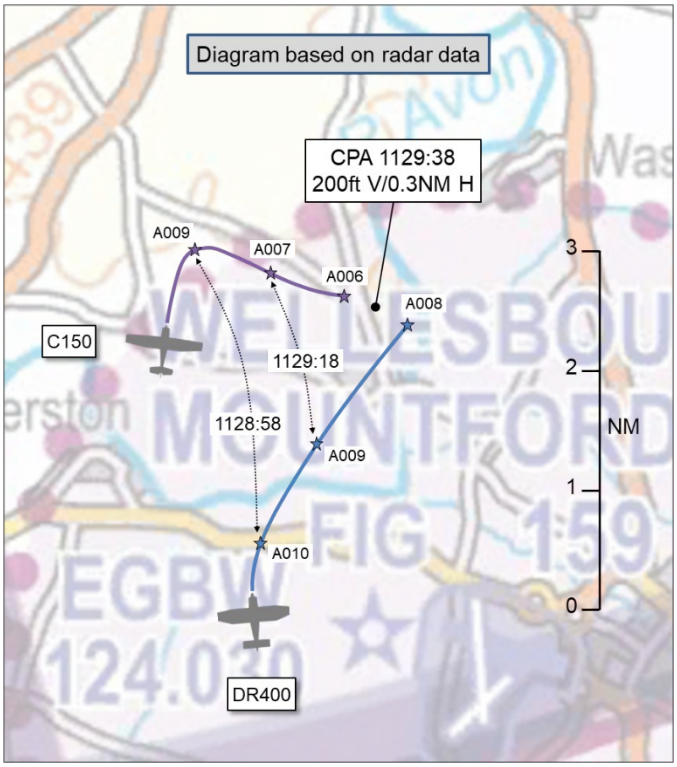
AIRPROX REPORT No 2024108

Date: 25 May 2024 Time: 1130Z Position: 5213N 00138W Location: Wellesbourne ATZ

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DR400	C150
Operator	Civ FW	Civ FW
Airspace	Wellesbourne ATZ	Wellesbourne ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Wellesbourne Info.	Wellesbourne Info.
Altitude/FL	800ft	600ft
Transponder	A, C, S	A, C, S
Reported		
Colours	Red, white	White, blue
Lighting	Strobes, nav	"*yes*"
Conditions	VMC	VMC
Visibility	5-10km	>10km
Altitude/FL	"*Landing*"	1200ft
Altimeter	QFE	QNH
Heading	"*runway heading*"	350°
Speed	<80kt	NK
ACAS/TAS	SkyEcho	Not fitted
Alert	Information[1]	N/A
Separation at CPA		
Reported	NK	500ft V/200m H
Recorded	200ft V/0.3NM H	



THE WELLESBOURNE AFISO reports that [the pilot of the] DR400 joined the circuit from the overhead (with three other aircraft in the circuit [at that time]) and turned downwind [for RW18] behind two aircraft ahead. A C150 was on base-leg and a PA28 was in the late downwind position shortly to turn onto base-leg.

The [pilot of the DR400] reported downwind and was told to report final, was given information about the two aircraft ahead and was asked to maintain a good lookout. The pilot acknowledged the information. The aircraft continued downwind and the AFISO observed the DR400 turn inside both aircraft.

There was sufficient separation between the C150 (on final approach at approximately 3/4 mile final) and the PA28 (on base leg, number 2 to the C150 on final). The pilot [of the DR400] reported final and the AFISO gave further information that [they had] turned inside the C150 and the PA28.

The pilot of [the DR400] decided to make a go-around back into the circuit. The C150 pilot landed safely followed by the PA28 pilot after the C150 had vacated the runway [they recall]. The DR400 pilot landed after completing a second circuit.

THE DR400 PILOT reports that, approaching the appropriate runway at Wellesbourne [after CPA], they made the judgement call that they needed to do a go-around. They applied full power and moved to the right of the runway which enabled them to stay safe and have full visibility of the runway at all times. They also had visibility of any traffic joining the circuit. On moving to the right, the 'tower' informed them that they nearly cut-up an aircraft [earlier, when they had been on the downwind leg]. They apologised at the time but asked themselves why an aircraft would be adjacent to the runway that, potentially, could

[1] The Board assessed that the Information had come from an aircraft other than the C150.

have prevented them from doing a go-round for safety reasons. They kept a lookout for joining aircraft on crosswind before they rejoined the circuit and landed safely.

