

AIRPROX REPORT No 2023042

Date: 07 Apr 2023 Time: 1123Z Position: 5317N 00053W Location: 2.5NM E Gamston

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	BE200	C150
Operator	Civ Comm	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Gamston	Gamston
Altitude/FL	FL018	FL017
Transponder	A, C, S	A, C, S
Reported		
Colours	White	White
Lighting	'All'	Beacon, Strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1800ft	1000ft
Altimeter	QNH (1021hPa)	QFE
Heading	230°	200°
Speed	160kt	80kt
ACAS/TAS	TAS ¹	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	100ft V/700m H	0ft V/500m H
Recorded	100ft V/0.2NM H	



THE BE200 PILOT reports that the 3 green lights for gear were not illuminated, so the pilot initiated a go-around and went to the south of the ATZ climbing to 2000ft. After a left turn and descending deadside for the 02LH circuit when turning level, an aircraft was spotted at similar altitude, crossing east-west through the ATZ at 1800ft, before leaving the ATZ to the west [they believed]. The BE200 pilot took evasive action, turning right to avoid the other aircraft. A normal circuit was performed leading to a normal landing.

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

THE C150 PILOT reports that they were returning to Gamston from the north. They were proceeding on a heading of 200°, waiting to turn right to cross RW02 on the deadside. They noticed a twin-engine aircraft approaching in the opposite direction and the twin was on course to pass to their left-hand side. They had good sight of the other aircraft for 5-10sec and turned slightly towards the right to gain more horizontal separation. The twin then started to change its heading and fly towards them, but was on course to fly to their rear, just, but closer than they would have liked. The pilot opined that the other pilot clearly hadn't seen them when they [the other pilot] began their turn.

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

THE GAMSTON AGO reports [BE200 C/S] when downwind, reported that they had some gear issues and would depart the circuit to the deadside and would provide updates. They then reported the gear issues were resolved and re-joined the circuit. They [the AGO] were not made aware of this Airprox and it wasn't reported at the time by the BE200 pilot.

¹ Pilot reported that a TAS was fitted but was U/S

Factual Background

The weather at East Midlands was recorded as follows:

METAR EGNX 071120Z 33005KT 270V040 9999 FEW033 11/02 Q1021=

The Retford/Gamston website has the following information on circuit joins:

To reduce the impact from aircraft noise, pilots are reminded to observe the standard circuit pattern, which is published on Sky demon and Pooleys. All Gamston circuits are 1000ft QFE and standard overhead joins are preferred.

Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be seen and identified using Mode S information. At 1120:36 (Figure 1) the C150 was northeast of Gamston indicating FL018. By 1122:46 (Figure 2) the BE200 had flown to the east of Gamston, as described in their report and the C150 was 3NM north of them.

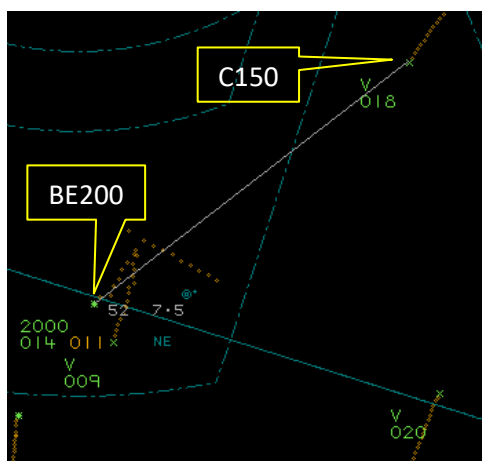


Figure 1 - 1120:36

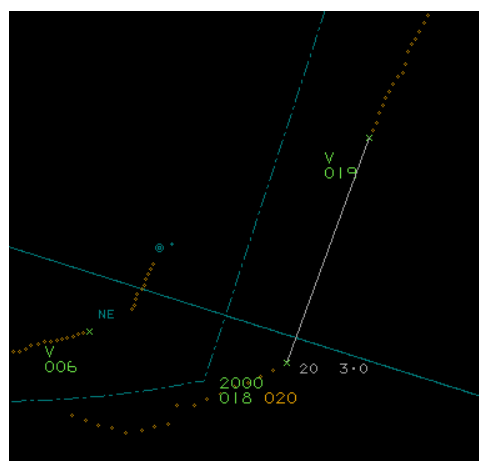


Figure 2 - 1122:46

The two aircraft continued to close at a similar altitude (Figures 3 and 4).

