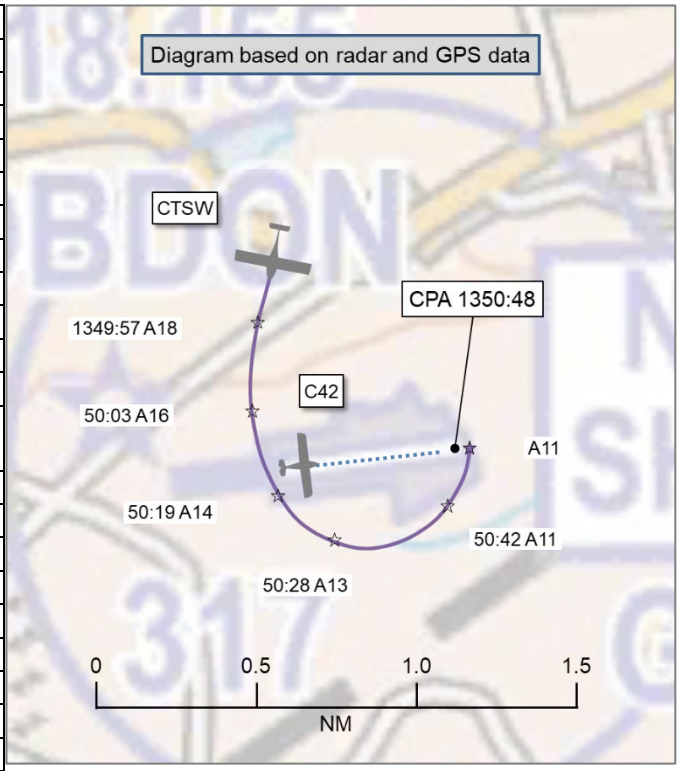
AIRPROX REPORT No 2023013

Date: 12 Feb 2023 Time: 1351Z Position: 5215N 00253W Location: Shobdon ATZ

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C42	CTSW
Operator	Civ FW	Civ FW
Airspace	Shobdon ATZ	Shobdon ATZ
Class	G	G
Rules	VFR	VFR
Service	AFIS	AFIS
Provider	Shobdon Info	Shobdon Info
Altitude/FL	NR	1100ft
Transponder	Not fitted	A, C, S
Reported		
Colours	White, blue	White
Lighting	Not fitted	Nav, anti-col, beacon
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	400ft	1000ft
Altimeter	QFE (1028hPa)	QFE (NK hPa)
Heading	080°	NK
Speed	70kt	120kt
ACAS/TAS	Not fitted	PilotAware
Alert	N/A	None
Separation at CPA		
Reported	500ft V/300ft H	Not seen
Recorded	NK	



THE C42 INSTRUCTOR reports flying with a pre-solo student on a circuit detail, flying right-hand, 500ft microlight circuits from RW08. On climb-out at 400ft, the Instructor noticed a CTSW immediately ahead, tracking right-to-left. The CTSW was entering the deadside at approximately 1000ft, 500ft below the minimum 1500ft dead side limit. The C42 Instructor turned right onto crosswind and called on the radio to announce they had seen a CTSW entering the dead side at 1000ft. They were concerned that the CTSW would come in to conflict with gliders, active that day, on downwind left-hand (on the deadside). As they tuned downwind right-hand for RW08, they continued to look out for the CTSW, concerned they might conflict again. The CTSW had commenced a left-hand 1000ft circuit on the deadside but then repositioned above and ahead of them on the right-hand microlight circuit for RW08. Once again, they announced that they could see the CTSW above in the microlight circuit and questioned its pilot's intentions. At that point the CTSW pilot climbed and moved out towards the corner of the downwind and base-leg on the GA circuit. The C42 Instructor carried out their circuit detail with no further conflict. After landing they went to see the FISO who said they did not see the conflict but were aware of the C42 Instructor's R/T calls. The C42 Instructor said they would file an Airprox. They went to see the pilot of the CTSW in the airfield cafe and introduced themself. The CTSW pilot recognised there had been a problem, but partly blamed the FISO for giving them misleading information. They claimed the FISO had told them the circuits were 08 left-hand. The CTSW pilot then claimed they saw the C42 on climb-out but then couldn't see them behind them because they didn't appear on their [TAS]. They said the [TAS] wasn't set up for audible alerts, instead they had to look at the screen for traffic information. The C42 Instructor explained that they were flying right-hand circuits, that their aircraft was not fitted with a transponder, like many aircraft in the circuit, and that the CTSW pilot should refrain from looking at the [TAS] screen in the circuit. They tried to explain the circuit patterns and restrictions for GA, microlights and gliders at Shobdon, but the CTSW pilot said he knew the procedures and had flown here many times before. The C42 Instructor shook his hand and wished him a safe flight home.

