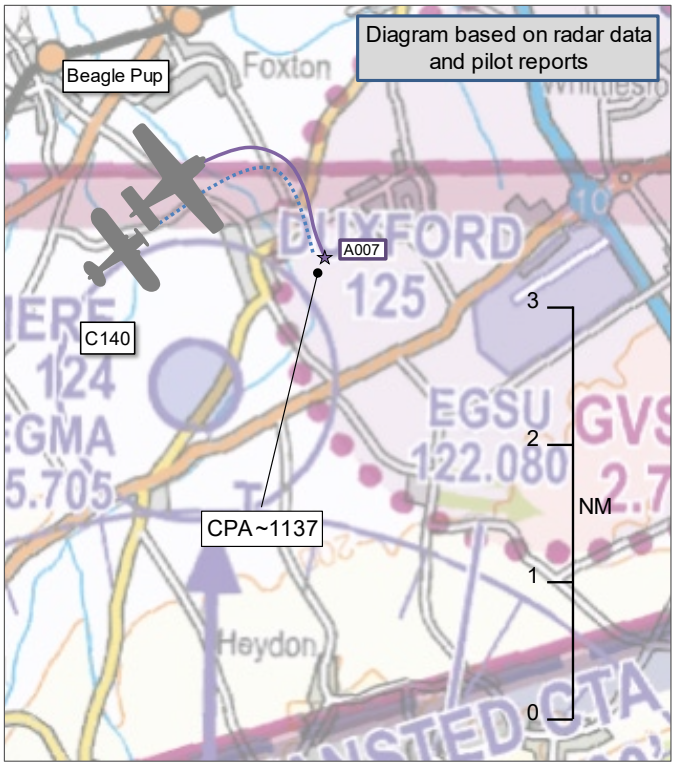
AIRPROX REPORT No 2025060

Date: 17 Apr 2025 Time: ~1137Z Position: 5205N 00005E Location: Fowlmere

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Cessna 140	Beagle Pup
Operator	Civ FW	Civ FW
Airspace	Duxford ATZ	Duxford ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Fowlmere	Fowlmere
Altitude/FL	NK	700ft
Transponder	Not fitted	A, C
Reported		
Colours	Silver	White, Blue
Lighting	Nil	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	500ft	300ft
Altimeter	QFE	QFE
Heading	160°	250°
Speed	57kt	65kt
ACAS/TAS	Not fitted	PilotAware
Alert	N/A	None
Separation at CPA		
Reported	0ft V/10-20m H	0ft V/100m H
Recorded	NK	



THE CESSNA 140 (C140) PILOT reports that they were in the circuit for RW25 at Fowlmere, practising flaps-up landings. [The Beagle Pup] had joined the circuit behind them. The C140 pilot flew the turn to base leg slightly tighter than expected. They were aware that the Beagle Pup was in the circuit behind them and were taken by surprise when they saw the aircraft overtake them from above and behind on a parallel course to their own as they were beginning to arrest their descent. They immediately called that they would go-around over the frequency. They delayed beginning the turn for the overhead leg until after they had crossed the extended 6 o'clock of the Beagle Pup to ensure that they could both see the other aircraft and also, in the event the other pilot initiated a go-around, they wouldn't be directly above the other aircraft, where the other pilot wouldn't be able to see them, and so that they wouldn't inadvertently end up inside [the Beagle Pup's] turn to the crosswind leg of the missed approach.

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

THE BEAGLE PUP PILOT reports that they set up a downwind join for Fowlmere from about 4NM NW of Royston, at which point they contacted Duxford Information and passed their details. They were given the QFE and active runway directions at Duxford and Fowlmere, and were asked to report changing frequency to Fowlmere Radio. They descended to a downwind join aiming rather to the north of the bird reserve and set the radio to monitor both frequencies. That was probably not a wise move because of the intense radio activity from Duxford, and at that stage they recalled hearing only one aircraft on Fowlmere's frequency. They were at the start of the downwind leg when, because of the continuous activity on the Duxford frequency, they gave up trying to let them know they were changing frequency to Fowlmere Radio, made the change, and made a downwind call. The last call they remember from the aircraft on Fowlmere's frequency was a 'final' call and shortly afterwards they saw an aircraft rolling out on RW25. Whilst still downwind they changed to just Fowlmere Radio. They turned base leg somewhat past (i.e. east of) Fowlmere village. They heard a downwind call from an aircraft and continued on to final turn at about 65kt, making a 'final runway 25' call. They were on final when their

