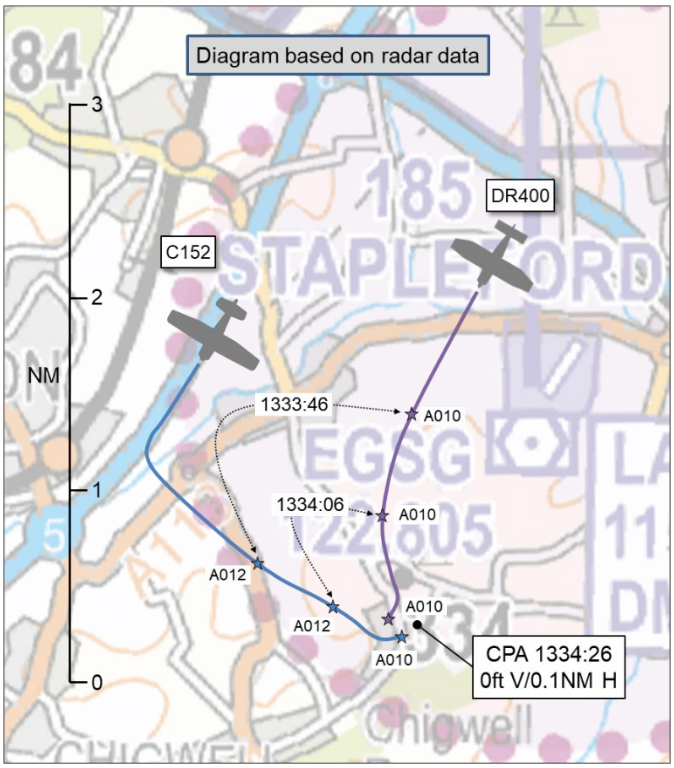
AIRPROX REPORT No 2024275

Date: 13 Nov 2024 Time: 1334Z Position: 5138N 00008E Location: Stapleford ATZ

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	DR400
Operator	Civ FW	Civ FW
Airspace	Stapleford ATZ	Stapleford ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Stapleford Radio	Stapleford Radio
Altitude/FL	A010	A010
Transponder	A, C, S	A, C, S
Reported		
Colours	Red, white	White, blue
Lighting	Landing, taxi, nav, strobes	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	800ft	1000ft
Altimeter	QNH (1035hPa)	QNH
Heading	035°	210°
Speed	65kt	100kt
ACAS/TAS	Not fitted	PilotAware
Alert	N/A	Information
Separation at CPA		
Reported	0ft V/300m H	100ft V/150m H
Recorded	0ft V/0.1NM H	



THE C152 PILOT reports that, whilst on final approach with a student, the pilot of another aircraft, which they understood to have been making a standard overhead join to Stapleford, ended up flying in an opposite direction to the final approach track, at low level, on a conflicting course with them and another aircraft that was on final approach behind them. [The pilot of the C152 reported that they had] first sighted the DR400 at a range of less than 300m slightly to the north of their position. [The pilot of the C152] rolled to avoid the DR400.

After speaking with the flight examiner in the aircraft behind them, and the radio operator, it was clear that the standard overhead join procedure had not been followed. After descending on the deadside for RW03, the [pilot of the DR400] had joined crosswind but then turned downwind very early, tracking directly towards the final approach course at a similar level [to the C152].

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

THE DR400 PILOT reports that they were flying a tight left-hand circuit for RW03 at Stapleford Airfield. They were approximately halfway down the downwind leg when they spotted the Cessna 152 in their 2 o'clock position travelling from right-to-left. At that stage, they didn't know if the other aircraft was 'transiting' the Stapleford zone or was on base leg ready for landing, so they elected to continue their downwind leg. As they got closer to the other aircraft (now in front of them) it started to turn to the left. [The pilot of the DR400] then realised it was turning final to land and so they turned right and went behind it. They then extended their downwind leg before landing to ensure adequate separation between themselves and the landing Cessna. As they had first spotted, and were observing, the other aircraft at a distance, they felt that at no time had there been a danger of collision. However, they do appreciate that the other pilot might not have seen them until the last moment and thought there was an imminent danger of a collision. Therefore, in hindsight (although they had been fully aware of the situation), perhaps it would have been better for them to have turned to go behind the other aircraft a

lot earlier than they did, thus avoiding 'alarming' the other pilot into thinking they had to take immediate action (and subsequently filing an Airprox).