The pilot assessed the risk of collision as 'None'.

THE C150 PILOT reports that they were in the circuit performing Ex.12,13 (Circuit patterns) with a student. The circuit in use was RW18RH at that time. They were number 2 on the downwind leg and, in front of them, was a PA28 (number 1) [they recalled]. The DR400 pilot had joined from the east and performed an overhead join. However, when the [DR400 pilot] joined the circuit, they crossed [the C150] on the downwind leg and positioned themselves between [the C150] and the PA28 [they believed].

[The pilot of the PA28] decided to extend the downwind leg (probably outside the ATZ) to enhance traffic separation and reported it to the Wellesbourne 'tower'.

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

Factual Background

The weather at Birmingham was recorded as follows:

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METAR EGBB 251120Z 13011KT 9999 BKN038 17/09 Q1017
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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 1).

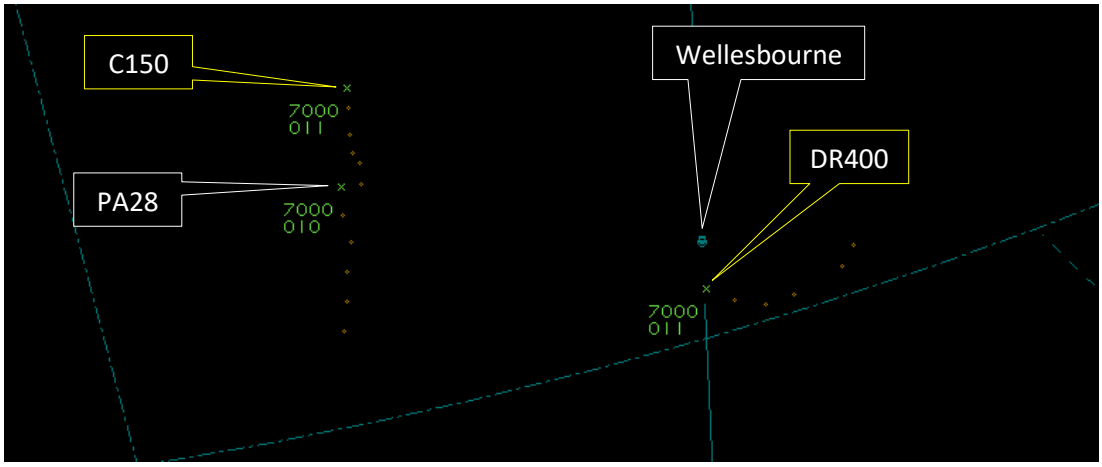

Figure 1 – Aircraft positions at 1128:02

The aircraft were depicted on the radar replay at Flight Levels. A suitable correction was applied to determine their altitudes. The diagram was constructed and the separation at CPA determined by reference to the radar data.

