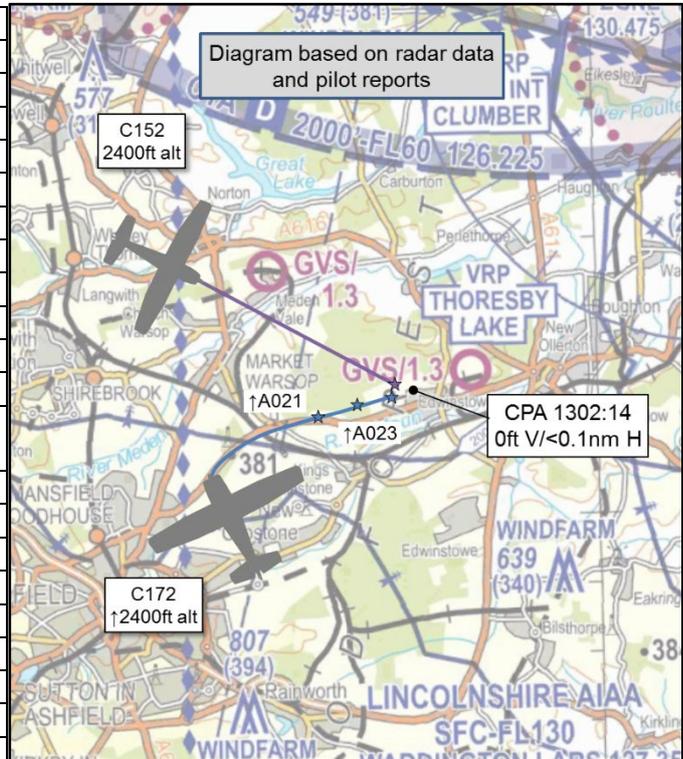


AIRPROX REPORT No 2018202

Date: 31 Jul 2018 Time: 1308Z Position: 5311N 00104W Location: 7nm SW Gamston

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C172	C152
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	None
Provider	East Midlands	
Altitude/FL	2400ft	2400ft
Transponder	A, C, S	A, C
Reported		
Colours	Green, White	White
Lighting		Landing, Beacon, Nav
Conditions	VMC	VMC
Visibility	50km	>10km
Altitude/FL	2000ft	2000ft
Altimeter	QNH (1015hPa)	QNH
Heading	070°	143°
Speed	80kt	90kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	50ft V/50m H	0ft V/155m H
Recorded	0ft V/<0.1nm H	



THE C172 PILOT reports that he was climbing for general handling after a PFL, when he saw another aircraft in the 10 o'clock, just above and crossing left to right. The instructor took control, levelled and started a right-turn away. The other aircraft also seemed to make an avoidance manoeuvre at that point. Having turned through about 150°, he descended and looked up and to the right; he saw the other aircraft in the 8 o'clock and high. He waggled his wings and the other pilot did the same. The student did not see the aircraft until they had completed the avoidance manoeuvre.

He assessed the risk of collision as 'High'.

THE C152 PILOT reports that he spotted the other aircraft at a distance of about 1nm and ascertained that they were on a collision course. However, he did not alter his course at this point because he was on a nav-ex with a student and, having seen the other aircraft and having him in good sight, he felt there was no risk of collision. He waggled his wings at this point to let the other pilot know he had seen him, but did not see a response. He waited a little longer to see whether the other aircraft would change course because, as the instructor sitting in the right-hand-seat, he was concerned that he would lose sight of the other aircraft if they turned. He then took avoiding action by banking right and, as he did so, saw the other pilot enter a rapid descent and turn to the right.

He assessed the risk of collision as 'None'.

Factual Background

The weather at East Midlands was recorded as follows:

METAR EGNX 311250Z 22010KT 180V260 9999 BKN042 21/10 Q1015=
 METAR EGNX 311320Z 20013KT 9999 SCT045 21/10 Q1015=

Analysis and Investigation

CAA ATSI

The C172 was on a local VFR flight in receipt of a Basic Service from East Midlands Radar at the time of the Airprox. The C152 was also on a VFR flight and was in communication with Waddington Zone at the time of the Airprox but had not yet been placed under a service.

At 1245:30, the C172 pilot established communications with the East Midlands Radar Controller. The pilot reported that they were flying a Navex at 3000ft and were transponding code 7000. The controller passed the QNH 1015, instructed the pilot to squawk 4571 and advised the pilot that Langar was active; a Basic Service was agreed. At 1250:30, the C172 pilot advised the East Midlands radar controller that there was a change of intention and that they wished to conduct a simulated diversion to Gamston. At 1258:30, the 2 aircraft were separated by 5.3nm and 1600ft (Figure 1), by 1302:00 the C172 had climbed to the same level as the C152 and the aircraft were separated by 0.5nm horizontally (Figure 2).

