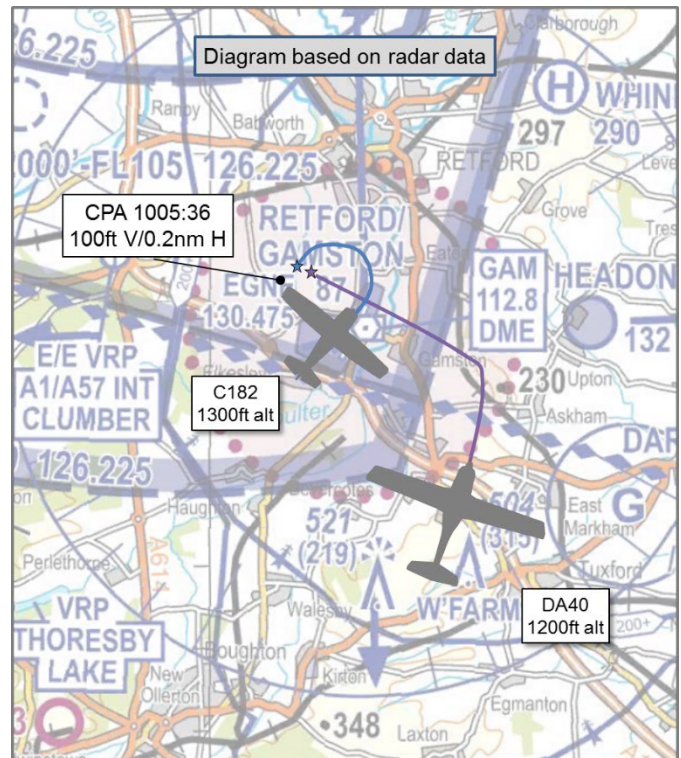


AIRPROX REPORT No 2018040

Date: 25 Mar 2018 Time: 1005Z Position: 5317N 00057W Location: Gamston

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C182	DA40
Operator	Civ Club	Civ Pte
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Gamston	Gamston
Altitude/FL	1300ft	1200ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, Red	White
Lighting	Beacon	Strobes
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1400ft	1000ft
Altimeter	QNH (1012hPa)	QFE
Heading	210°	210°
Speed	100kt	100kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	30ft V/0m H	75ft V/0m H
Recorded	100ft V/0.2nm H	



THE C182 PILOT reports that he had just taken off from Gamston, turned crosswind at approx. 500ft and climbed to downwind at 1000ft; no calls from any other traffic were heard throughout. The first sighting of the other aircraft was by the left rear-seat passenger, who was looking behind. The other aircraft appeared to fly from below and to the left of the C182, in a nose-up attitude, and passed directly overhead with minimal separation before continuing onto an extremely wide downwind position. The C182 pilot made a radio report of the Airprox almost immediately, but still no call was heard from the other pilot, until a later call of downwind. After landing he asked the A/G operator whether a call was made to enter the ATZ, and he confirmed that he hadn't heard from the other aircraft until the downwind call was made.

He assessed the risk of collision as 'High'.

THE DA40 PILOT reports that he was halfway downwind at 1000ft, when the other aircraft passed underneath. It came from the right and behind, then flew over the runway at 45°.

He assessed the risk of collision as 'Medium'.

THE GAMSTON A/G OPERATOR reports that the DA40 pilot reported leaving the circuit to operate over Newark, which is outside the Gamston ATZ. A short while later the C182 back-tracked on RW03 and reported lining-up. The A/G operator passed the surface wind in the usual way and the aircraft departed on runway heading. He then heard the DA40 pilot call 'downwind', which surprised him because the circuit was busy and he hadn't heard him call for joining information nor request details of circuit traffic; he would have expected him to establish two-way contact before entering the ATZ. However, he stressed that without RT recordings he could only say that he, the operator, did not hear a call, not that a call wasn't made. The C182 pilot asked whether there was another aircraft downwind and he replied that he believed there was now a DA40 downwind, to which the DA40 pilot replied that he could see the C182 and it had come 'very close'. There was a brief pause and the C182 pilot said

'I'll be filing on that, please take down the usual details and information'. The A/G Operator then reminded him that he was only providing a A/G Service and he didn't have any radar or RT information, but could note down the time and aircraft registration details. The C182 pilot acknowledged and reported departing the circuit.

Factual Background

The weather at Doncaster Sheffield was recorded as follows:

METAR EGCN 250950Z 34008KT CAVOK 10/03 Q1012=

UKAB Secretariat

Although neither aircraft was being provided with an ATS, the incident could be seen on the NATS radars. Figure 1 at 1004:22 shows the DA40 apparently re-joining from the south-east and the C182 just getting airborne, passing 400ft in the climb. At 1005:09 (Figure 2), the DA40 has turned to join cross-wind and the C182 is also turning downwind. CPA occurs just after 1005:33 (Figure 3).