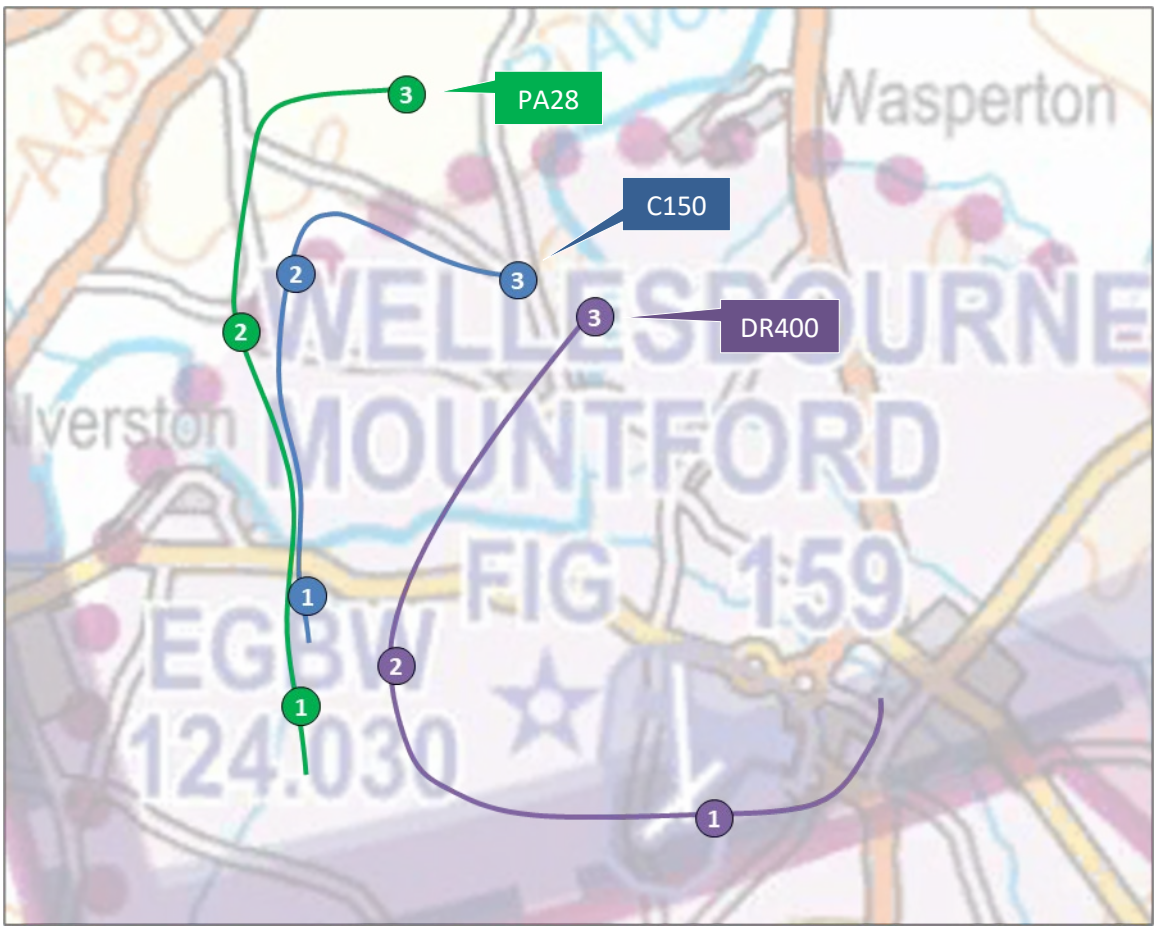

Figure 2 - Circuit patterns
The coloured dots depict the aircraft positions at 1128:02 (1), 1128:50 (2) and 1129:38 (3)

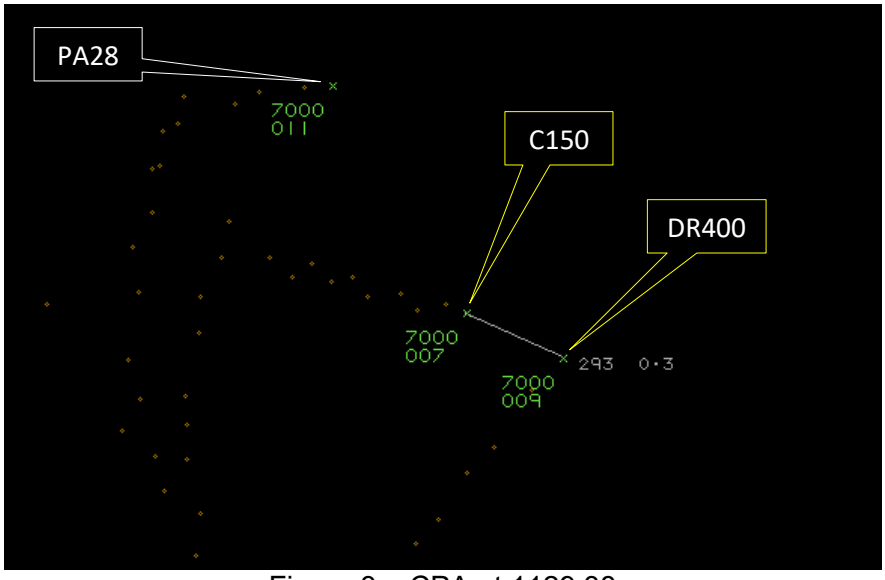

Figure 3 – CPA at 1129:38

The DR400 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] 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.[3]