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

THE CTSW PILOT reports that they decided to fly to Shobdon. It appeared that the C42 was doing short circuits and touch-and-goes. They did not see the C42 and, on reaching the base leg of the wide circuit, the C42 was landing on RW08. They received no radio communication from the C42 pilot and later found out that the C42 had no transponder or other identification so was not picked up by their TAS. They had seen the C42 doing a touch-and-go on RW08 and had only the Instructor's word that there had been an Airprox. In retrospect a better action would have been to follow the C42 going outside its track and then go to the wider circuit, thus avoiding any possibility of conflict.

THE SHOBDON AFISO reports that a microlight instructor with student in [C42 C/S] reported an aircraft passing overhead their climb-out, tracking in the wrong direction. The Duty FISO observed [CTSW C/S] to the east, low-level (circa 500ft), tracking south. They appeared to be low-level crosswind. The CTSW pilot began to climb and acknowledged a transmission from [C42 C/S] asking if the aircraft was for the main circuit.

Factual Background

The weather at Birmingham was recorded as follows:

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EGBB 121350Z 17007KT 150V210 9999 OVC025 08/03 Q1036=
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Analysis and Investigation

CAA ATSI

At 1345:15 the pilot of the CTSW called the Shobdon FISO advising they were inbound and requesting joining information. The FISO advised the pilot that it was Runway 08 with a right-hand circuit, passed the QFE and requested a call in the overhead. The pilot read back the QFE and "*Runway 08 left-hand*". The FISO did not correct the wrong readback on circuit direction but went on to request the pilot's position, reported as about 5 miles north.

At 1348:46 the pilot of the C42 who was instructing a pre-solo student reported ready for departure and was given the runway.

At 1349:22 the pilot of the CTSW reported in the overhead "*descending deadside for 08 left-hand*". The FISO acknowledged the call and requested a call downwind. Again, they did not correct the wrong circuit direction.

At 1350:05 the pilot of the CTSW reported "*and its (callsign) into the circuit for 08 left hand*". The FISO replied "*just confirm it's 08 with a right-hand circuit?*" The pilot replied: "*correction 08 right-hand*".

The FISO then requested a position report from the pilot of the CTSW, to which the pilot replied "*now on the deadside going into the right-hand circuit for 08*" which was acknowledged by the FISO (Figure 1).