The pilot assessed the risk of collision as ‘None’.

Factual Background

The expected circuit patterns and areas to avoid at Stapleford aerodrome (as published in a popular flight guide).

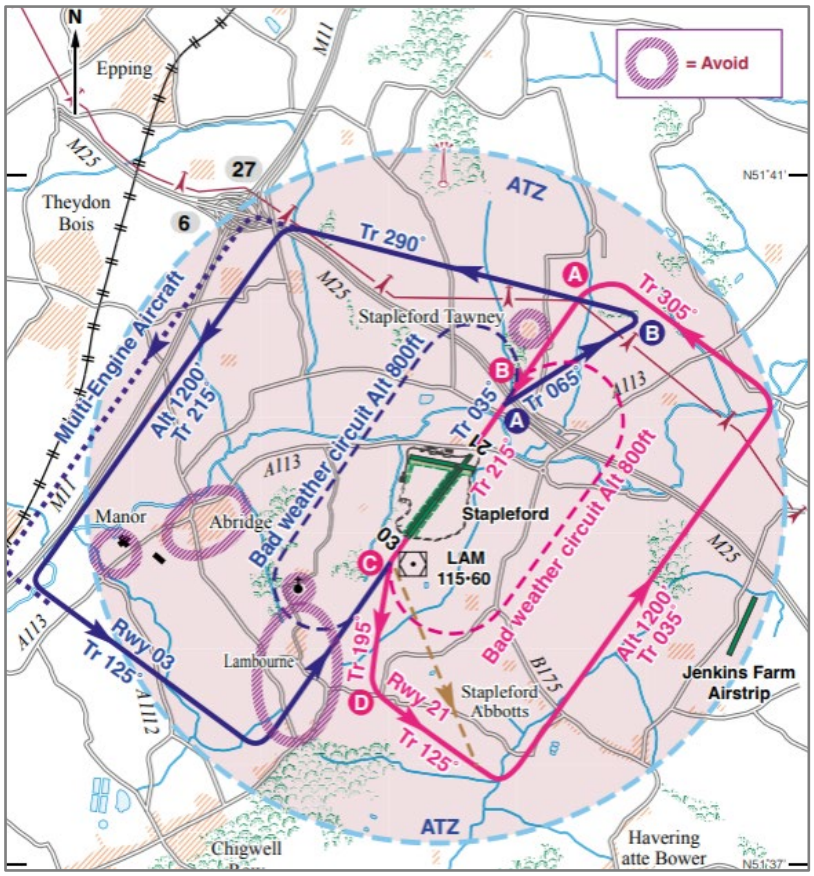


Figure 1

The weather at London City Airport was recorded as follows:

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METAR EGLC 131320Z 33005KT 290V030 9999 BKN019 11/07 Q1035
METAR EGLC 131350Z AUTO VRB04KT 9999 BKN020 11/07 Q1035
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft could be positively identified from Mode S data.