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

Summary

An Airprox was reported when a DR400 and a C150 flew into proximity in the Wellesbourne ATZ at 1130Z on Saturday 25th May 2024. Both pilots were operating under VFR in VMC, both in receipt of an AFIS from Wellesbourne Information.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the AFISO involved, 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 discussed the actions of the pilot of the C150. Members noted that they had extended their downwind leg and had turned onto base leg at a position just outside the ATZ. A diagram for the circuit at Wellesbourne (as provided on the Wellesbourne Airfield website) was reviewed by members. It was noted that the standard circuit pattern for the runway that had been in use on this particular occasion, is wholly contained within the ATZ. However, it was acknowledged that such a diagram is only representative of a typical circuit pattern. The reason that the pilot of the C150 had extended their downwind leg was not clear to members, but they agreed that it would have been prudent for the C150 pilot to have relayed their intention on the Wellesbourne frequency for the benefit of the other pilots in the circuit and for the Wellesbourne AFISO (**CF3**). Members agreed that the same had been applicable to the pilot of the PA28 who had further extended their downwind leg for increased separation from the C150 ahead of them. Members were in agreement that the pilot of the C150 had had generic situational awareness of the presence of the DR400 (**CF7**) and noted there had been no need to have taken avoiding action when they had subsequently visually acquired the DR400 on the base leg. However, members appreciated that to have sighted the DR400 turning ahead of them on base leg had caused them some concern (**CF10**).

Turning their attention to the actions of the pilot of the DR400, members pondered their join to the Wellesbourne circuit. Members agreed that, although the EC device fitted to the DR400 would not have been expected to detect the presence of the C150 (**CF8**), it was noted that the Wellesbourne AFISO had passed Traffic Information on the C150 and PA28 to the pilot of the DR400. It was also noted that the information had been acknowledged. Members were therefore surprised that the pilot of the DR400 had flown a downwind leg that had not been parallel to the runway and that they had circumvented the order of the aforementioned traffic. Members were in agreement that the pilot of the DR400 had not complied with the regulation to have conformed with (or to have avoided) the pattern of traffic in the circuit (**CF2**). Further, members agreed that the pilot of the DR400 had not monitored the circuit appropriately to have conformed with the pattern of traffic (**CF5**). Further still, members agreed that the pilot of the DR400 had not correctly integrated into the circuit pattern despite having situational awareness of the presence of the C150 (and PA28) (**CF6**). Ultimately, members agreed that the pilot of the DR400 had not visually acquired the C150 (**CF9**) and had continued with a plan that had been wholly insufficient to have met the needs of the situation (**CF4**).

Members wished to emphasise the importance of a thorough and effective lookout whilst in the airfield overhead, and that a descent into the circuit should only be initiated once the traffic in the circuit had been identified and separation ensured. Members wished to highlight the guidance provided in CAA CAP1535 'The Skyway Code' and, in particular, the depiction of the standard overhead join (Figure 4).