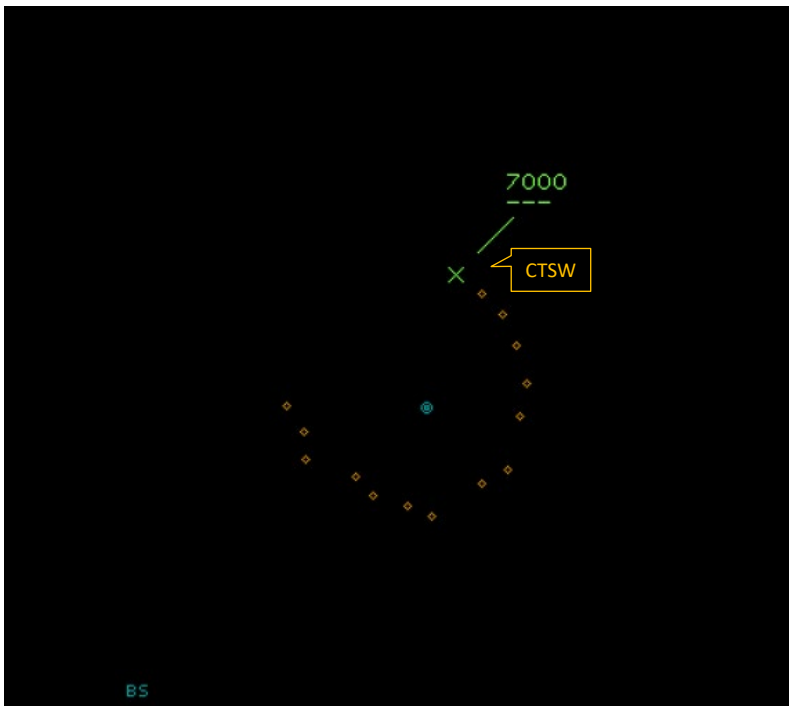


Figure 1 - 1310:10

At 1351:25 the pilot of the C42 called "*we've just noticed the CTW very low on the deadside*" to which the FISO replied with just the abbreviated callsign of the C42. Another call was heard, believed to be the CTSW pilot "*yeah I see him*", again acknowledged by the FISO with only the CTSW's abbreviated callsign (Figure 2).

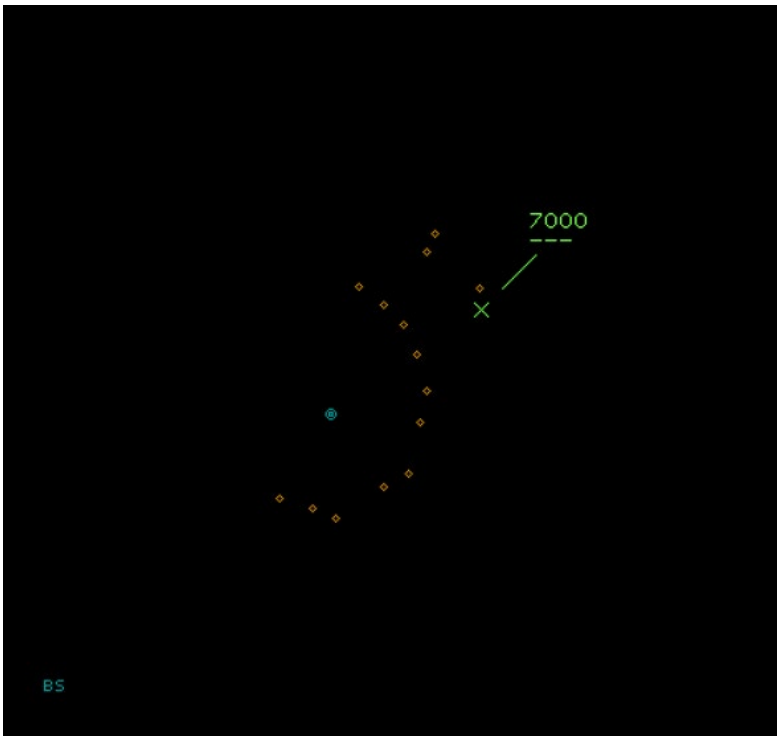


Figure 2 – 1351:25

At 1351:32 the pilot of the C42 asked, "*we're 500ft in the microlight circuit. Is the CTW in the main circuit or the microlight?*" The FISO replied "*I believe the main circuit*", to which the C42 pilot responded "*er roger that. We'll keep a good look out. It looks a bit unusually placed. We're downwind 08 main for a touch and go*". The FISO requested a finals call.

ATSI received copies of reports from both pilots and the Shobdon FISO. A unit investigation was also received. A review of the area radar replay and Shobdon RTF was also completed. Only the CTSW was visible on the radar replay.

On two occasions the pilot of the CTSW read-back a left-hand circuit for Runway 08, and this was not corrected by the FISO. The aircraft was then seen to be entering a left-hand circuit. On the third occasion the pilot mentioned a left-hand circuit, they were corrected by the FISO, and the aircraft was subsequently seen to make a 180° turn into the right-hand circuit. This turn took place in the Runway 08 climb-out where it is believed the Airprox occurred, with the C42 having just got airborne.

The Shobdon unit report identified the lack of correct self-briefing by the pilot of the CTSW as the main root cause, citing the fact that the FISO had originally passed the correct circuit direction, although they didn't detect the wrong read back by the pilot.