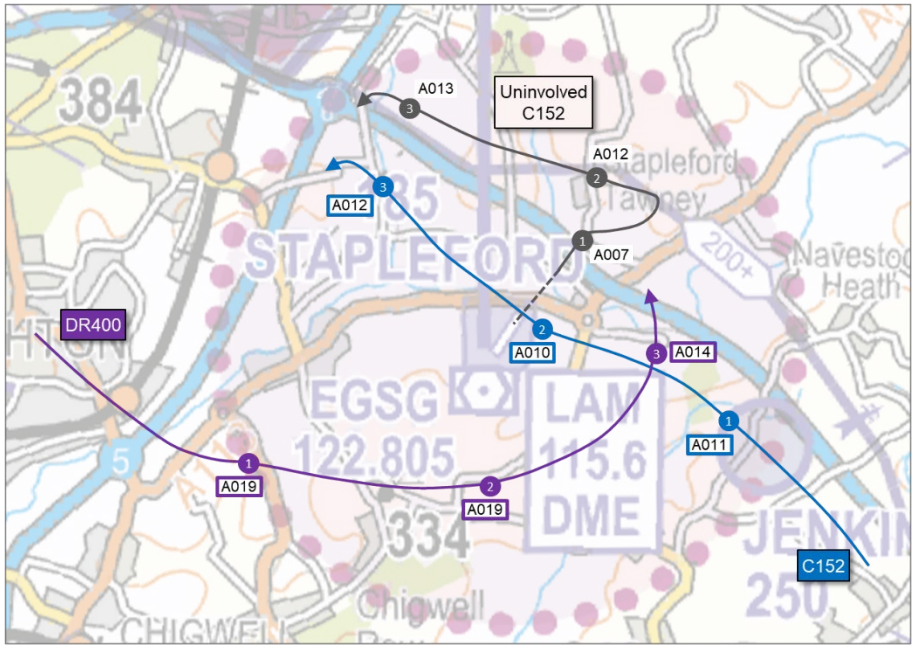


Figure 2 – 1332:16. The joining positions of the C152 and DR400 pilots

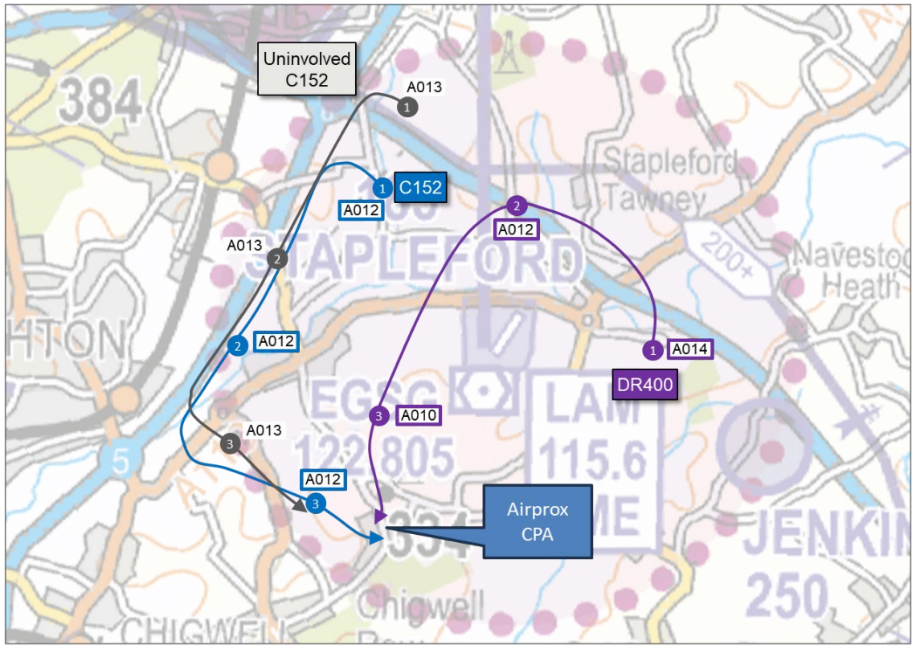


Figure 3 – CPA at 1334:26. Circuit patterns

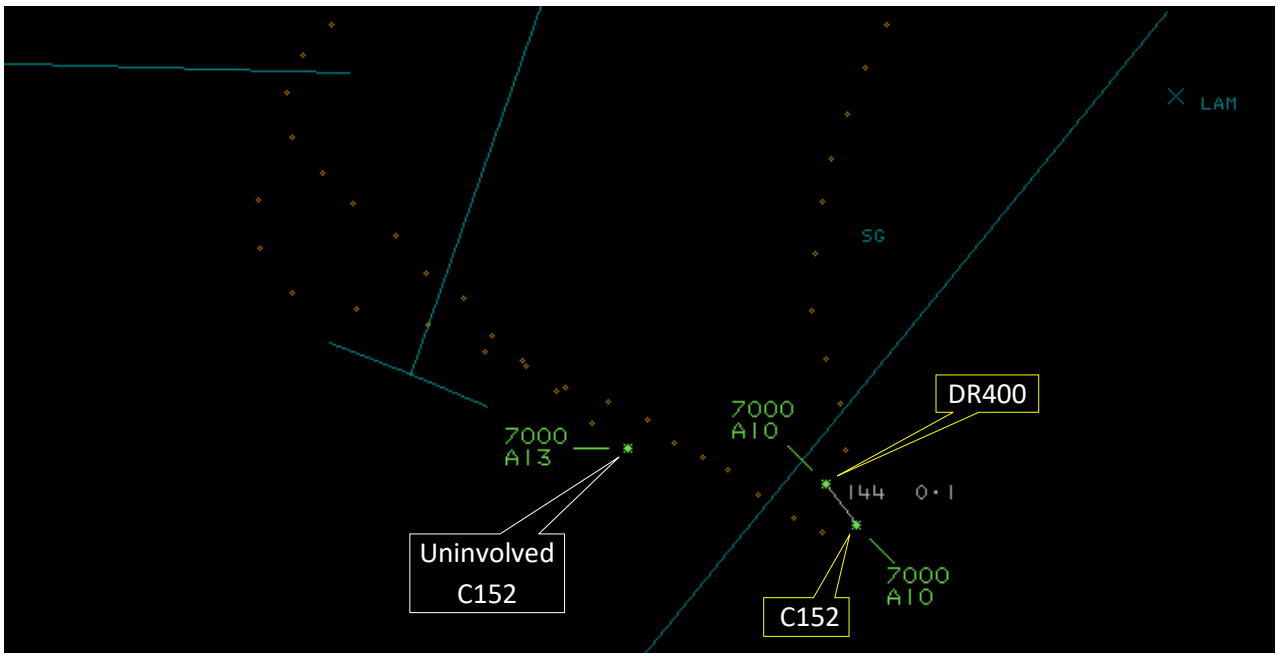


Figure 4 – CPA at 1334:26

The diagram was constructed and the separation at CPA determined from the radar data.

The C152 and DR400 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 C152 and a DR400 flew into proximity in the Stapleford ATZ at 1334Z on Wednesday 13th November 2024. Both pilots were operating under VFR in VMC and in receipt of an AGCS from Stapleford Radio.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots and radar photographs/video recordings. 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 pilot of the C152. Members noted that they had joined the circuit over the upwind threshold of the runway in use and had integrated into the pattern of traffic ahead of the pilot of the other C152 (uninvolved in the Airprox).

It was not clear to members whether the standard calls had been made by all pilots in the circuit but, in the absence of any evidence to the contrary, members proceeded on the basis that relevant calls had been made. Consequently, members agreed that the pilot of the C152 had had generic situational awareness of the presence of the DR400 (**CF7**) and that they had intended to join the circuit. Members noted that the pilot of the C152 had visually acquired the DR400 when they had been on the base leg and the DR400 had been approximately 300m to their left. Members appreciated that it may have been startling to have first sighted the DR400 tracking perpendicular to their base leg and agreed that the proximity of the DR400 had caused them concern (**CF10**). Nevertheless, members agreed that the pilot of the C152 had reacted quickly to have "*rolled to avoid the DR400*".

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

Members next turned their attention to the pilot of the DR400 and noted that they had entered the ATZ from the northwest, above circuit height, and had descended on the deadside. Members pondered the DR400 pilot's position as they had crossed to the live side and recalled the guidance provided in the Skyway Code (CAP 1535) reproduced below:

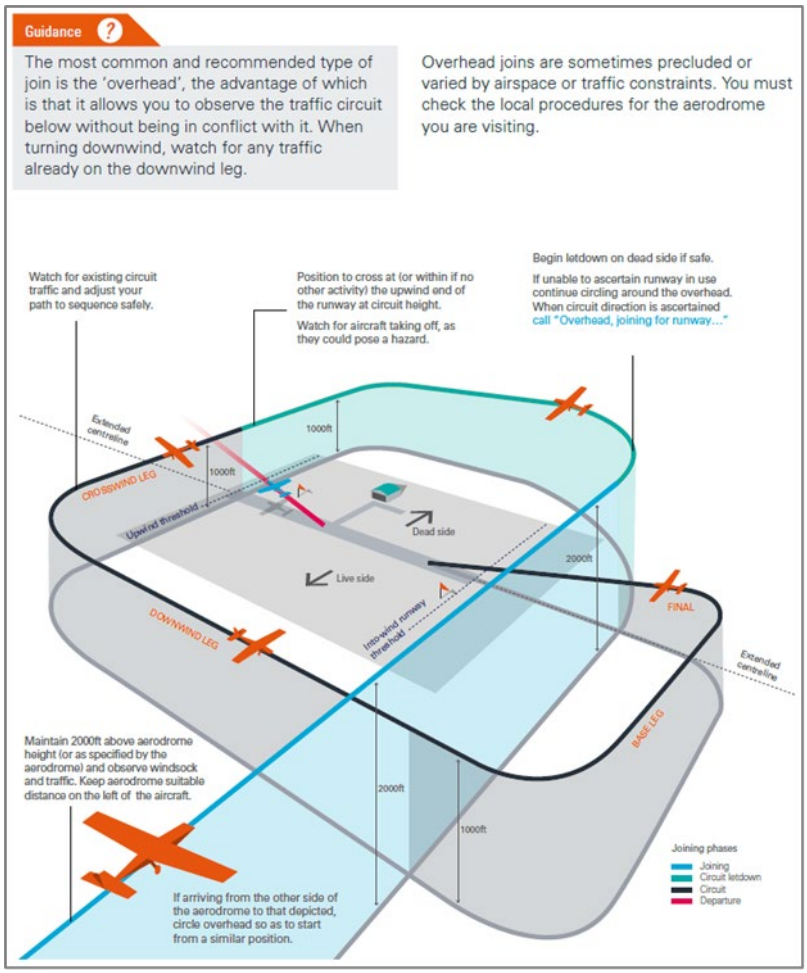


Figure 5 – The Standard Overhead Join

Members wished to emphasise the guidance to 'Position to cross at [..] the upwind end of the runway' and to 'Watch for existing circuit traffic and adjust your path to sequence safely'. Members agreed that the join into the circuit by the pilot of the DR400 had not been in accordance with the guidance, nor had it been in accordance with the expected circuit pattern as promulgated in popular flight guides (**CF1**). Again, proceeding on the basis that standard circuit calls had been made on frequency by the pilots of the other aircraft in the circuit, members agreed that the pilot of the DR400 had not appropriately monitored their radio (**CF6**) and surmised that they had had generic awareness of the other traffic (**CF7**) rather than having gleaned specific situational awareness of the C152 from circuit calls. Members agreed that the EC equipment fitted to the DR400 had alerted the pilot to the presence of aircraft in the vicinity (**CF8**), but agreed that the information had either not been sufficiently detailed or had not been sufficiently assimilated to have provided confirmation of the circuit pattern. Members were in agreement that the pilot of the DR400 had not executed their join into the circuit correctly (**CF2**) and had not integrated into the existing pattern of traffic (**CF4**).

Members next noted that the pilot of the DR400 had visually acquired the C152 "*halfway down the downwind leg*" but had not been aware if it had been in the circuit or if its pilot had intended to transit the ATZ. Acknowledging that the DR400 pilot had held an incorrect mental model that they had been in the circuit and that the pilot of the C152 had not been, members wondered why the pilot of the DR400 had not requested additional information as to the C152 pilot's intentions (**CF5**). Indeed, such an enquiry may have elicited a response that may have enlightened the DR400 pilot as to their own positional error. Members agreed that the pilot of the DR400 had not made a sufficiently detailed plan to have met the needs of the unfolding situation (**CF3**). Notwithstanding, once the pilot of the DR400 had realised

that the pilot of the C152 had turned left for their approach to the runway, they had taken avoiding action to increase the separation.

Concluding their discussion, members summarised their thoughts. It was agreed that the pilot of the C152 had had generic situational awareness of the presence of the DR400 but had not visually acquired it until they had commenced a turn from base leg to final when it had been sighted to their left. Members agreed that the pilot of the DR400 had not executed their join to the circuit correctly and had held an inaccurate mental model of the circuit and traffic situation. Members noted that both pilots had sighted the other aircraft in time to have taken effective avoiding action but agreed that the pilot of the DR400 had flown close enough to the C152 to have caused its pilot concern (**CF9**). Members concluded that safety margins had been reduced but, overall, were satisfied that there had not been a risk of collision. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024275			
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	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
3	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
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	• Lack of Communication	Events involving flight crew that did not communicate enough - not enough communication	Pilot did not request additional information
6	Human Factors	• Monitoring of Communications	Events involving flight crew that did not appropriately monitor communications	
7	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			
8	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
	• See and Avoid			
9	Human Factors	• Incorrect Action Selection	Events involving flight crew performing or choosing the wrong course of action	Pilot flew close enough to cause concern
10	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

Degree of Risk: C.