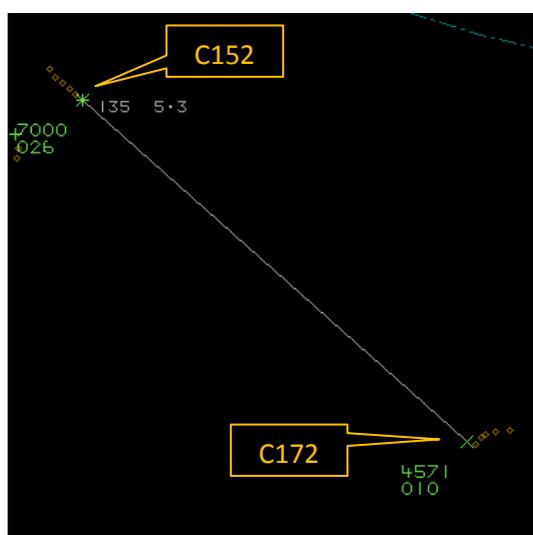


Figure 1 - 1258:30

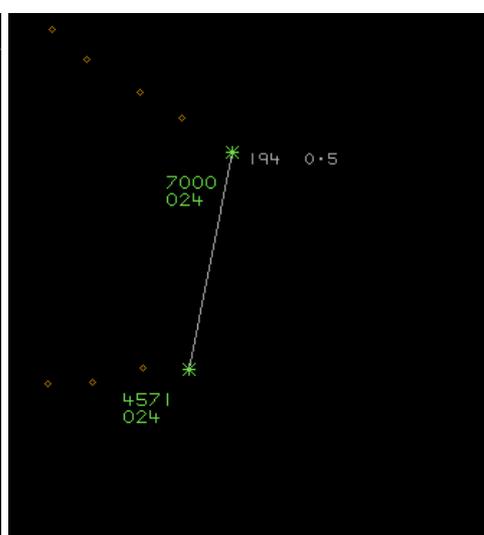


Figure 2 - 1302:00

CPA occurred at 1302:20 with both aircraft at the same level and separated by less than 0.1nm horizontally (Figure 3). At 1303:10, the C172 pilot advised East Midlands that they would be filing an Airprox when they got home. The controller instructed the pilot to squawk ident and asked whether he would like to pass any more details of the Airprox. The pilot advised that it was a C152 in the open FIR that was in their blind spot until very close. The controller acknowledged the details.

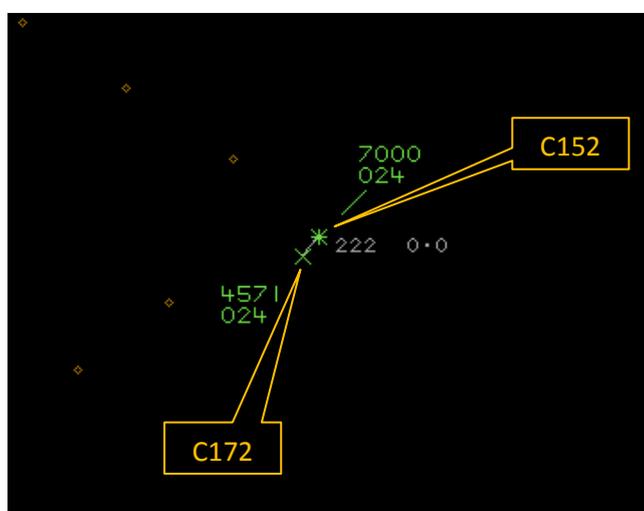


Figure 3 - 1302:20

At the time of the Airprox, the C172 pilot was receiving a Basic Service from the East Midlands Radar Controller who was also providing radar services to inbound, outbound and overflying traffic.

Under the terms of a Basic Service CAP 774 states;

The provider of a Basic Service is not required to monitor the flight, pilots should not expect any form of traffic information from a controller/FISO.

If a controller/ FISO considers that a definite risk of collision exists, a warning shall be issued to the pilot (SERA.9005(b)(2) and GM1 SERA.9005(b)(2)).

Whether traffic information has been provided or not, the pilot remains responsible for collision avoidance without assistance from the controller.

The controller was not required to monitor the flight of the C172 and could not be reasonably expected to do so whilst also providing higher priority Air Traffic Services to inbound, outbound and overflying aircraft. The Airprox took place in Class G airspace under a Basic Service, where separation between aircraft is ultimately the responsibility of the pilots.

UKAB Secretariat

The C172 and C152 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard¹. If the incident geometry is considered as head-on or nearly so, then both pilots were required to turn to the right². If the incident geometry is considered as converging, then the C152 pilot was required to give way to the C172³.