passenger in the right-hand seat spotted an aircraft in their 4 o'clock. The pilot had a brief glance and saw it too, but it was passing behind and they resumed concentrating on the approach. They were rather disturbed that they hadn't seen the aircraft previously as it should have been visible in the front-right quarter earlier in their final approach. Just after landing, they recalled hearing a go-around call. They had no messages from the [CWS], but there were indications that it was not functioning correctly (no track file was saved). They briefly reported the incident to staff on the desk at Fowlmere, but no conclusions were drawn as they were unaware of any other aircraft in their circuit at the time.

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

Factual Background

The weather at Cambridge was recorded as follows:

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METAR EGSC 171120Z VRB03KT 9999 FEW030 15/04 Q1012=
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The following information appears on the Fowlmere website detailing the visual circuit information:

> Avoid overflying the local towns, the Bird Sanctuary and the noise sensitive area marked in the NE of the circuit.
> The circuit has been designed to keep aircraft noise to a minimum in the area.
> The circuit is always to the North of the field. RH for 25 and LH for 07.This avoids conflicts with circuit traffic at Duxford. They usually use circuits to the south of their field.
> Circuit altitude is 800ft (AGL) with a maximum altitude of 500ft inside Duxford ATZ (base and final leg).

Figure 1 – Fowlmere Visual Circuit diagram.

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The C140 could not be seen on the radar. An aircraft believed to be the Beagle Pup could be seen northwest of Fowlmere at 1900ft (radar QNH 1012hPa), this aircraft could not be identified via Mode S, nor did it appear on any ADS-B analyser tools, however, the profile matched that described by the Beagle Pup pilot.