Both the AIP entry for Shobdon and the airfield's own website emphasise that powered aircraft are to circuit to the south of the airfield due to glider activity on the north side:

1 CIRCUITS

a. Circuit directions: Runway 26 - LH; Runway 08 - RH.
b. Circuit heights:
   i. Powered fixed-wing circuits at 1000 FT QFE to the south of the villages of Pembridge and Eardisland;
   ii. Microlight circuits at 500 FT QFE;
   iii. Helicopter circuits at 700 FT QFE inside the normal circuit pattern.
c. Radio failure procedure for a powered aircraft in VMC is for the circuit to be joined overhead not below 2000 FT QFE and to let down on the dead side, joining over the upwind end of the active runway, observing any light signals displayed.
d. Radio failure procedure for a glider in VMC is to join the normal glider circuit, keeping a good look-out for other traffic and land when safe on an available runway.

Circuit Information & Noise Abatement

Access the circuit chart here

Powered aircraft wide circuits:

08 Right Hand 1000ft QFE
26 Left Hand 1000ft QFE
Helicopters 700ft QFE
Micro lights 500ft QFE

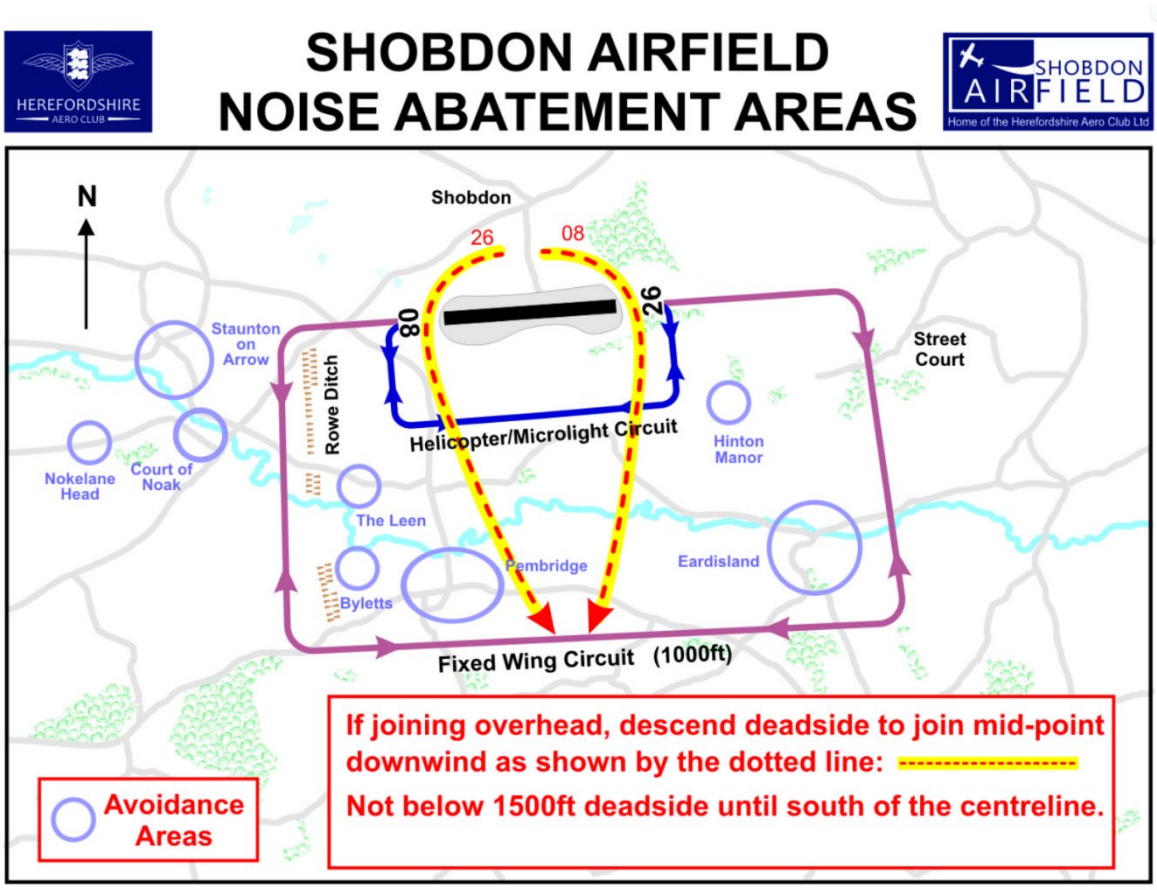
Glider circuit to the north of the airfield.