Summary

An Airprox was reported when a C172 and a C152 flew into proximity at 1302hrs on Tuesday 31st July 2018. Both pilots were operating under VFR in VMC, the C172 pilot in receipt of a Basic Service from East Midlands and the C152 pilot not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, transcripts of the relevant R/T frequencies, radar photographs/video recordings, and reports from the appropriate ATC operating authorities.

The Board first looked at the actions of the C172 pilot. He was general handling and receiving a Basic Service from East Midlands. Members noted that under a Basic Service controllers were not required to monitor flights on the radar and, although they would pass Traffic Information if they believed a definite risk of collision existed, this presupposed that they had enough spare capacity to notice the conflict occurring. As was demonstrated here, the East Midlands controller was busy and did not pass any information; therefore, the Board thought that it was worth reminding pilots that if Traffic Information was desired then a Traffic Service should be requested. Members commented that the C152 was probably obscured by the C172's high wing as the C172 climbed, and so the C172 pilot did not see the C152 until late, at which point he took appropriate avoiding action.

For his part, the C152 pilot reported that had seen the C172 from about a mile away and, given that it was on his right, the Board wondered why he had not taken earlier avoiding action as required by the Rules of the Air. Acknowledging that he may have been focused on allowing his student to remain on his nav-ex route, such avoiding action could have been achieved by either climbing or descending rather than a turn. Instead, members felt that he inappropriately continued into conflict until the two aircraft were in close proximity. Members noted that the C152 pilot had waggled his wings in the hope

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way (c)(1) Approaching head-on.

³ SERA.3210 Right-of-way (c)(2) Converging.

that the other aircraft would see him, and some members wondered if he also expected the C172 pilot to avoid him if he did. When the C172 pilot didn't avoid him or waggle (because he had not seen the C152 at that point) the C152 pilot eventually took avoiding action. The Board noted that the C152 pilot was not in receipt of an ATS at the time of the incident although he was in the process of calling Waddington albeit unfortunately not yet fully identified and so it was unlikely that he would have received any Traffic Information from them.

In determining the cause of the Airprox, the Board quickly agreed that because the C152 pilot had been visual with the C172 converging on his right from about a mile away and had not taken earlier action, he had flown into conflict with it. The Board then debated the risk. Some members thought that because the C152 pilot had been visual with the C172 at all times he would not have flown into it and therefore there had been no risk of collision. Whilst they agreed that this may have been the ultimate outcome, others felt that the final separation had been such that safety had been much reduced below the norm. After much debate, the latter view prevailed and the risk was assessed as Category B.

The Board opined that when transiting through the busy Lincs AIAA pilots should endeavour to get an ATS where possible, and ideally a Traffic Service. The Board also commented that neither aircraft was fitted with a collision warning system and, noting that such systems were increasingly affordable, opined that if either aircraft had been so fitted, that pilot would have received valuable situational awareness because both aircraft had serviceable transponders and were squawking.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The C152 pilot flew into conflict with the C172.

Contributory Factors: The C152 pilot did not give way to the C172, converging on his right.

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:

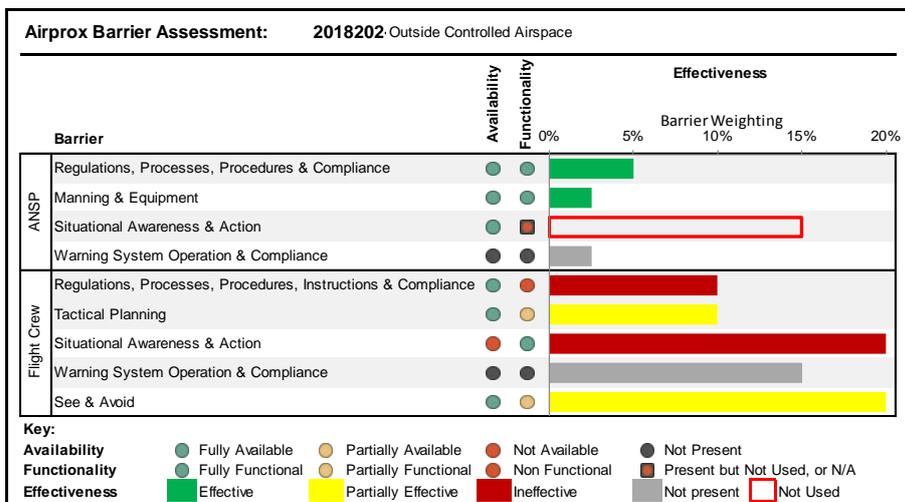
Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the C152 did not give way to the C172.

Tactical Planning was assessed as **partially effective** because the C152 pilot did not take action until a late stage.

Situational Awareness and Action were assessed as **ineffective** because neither pilot had any prior knowledge or information on the other aircraft.

See and Avoid were assessed as **partially effective** because both pilots took avoiding action, albeit late.



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