4**). A GA pilot member stated that, when planning a flight, the route should continue all the way to destination and include the expected arrival, adding that if unsure of their position, pilots should consider orbiting in their current location to avoid inadvertently entering controlled airspace or other areas of activity. The Board was satisfied that the Beagle Pup pilot had been aware of the activity at Conington and had therefore had a generic awareness of the presence of the Extra (**CF6**) however, they had not become visual with it at any point (**CF7**).

Next, the Board considered the actions of the Extra pilot, agreeing that they had been aware that the Beagle Pup had been in the vicinity (**CF6**), however members were unable to determine at what point the Extra pilot had become visual with the Beagle Pup, and therefore the Board was unsure what action, if any, the pilot had taken to increase or maintain separation prior to CPA, meaning members were unable to assess the effectiveness of the see and avoid barrier.

The Board then turned its attention to the ground elements involved, and first discussed that the information provided by the British Aerobatics Association personnel had indicated that, in their view, the separation between the Beagle Pup and the Extra had been satisfactory. Considering the Conington staff, the Board wondered why they had granted PPR to a student when ordinarily they would not do so when an event such as this was underway (**CF1**). A civil controller member stated that in a controlled environment it would have been preferable for the Beagle pup to have been told to hold away from the airfield, however members agreed that an AGO does not have the ability to do this, leading the Board to conclude that the AGO had acted appropriately.

Finally, the Board considered the risk involved in this Airprox. Members discussed that both pilots had been aware of the presence of the other aircraft. The Board agreed that the Beagle Pup pilot had not become visual with the Extra and that it could not be determined whether the Extra pilot had visually acquired the Beagle Pup prior to the Airprox. However, the Board concluded that, due to the separation that had existed between the aircraft there had been no risk of collision but safety had been degraded. Consequently, the Board assigned a Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022203			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Regulations, Processes, Procedures and Compliance			
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
	• Situational Awareness and Action			
2	Human Factors	• Expectation/Assumption	Events involving an individual or a crew/ team acting on the basis of expectation or assumptions of a situation that is different from the reality	Concerned by the proximity of the aircraft
	Flight Elements			
	• Tactical Planning and Execution			
3	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution

4	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption
	• Situational Awareness of the Conflicting Aircraft and Action			
5	Human Factors	• Mentoring	Events involving the mentoring of an individual	
6	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			
7	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

Degree of Risk: C

Safety Barrier Assessment[9]

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 although the Conington representative stated that they do not usually allow student pilots to fly in to Conington during Aerobatic events, permission was granted on this occasion.

Situational Awareness of the Confliction and Action were assessed as **not used** because the Air Ground Operator could only forward information to the pilot which they had received from other pilots.

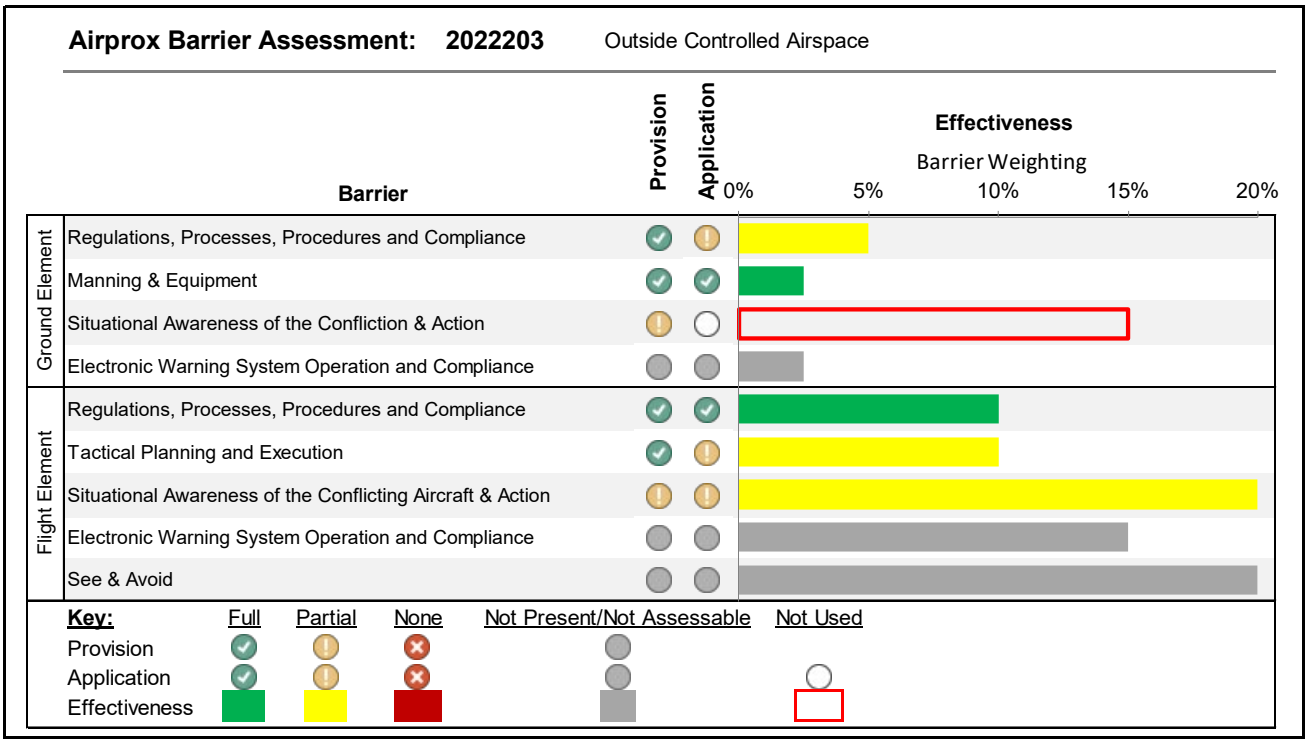
Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the Beagle Pup pilot had initially mis-identified the airfield and had then not adapted their plan sufficiently for locating and joining at Conington.

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

See and Avoid were un-assessable because, although the Beagle pup pilot had not seen the Extra, it could not be determined at what point the Extra pilot visually acquired the Beagle pup and so the Board could not ascertain whether this safety barrier had been in play or assess its effectiveness.

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


Airprox Barrier Assessment: 2022203 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 Confliction & 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