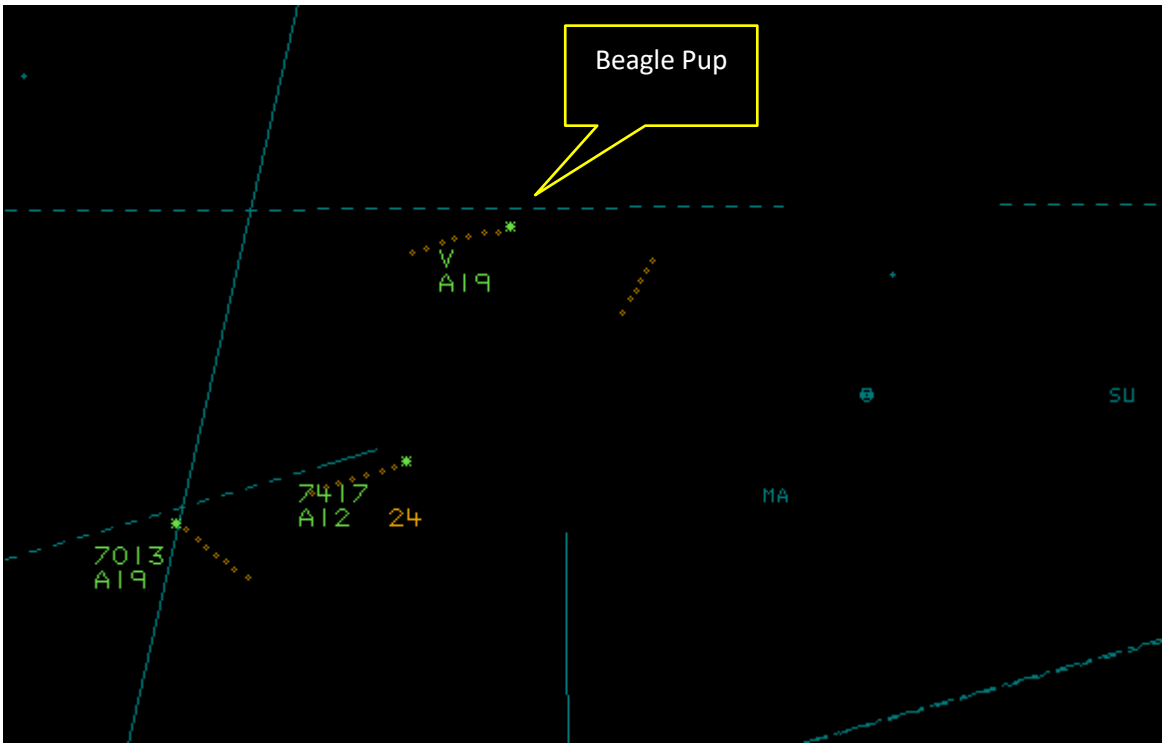


Figure 2 -1134:01

At 1134:38 (Figure 3) an intermittent primary-only track can be seen on the radar ahead of the Beagle Pup, this track lasted for only two radar sweeps before fading again, but potentially could be that of the C140.

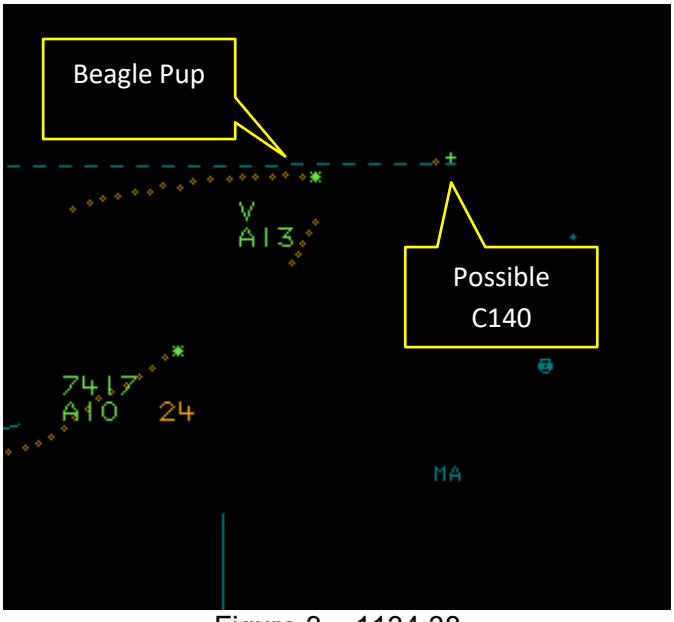


Figure 3 – 1134:38

The Beagle Pup continued onto a base leg and, at 1136:54, a primary-only contact re-appeared on radar in close proximity to the Beagle Pup, and it is likely that the Airprox occurred just before this point.

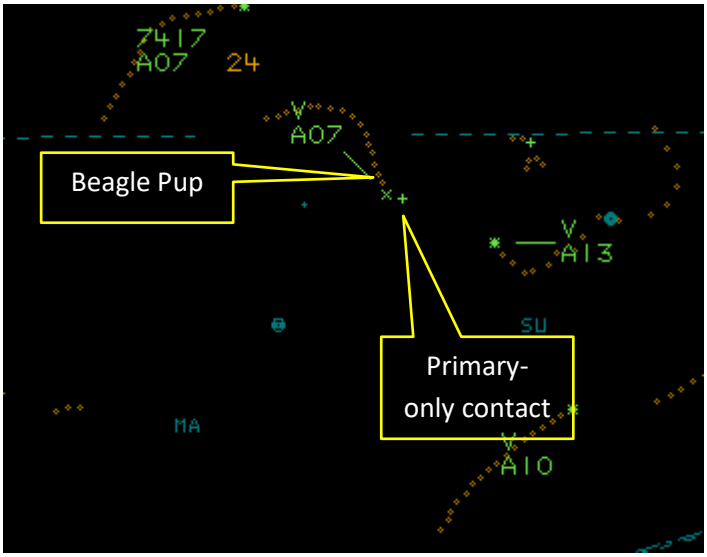


Figure 4 – 1136:58 approximate CPA

The C140 and Beagle Pup 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 operation.[2]