Landing on Northside Grass Runway

The noise abatement procedures apply to all aircraft using Shobdon Airfield with the exception of the Air Ambulance Service, police and military traffic.

Please check our noise abatement circuit before arrival and help us to be good neighbours by complying with our unusually large circuit avoiding the villages of Pembridge(SW), Eardisland(SE) and Staunton-On-Arrow(W).

The circuit route is available in Pooleys, AFE and Jeppesen flight guides or see the diagram below.



It cannot be determined if the pilot of the CTSW had correctly briefed for a right-hand circuit, but having incorrectly read back left-hand they appeared to position for a circuit to the north. Had the wrong readback been detected on either of the first two occasions by the FISO, it is considered likely that the pilot of the CTSW would have been able to reposition in good time and still remain ahead of the C42 joining the circuit behind them.

ATSI also noted that no Traffic Information had been passed to the pilot of the C42 on the arriving CTSW, nor to the CTSW pilot on the C42 entering the circuit.

The pilot of the CTSW, having joined for the wrong circuit and whilst in the process of correcting this circuit, came into confliction with the departing C42. Opportunities to assist the CTSW pilot in making the correct join were missed on two occasions by the Shobdon FISO through not identifying and correcting the wrong readback.

UKAB Secretariat

The C42 and CTSW 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 C42 and a CTSW flew into proximity in the Shobdon visual circuit at 1351Z on Sunday 12th February 2023. Both pilots were operating under VFR in VMC, both in receipt of an AFIS from Shobdon Information.

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

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, a report from the AFISO involved and a report from the appropriate operating authority. 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.

Members first discussed the pilots' actions and agreed that the CTSW pilot had joined the visual circuit for RW08RH in the wrong direction. The Board wondered to what degree the CTSW pilot had self-briefed (**CF8**), whether they had used RW08RH on one of their many previous visits or to what degree their uncorrected mistaken R/T calls of 'Runway 08 left-hand' had influenced their subsequent join. In the event, the CTSW pilot had flown a joining track for a left-hand circuit to RW08RH (**CF6**), although the Shobdon UK AIP entry and website notified a right-hand circuit to RW08 (**CF5**), and hence had not conformed with the pattern of traffic in operation (**CF7**). The C42 pilot had unsurprisingly not assimilated the CTSW pilot's incorrect R/T calls and hence neither pilot had had situational awareness of the developing situation (**CF9**). Turning to the AFISO, members agreed that they had not detected the CTSW pilot's incorrect read-back or incorrect overhead call (**CF3**), that their situational awareness may have been incorrect (**CF4**) and that they had not passed Traffic Information to either pilot (**CF2**, **CF1**). Members noted that even if the C42 pilot had not been taking-off at the time, the CTSW pilot had still flown into potential confliction with the gliders operating on the north side of the airfield and that this mixed traffic operation placed an increased onus on the AFISO to maintain the overall 'safety picture'. The Board discussed the EC barrier, noted that it had not functioned because the C42 had not been fitted with a transponder (**CF10**) and expressed their opinion that an aircraft used for training would benefit from being so fitted in order to train a student pilot in its use and to provide a valuable mitigation to mid-air collision by alerting other aircrafts' TAS. The Board surmised from the CTSW pilot's report that they had not seen the C42 as it took-off (**CF11**) but agreed that, although the C42 pilot had been concerned by the proximity of the other aircraft (**CF12**), they had seen it in sufficient time to avert any possibility of mid-air collision, Risk C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023013			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Regulations, Processes, Procedures and Compliance			
1	Human Factors	• ATM Regulatory Deviation	An event involving a deviation from an Air Traffic Management Regulation.	Regulations and/or procedures not fully complied with
	• Situational Awareness and Action			
2	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
3	Human Factors	• ATM Personnel Hear back	An event involving the hearback (listening) of ATM personnel to communications	
4	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
5	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			
6	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
7	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

8	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
	• Situational Awareness of the Conflicting Aircraft and Action			
9	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			
10	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			
11	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
12	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:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the Shobdon AFISO did not detect the CTSW pilot's incorrect readback of circuit direction and did not pass Traffic Information to each pilot.

Situational Awareness of the Confliction and Action were assessed as **ineffective** because the Shobdon AFISO did not take action when the CTSW joined in the wrong direction.