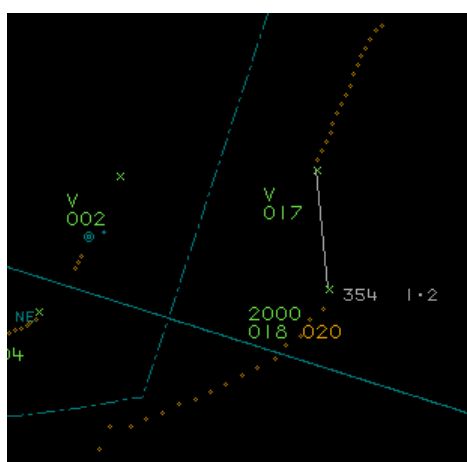


Figure 3 - 1123:14

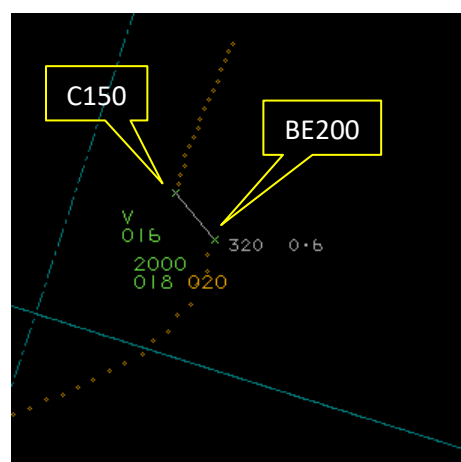


Figure 4 - 1123:26

CPA occurred at 1123:34 with the BE200 passing 0.2NM behind the C150 and with an indicated vertical separation of 100ft (Figure 5).

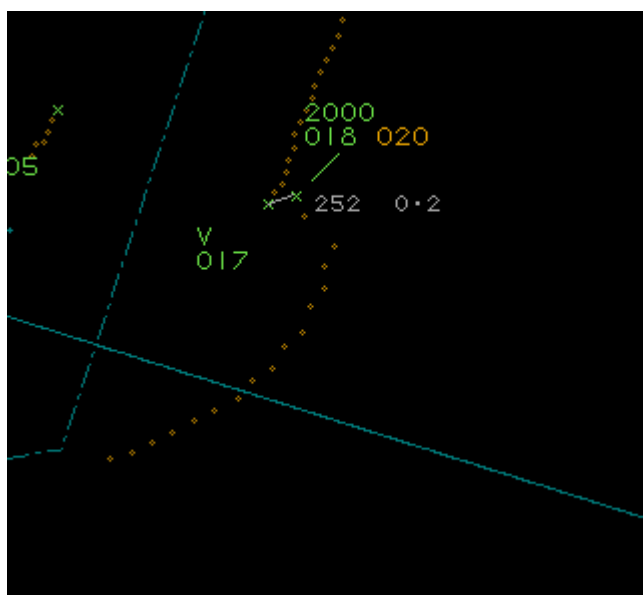


Figure 5 - 1123:34, CPA.

The BE200 and C150 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 If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.³ If the incident geometry is considered as converging then the BE200 pilot was required to give way to the C150.⁴

Summary

An Airprox was reported when a BE200 and a C150 flew into proximity 2.5NM east of Gamston at 1123Z on Friday 7th April 2023. Both pilots were operating under VFR in VMC, both were in receipt of an AGCS from Gamston.

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 AGO 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 considered the actions of the BE200 pilot. They had been operating in the circuit when they had encountered a problem with their gear indication lights and therefore had told the AGO that they would be clearing the circuit to concentrate on solving the issue. Members noted that this was likely to have been a major distraction to the pilot (**CF1**) and may have been the reason why the pilot had not heard the C150 pilot call to join the circuit from the north-east (**CF2**) and had not assimilated that the C150 had been likely to become a conflict (**CF3**). Some members opined that, whilst the BE200 pilot had acted correctly in clearing the visual circuit to concentrate on the problem, the pilot could have called a 'Pan' because this would have alerted other pilots to the fact that the BE200 had been experiencing a problem. Once the BE200 pilot had dealt with their gear problem, they had re-positioned for joining the circuit. Again, members wondered whether the pilot had been focused on re-joining the circuit to the detriment of lookout, because the pilot had not seen the C150 and had turned towards the circuit and, in doing so, the C150; on suddenly seeing the C150 ahead, the BE200 pilot reported having been concerned by its proximity (**CF4**).

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

⁴ (UK) SERA.3210 Right-of-way (c)(2) Converging.

The Board then discussed the actions of the C150 pilot. They had called to join the circuit and, although the exact timings of the RT calls were not known, still members thought that there had been the opportunity for the C150 pilot to have heard the BE200 pilot on the RT (**CF2**), but that the pilot had not assimilated that the BE200 pilot had been operating to the east of the airfield (**CF3**). The C150 pilot reported that they had been visual with the BE200 for 5-10sec when it suddenly turned towards them; they had had enough time to assess that, although close, the BE200 would pass behind and therefore they had not been concerned by its proximity. Members discussed at length the joining procedure that the C150 pilot had undertaken. They noted that the Gamston website provided information for pilots that overhead joins were preferred. Members noted that an overhead join in the CAA Skyway Code advocated maintaining 2000ft when crossing to the deadside, to begin to let-down deadside if safe and otherwise to circle at 2000ft in the overhead to assess the circuit traffic.⁵ They thought that the C150 pilot had not been conducting an overhead join as described, but instead had conducted a descending crosswind join. However, given that the aircraft would have been at the same position and height even if the pilot had conducted a standard overhead join, the Board agreed that it had not had any bearing on the outcome of this encounter.