Summary

An Airprox was reported when a C140 and a Beagle Pup flew into proximity in the Fowlmere visual circuit at approximately 1137Z on Thursday 17th April 2025. Both pilots were operating under VFR in VMC, both in receipt of an AGCS from Fowlmere.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and radar photographs. 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 C140 pilot. They had been conducting circuits at Fowlmere, making calls as appropriate and had been aware that the Beagle Pup had joined the circuit behind them. The Board agreed that whilst the C140 pilot had received generic situational awareness that the Beagle Pup had been behind them from the RT (**CF6**), they could not have expected the other pilot to have overtaken them on base leg, nor could they have seen the other aircraft prior to it passing overhead (**CF8**, **CF9**). Whilst not a factor for this Airprox, some members opined that, although they understood that there was a beauty in flying a classic aircraft in its original condition, nevertheless, the C140 had no transponder and no EWS, making it difficult for other pilots, or controllers, to detect it electronically. Members therefore urged pilots of such aircraft to consider using some form of carry-on EWS featuring ADS-B to improve safety for all.

Turning to the actions of the Beagle Pup pilot, members first discussed the join conducted by the pilot. They noted that the pilot had called Duxford, as required by the Fowlmere/Duxford LOA, and had been asked to inform Duxford prior to switching to the Fowlmere frequency. Members with local knowledge of the two airfields told the Board that this was to ensure pilots were aware of the status of the Duxford circuit so that on the base leg of Fowlmere, which is within the Duxford ATZ, pilots were aware of any

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

potential traffic in the Duxford northern 'warbirds' circuit. The Beagle Pup pilot reported that the Duxford frequency had been very busy and they could not get their call in, which members opined should have been a warning to the Beagle Pup pilot that they needed to remain outside the Fowlmere circuit until they were able to make that call. They noted from the radar screenshots that the Duxford northern circuit had been active and that the Beagle Pup had been higher than the agreed circuit height of 500ft, which had been put in place following previous Airprox between Fowlmere and Duxford circuit traffic. Members thought that, had the Beagle Pup pilot held clear of the Fowlmere circuit until able to make the Duxford call, and then devoted their full attention to joining the Fowlmere circuit, they would have been more likely to have been fully aware of the traffic to affect them (**CF1**, **CF3**).

Members agreed that when the Beagle Pup pilot had joined the Fowlmere circuit, whilst listening out on both frequencies, they had made their first call in the circuit late, at downwind (**CF2**). Already in the visual circuit, they had then not been able to accurately ascertain the circuit traffic, and had believed there to have been only one aircraft in the circuit, when in fact there had been two (**CF5**). The CWS on the Beagle Pup had not been able to detect the C140 (**CF7**) and so, without a full picture from the RT, the pilot had not received any additional situational awareness that the C140 had been ahead of them in the circuit (**CF6**). Without this situational awareness, the Beagle Pup pilot had not been cognisant that there had been traffic on base leg ahead of them, and had therefore not conformed with the pattern of traffic (**CF1**, **CF4**), catching up, and then overflying, the C140 without being visual with it (**CF8**). Members thought that, because the Beagle Pup had been flying above the standard circuit height, this probably contributed to the non-sighting, in that the C140 would have been obscured beneath the engine cowling of the Beagle Pup (**CF9**).

When determining the risk, members considered the reports from both pilots together with the radar screenshots. They discussed that neither pilot had seen the other aircraft until at, or just after, CPA and, as a result, no avoiding action had been taken. Members therefore agreed that providence had played a major part in the event and that safety had been reduced to the bare minimum (**CF10**); Risk Category A.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2025060			
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	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
3	Human Factors	• Late Decision/Plan	Events involving flight crew making a decision too late to meet the needs of the situation	
4	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			
5	Human Factors	• Monitoring of Communications	Events involving flight crew that did not appropriately monitor communications	
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
	• Electronic Warning System Operation and Compliance			
7	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment

	• See and Avoid			
8	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
9	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other
	• Outcome Events			
10	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: A.