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 Stapleford AGO had not been required to have sequenced the traffic in the circuit.

Flight Elements:

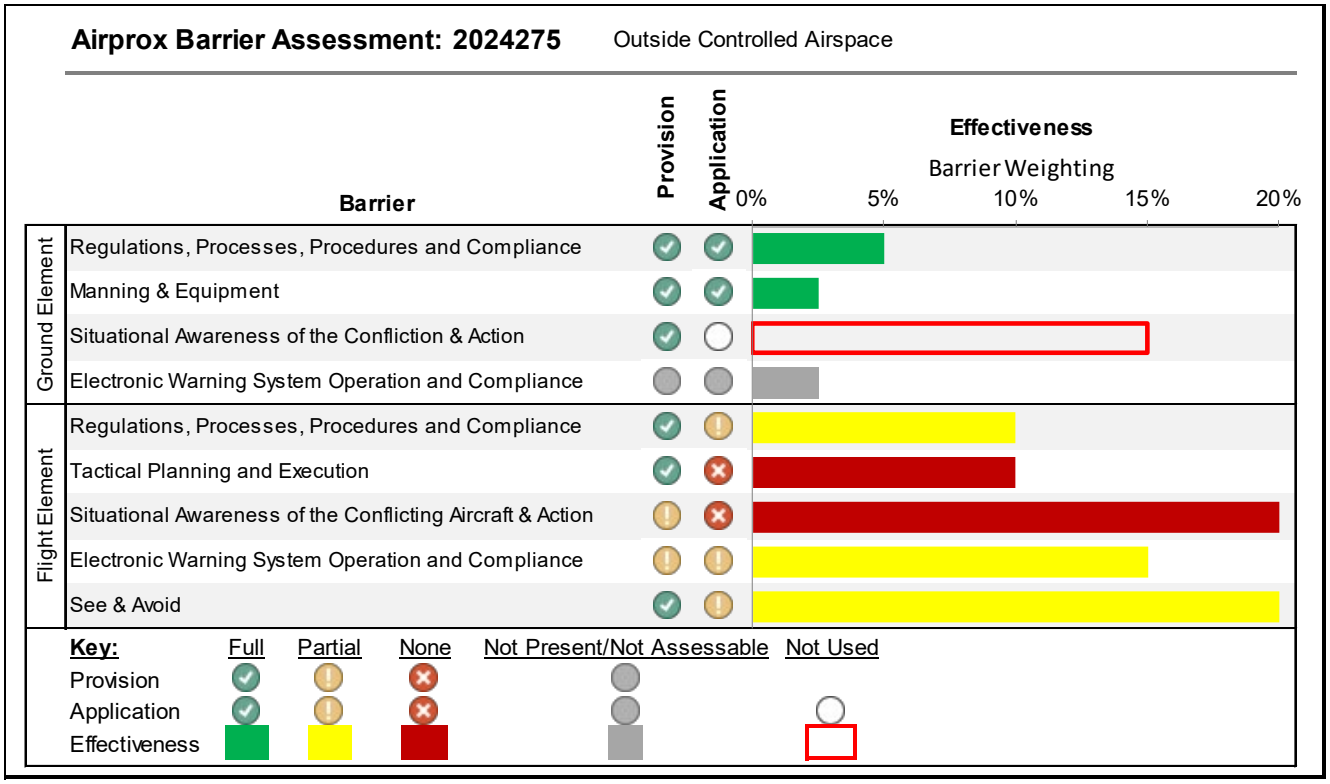
Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the pilot of the DR400 had not flown in accordance with the promulgated circuit pattern.

Tactical Planning and Execution was assessed as **ineffective** because the pilot of the DR400 had not conformed with, nor had sufficiently avoided, the existing pattern of traffic.

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

Electronic Warning System Operation and Compliance were assessed as **partially effective** because the EC device fitted to the DR400 had provided information on the presence of other aircraft in the vicinity.

See and Avoid were assessed as **partially effective** because the pilot of the DR400 had flown close enough to the C152 to have caused its pilot concern.



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