Turning to the role that the AGO had to play, members acknowledged that the AGO had not been required, nor were they empowered, to sequence aircraft in the circuit. Members noted that at many airfields the AGO could be employed in other administrative tasks as well as answering the radio calls and so could not be relied upon to re-broadcast position reports from other pilots. Some members opined that, because the AGO had known that the BE200 pilot had been experiencing 'gear issues' and had been operating to the east of the airfield, they could have passed this information on to the C150 pilot. However, without a transcript of the RT at Gamston, members were not able to assess the timings of the pilots' calls and therefore could not say for sure whether they thought the AGO could have acted. Nevertheless, controlling members thought that, although technically not providing an alerting service, an AGO was more likely to re-broadcast position details if a pilot declared an emergency and that, on this occasion, the AGO may have told the C150 pilot about the BE200 operating to the east of the circuit if they had known that the BE200 pilot had been dealing with an emergency.

When assessing the risk of the Airprox, members considered the radar screenshots together with the AGO and pilots' reports. They noted that although the BE200 pilot had been startled by suddenly seeing the C150 ahead, the C150 pilot had seen the BE200 prior to their turn and had therefore been able to assess that it had been going behind their aircraft and that avoiding action had not been necessary. The Board therefore agreed that this description, together with the radar separation, described a situation where, although safety had been degraded, there had been no risk of collision; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2023042				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
1	Human Factors	• Interpretation of Automation or Flight Deck Information	Interpretation of Automation or Flight Deck Information by the flight crew.	Pilot engaged in other tasks
2	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
3	Human Factors	• Understanding/ Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information
• See and Avoid				

⁵ CAA Skyway Code available [here](#)

4	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft
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Degree of Risk: C.

Safety Barrier Assessment⁶

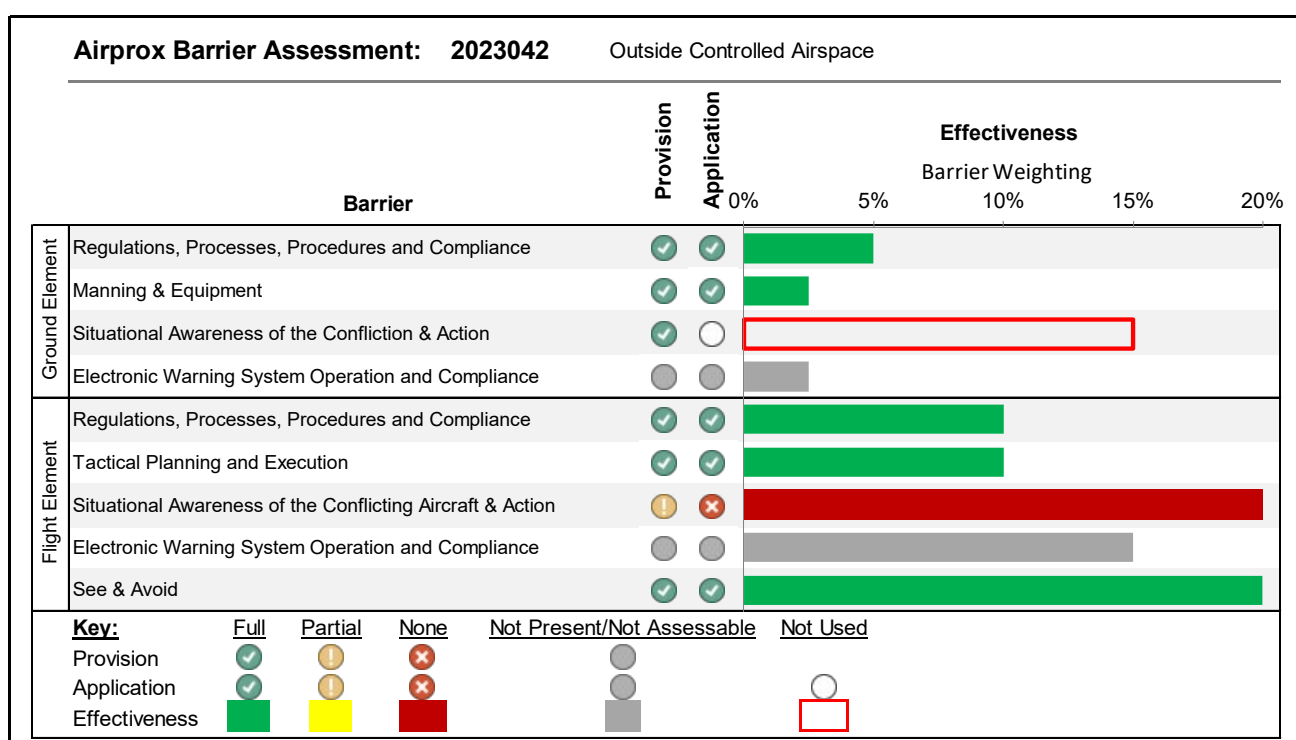
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Ground Elements:

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because although both pilots should have been able to garner generic SA from the RT, neither pilot had appeared to assimilate the information that the other had been in the vicinity.



⁶ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).