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:

Ground Elements:

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

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the Beagle Pup pilot did not integrate sufficiently with the visual circuit traffic and did not join the circuit in accordance with the Duxford/Fowlmere LOA.

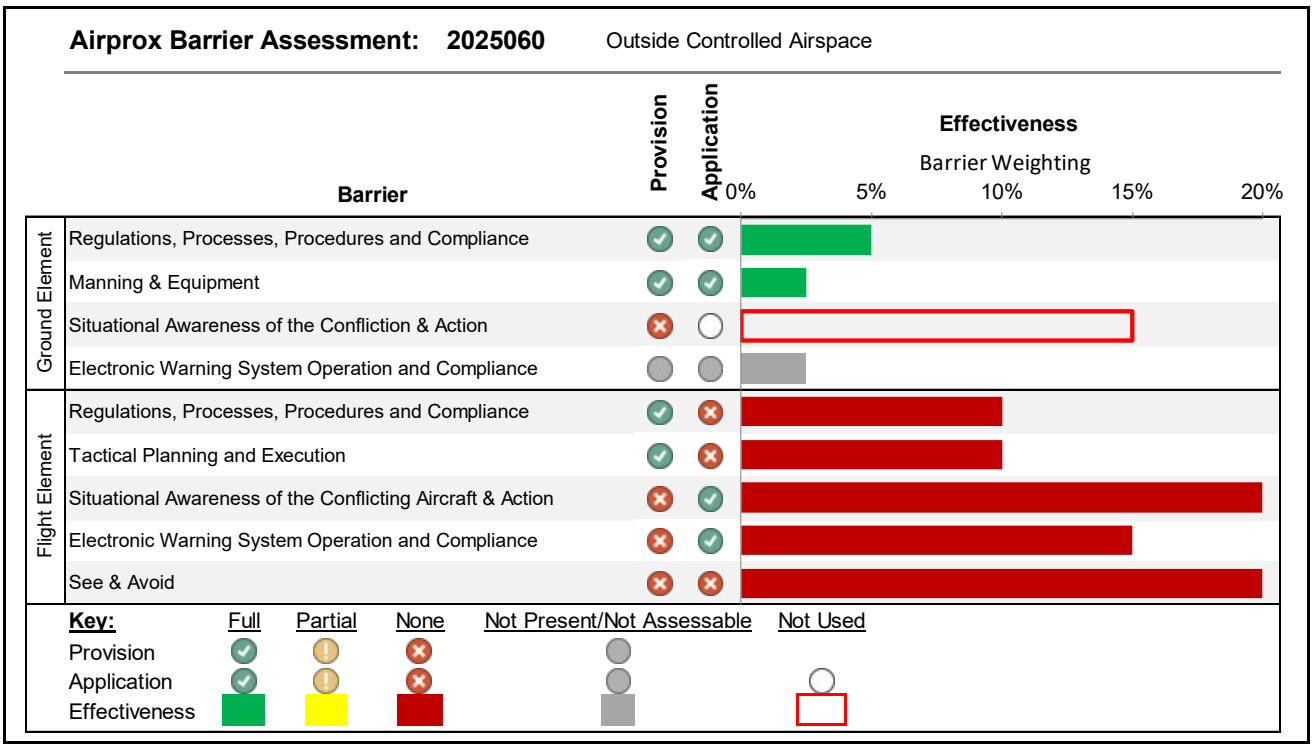
Tactical Planning and Execution was assessed as **ineffective** because the Beagle Pup pilot should have changed to the Fowlmere frequency earlier in order to be fully aware of the visual circuit traffic.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the C140 pilot had generic situational awareness that the Beagle Pup was in the circuit, but, understandably, had not expected it to overtake them. The Beagle Pup pilot could not fully hear the Fowlmere frequency due to blocking from the Duxford frequency and as a consequence was not aware of the presence of the C140 in the circuit.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the CWS on the Beagle Pup could not detect the C140 which did not have a transponder or a compatible CWS.

See and Avoid were assessed as **ineffective** because neither pilot saw the other aircraft in time to take action to increase separation.

[3] 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: 2025060
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