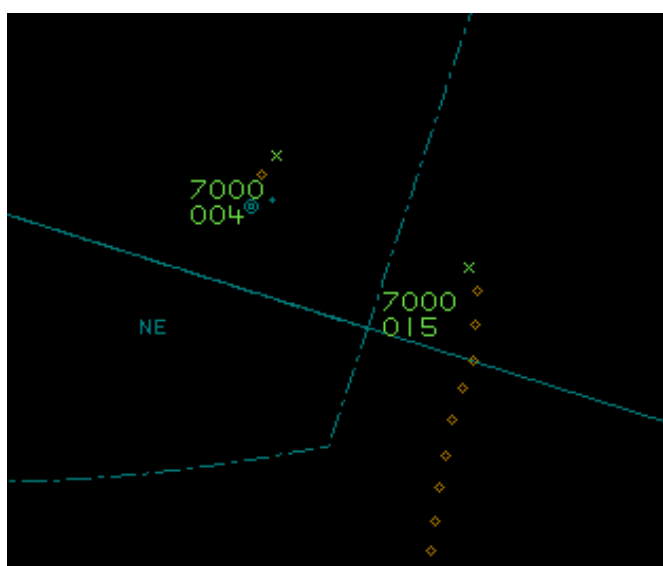


Figure 1 1004:22

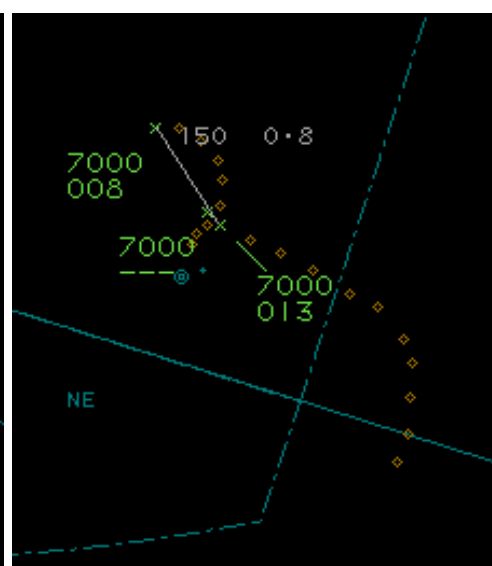


Figure 2 1005:09

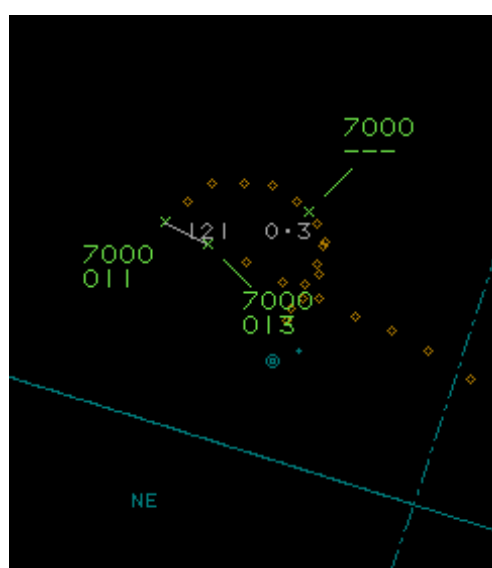


Figure 3 1005:33

Rules of the Air 2015¹ states that at a licensed aerodrome with an air/ground communications service:

- (6) *The commander of an aircraft flying within the aerodrome traffic zone of an aerodrome must—*
- (a) *cause a continuous watch to be maintained on the appropriate radio frequency notified for communications at the aerodrome; or*
 - (b) *if this is not possible, cause a watch to be kept for such instructions as may be issued by visual means; and*
 - (c) *if the aircraft is fitted with means of communication by radio with the ground, communicate the aircraft's position and height to the air traffic control unit, the flight information centre or the air/ground communications service unit at the aerodrome (as the case may be) on entering the aerodrome traffic zone and immediately prior to leaving it.*

The C182 and DA40 pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard. 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 operation².

Summary

An Airprox was reported when a C182 and a DA40 flew into proximity at Gamston airfield at 1005hrs on Sunday 25th March 2018. Both pilots were operating under VFR in VMC, and both were in the Gamston visual circuit, receiving a A/G Service.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the pilots of both aircraft, radar photographs/video recordings and a report from the Air/Ground Operator involved.