Flight Elements:

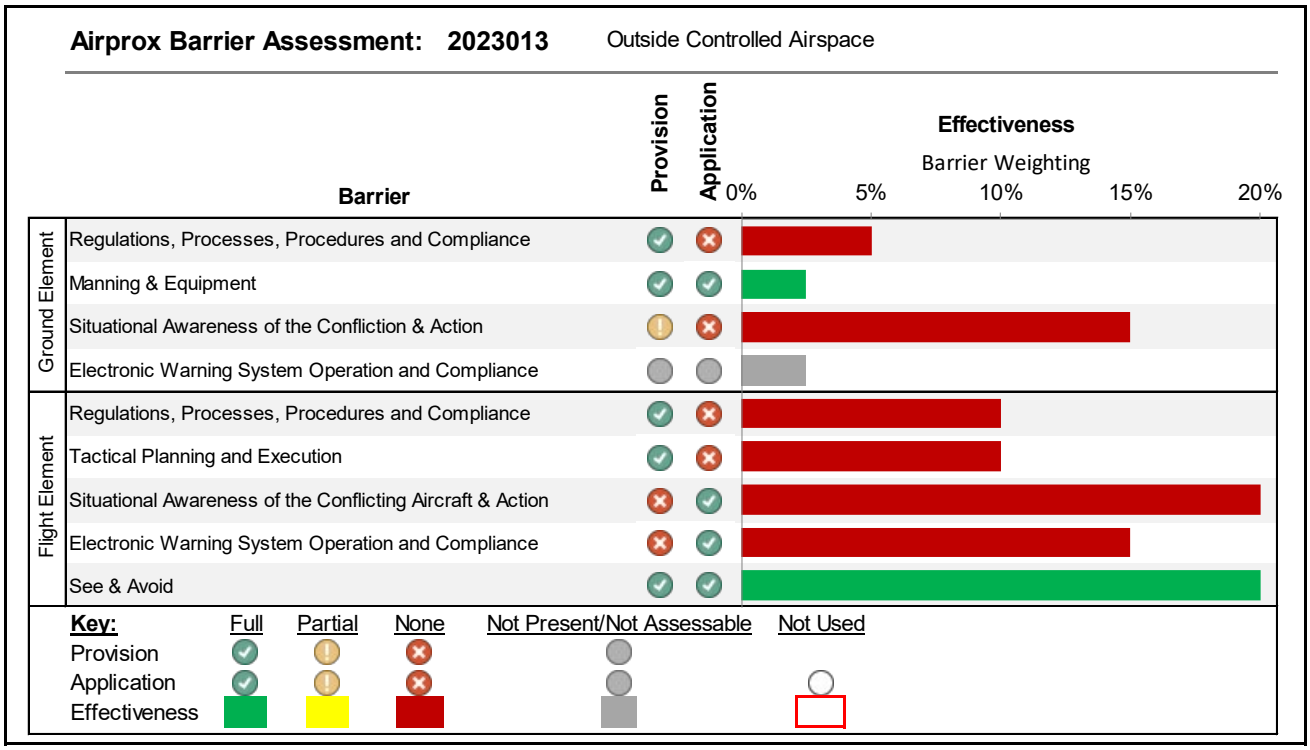
Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the CTSW pilot did not join in accordance with the promulgated Shobdon instructions.

Tactical Planning and Execution was assessed as **ineffective** because the CTSW pilot joined in the wrong direction and did not integrate with the pattern of traffic at Shobdon.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had situational awareness of the other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the C42 was not equipped with EC equipment and the CTSW TAS could not alert on it.

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


Airprox Barrier Assessment: 2023013
Outside Controlled Airspace
Barrier
Provision
Application
Effectiveness
Barrier Weighting
0%
5%
10%
15%
20%
Ground Element
Regulations, Processes, Procedures and Compliance
Manning & Equipment
Situational Awareness of the Confliction & Action
Electronic Warning System Operation and Compliance
Flight Element
Regulations, Processes, Procedures and Compliance
Tactical Planning and Execution
Situational Awareness of the Conflicting Aircraft & Action
Electronic Warning System Operation and Compliance
See & Avoid
Key:
Full
Partial
None
Not Present/Not Assessable
Not Used
Provision
Application
Effectiveness