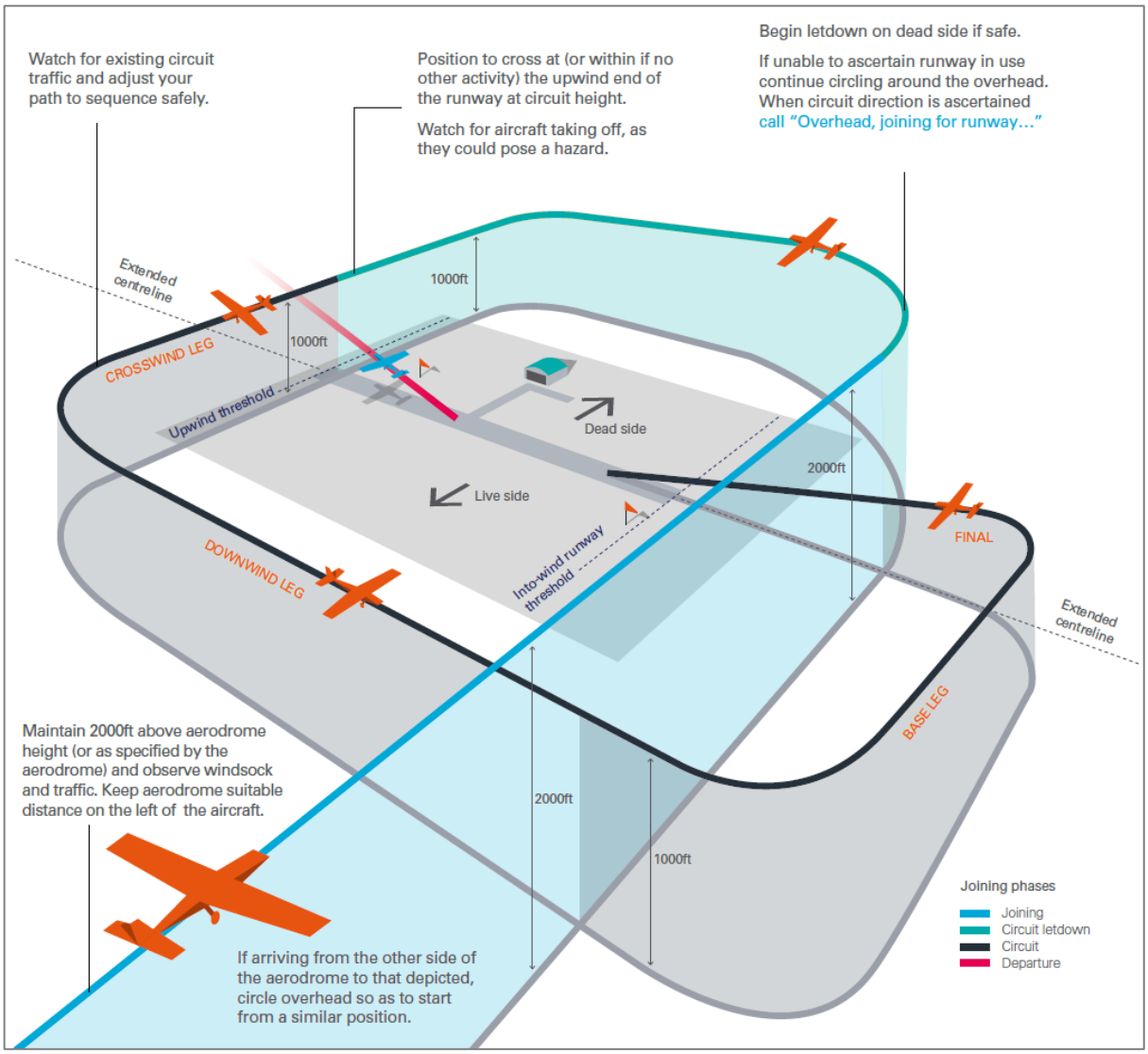

Figure 4 – The Standard Overhead Join as depicted in the Skyway Code

Members noted that the pilot of the DR400 had not recalled the actual Airprox event in their narrative report, but had focussed on an occurrence during their go-around. The Wellesbourne AFISO had passed a message to the pilot of the DR400 during the go-around that they had 'turned inside the C150'. Members surmised that, due to the timing of that transmission, the pilot of the DR400 may have believed that the Airprox had occurred at that point, whereas the AFISO's comment had actually referred to the interaction with the C150 on base leg earlier.

Members further considered the actions of the Wellesbourne AFISO and agreed that they had not been required to have sequenced the traffic in the circuit. However, it was agreed that they had passed sufficient Traffic Information to the pilot of the DR400 on the C150 and PA28 in the circuit for them to have considered their position in the pattern. Members agreed that the Wellesbourne AFISO had been concerned by the proximity of the C150 and DR400 on base-leg (**CF1**) and had informed the pilot of the DR400 of their 'cutting-in' appropriately.

Concluding their discussion, members agreed that it would have been helpful for the pilot of the C150 to have transmitted their intention to extend their downwind leg. However, the pilot of the DR400 had not assimilated the Traffic Information passed to them on the C150 and PA28, and had not been aware that they had, essentially, overtaken them. Members agreed that the actions of the pilot of the DR400 had significantly reduced safety margins. Notwithstanding, members agreed that, ultimately, the separation between the aircraft had been such that no avoiding action had been necessary, and no risk of collision had existed. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024108			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Human Factors	• Expectation/ Assumption	~~Events involving an individual or a crew/ team acting on the basis of expectation or assumptions of a situation that is different from the reality~~	Concerned by the proximity of the aircraft
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
2	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			
3	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
4	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
5	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			
6	Human Factors	• Incomplete Action	Events involving flight crew performing a task but then not fully completing that task or action that they were intending to carry out	Pilot did not sufficiently integrate with the other aircraft despite Situational Awareness
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	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			
9	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
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[4]

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

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the pilot of the DR400 had neither conformed with, nor had effectively avoided, the pattern of traffic formed in the circuit at Wellesbourne.

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

Tactical Planning and Execution was assessed as **ineffective** because the pilot of the DR400 had not adapted their plan to join the circuit at Wellesbourne sufficiently to meet the needs of the situation.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the DR400 did not integrate into the pattern of traffic in the circuit despite situational awareness of other traffic.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC device fitted to the DR400 would not have been expected to have detected the presence of the C150.