The Board first looked at the actions of the C182 pilot and noted that he was departing downwind and had no knowledge of the DA40 joining the circuit. The Board thought that there was little he could have done to change the circumstances. Some members wondered whether he could have been expected to see the DA40 as he turned cross-wind, but others thought that the high-wing of his aircraft would have prevented him from seeing the DA40 above him as he turned. Noting that the passenger reported the DA40 as below, yet it crossed overhead, the Board thought this was likely to have been an optical illusion due to the geometry of the turning aircraft because the radar showed the DA40 being slightly above the C182 at all times.

Turning to the DA40, the Board thought that because neither the A/G operator, nor the C182 pilot, had heard the DA40 pilot call for re-join, it was likely that he either didn't or there was an intermittent fault with his radio at the critical moment. Notwithstanding, Rules of the Air 2015 require that a pilot communicates with the A/G operator prior to entering the ATZ, so if he made the call and didn't receive an answer from the A/G operator giving circuit details, then he should have re-called before entering the ATZ. He also should have been cognisant that he did not know the circuit state as he was approaching, and as a result, was not aware of the position of the C182 getting airborne to depart downwind as he joined. Wondering why he didn't see the C182 before he overflew it, members thought that perhaps it was shielded from view by the DA40's low-wing as he turned, meaning that the low-wing/high-wing geometry had prevented both pilots from seeing each other in time to take action. Nevertheless, as the re-joining aircraft, members opined that it was for the DA40 pilot to integrate with the traffic already established in the circuit.

Members quickly discussed the A/G operator's role and were grateful for his report because it provided them with a much fuller picture. He was not responsible for the integration of the traffic, but some members wondered whether he was located in a position where he might have seen the DA40 joining

¹ Rules of the Air 2015 Section 2, Rule 11.

² SERA.3225 Operation on and in the Vicinity of an Aerodrome.

and warned him on the radio. However, with a busy circuit, there was every likelihood that he didn't see it, and the Board agreed that it was outwith his responsibilities to provide Traffic Information other than that based on pilot reports anyway.

In determining the cause of the Airprox, the Board quickly agreed that the DA40 pilot did not integrate with the C182, which was already established in the circuit. They also determined that a contributory factor had been that the DA40 pilot did not obtain sufficient information from the A/G Operator to enable his flight to be conducted safely within the ATZ. Noting both pilots' estimates of the vertical separation, and considering that the minimum recorded separation of 0.2nm at the last radar sweep did not reflect the geometry at actual CPA (where both pilots described there being no lateral separation), members considered there to have been a serious risk of collision because neither pilot had taken any action at all and so providence had played the major role in there not being a collision; risk Category A.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: The DA40 pilot did not integrate with the C182, already established in the visual circuit.

Contributory Factor: The DA40 pilot did not obtain sufficient information from the A/G Operator to enable the flight to be conducted safely within the aerodrome traffic zone.

Degree of Risk: A.

Safety Barrier Assessment³

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

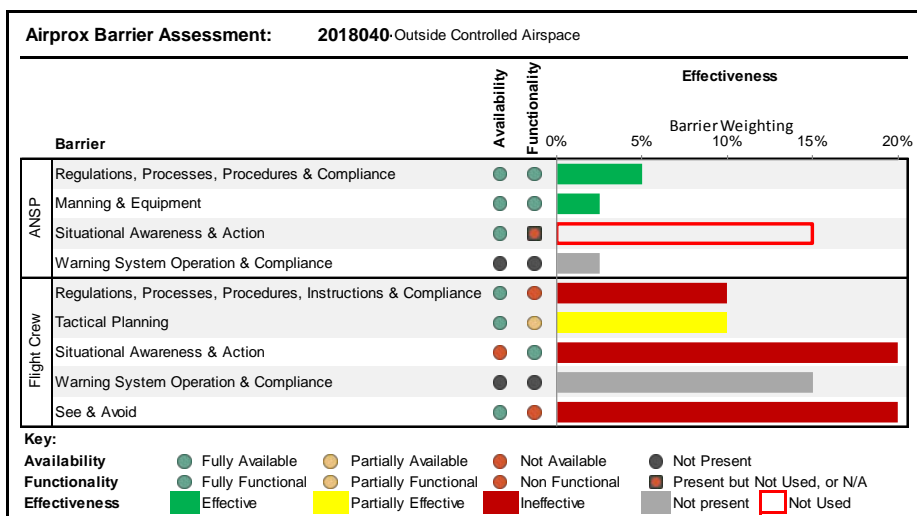
Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the DA40 pilot did not call the air/ground operator before entering the ATZ.

Tactical Planning was assessed as **partially effective** because the DA40 did not call for circuit information and therefore did not integrate into the circuit effectively.

Situational Awareness and Action were assessed as **ineffective** because neither pilot knew about the other aircraft.

See and Avoid were assessed as **ineffective** because neither pilot saw the other much before CPA and were unable to take any avoiding action.



³ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).