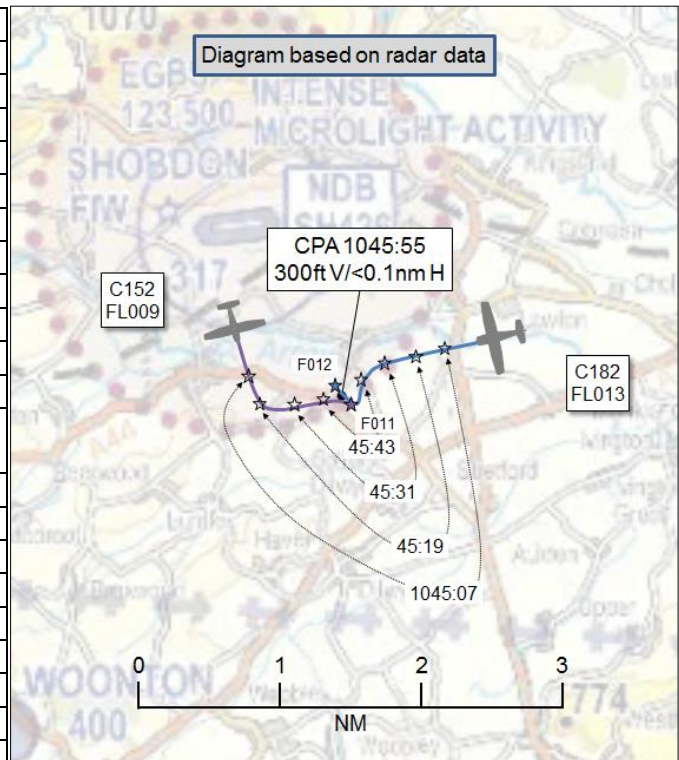


AIRPROX REPORT No 2017190

Date: 10 Aug 2017 Time: 1046Z Position: 5213N 00251W Location: Shobdon (elev: 317ft)

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C182	C152
Operator	Civ Club	Civ Trg
Airspace	Shobdon ATZ	ATZ
Class	G	G
Rules	VFR	VFR
Service	Information	Information
Provider	Shobdon	Shobdon
Altitude/FL	FL011	FL009
Transponder	A, C, S	A, C, S
Reported		
Colours	White/blue/red	White/blue/brown
Lighting	Strobe, beacon, landing	Nav, landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1100ft	1000ft
Altimeter	QFE (NK hPa)	QFE (NK hPa)
Heading	260°	090°
Speed	90kt	90kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	100ft V/200m H	200ft V/400m H
Recorded	300ft V/<0.1nm H ¹	



THE C182 PILOT reports flying downwind to land on RW08RH when the passenger, who was a PPL holder, noticed an aircraft ahead and below in the 11 o'clock position. The C182 pilot made a turn to the left to overtake if required, and widened his circuit pattern so as not to catch up with the other aircraft. During this shallow turn, he saw that the other aircraft was in fact flying towards him on what he concluded was a collision course. He made a steep turn to the right and levelled the wings. The other aircraft, a C152, passed below on the left in the opposite direction to the circuit. The C182 pilot didn't report the Airprox due to workload, and wasn't aware that he could report it to Tower once on the ground. During the brief time he spent at Shobdon, an instructor found him, stated that his student pilot was piloting the C152 in question, and apologised for the situation. The C182 pilot outlined the avoiding action that he had taken. The instructor went on to say that the student was not familiar with the RW08RH circuit pattern and that was why he had been downwind in the wrong direction.

He assessed the risk of collision as 'Medium'.

THE C152 PILOT reports returning to Shobdon from a solo cross-country landaway. He was given runway information as RW08RH. Instead of flying the RH circuit he joined overhead and mistakenly turned left downwind for a LH circuit. Just as he turned left, Tower contacted him to confirm he was tracking east. At this point he realised his mistake and saw the other aircraft above him to the left, tracking towards at 5-600m distance. The other aircraft pulled up and turned to its right as he also turned right through 180° to fly the correct circuit. He then let Tower know of his action and followed the circuit correctly to land on the grass. The C152 pilot noted that this was his first RH circuit at the airfield and that he was landing on the grass due to [planned] closure of the main runway.

He assessed the risk of collision as 'Low'.

¹ Interpolated between radar sweeps at 1045:51 and 1045:55.

THE SHOBDON AFISO reports everything seemed to be in accordance with SOP's and expected R/T calls were all correctly acknowledged and read back until both the C182 and C152 pilots called 'downwind' at similar times. The AFISO looked south to observe an aircraft tracking in the wrong direction, eastbound, at approximately the mid-point downwind. At the same time, a second aircraft westbound was approximately mid-point downwind making a turning manoeuvre. At this point he checked with the C152 pilot whether it was he who was tracking east, in the wrong direction. When the C152 pilot confirmed this, the AFISO pointed out that it was a right-hand circuit for RW08 and that he needed to make a 180° turn. By the time of this recommendation, both aircraft had already passed each other. The AFISO noted that he was expecting the C152 pilot's 'downwind' call would be at the mid-point and the C182 pilot's 'downwind' call would be at the start of the downwind leg; at the time of his reaction to the 'downwind' calls, by looking south, it appeared that the C152 was south of the C182 by some distance and that Traffic Information was not passed to either pilot.

Factual Background

The weather at Birmingham was recorded as follows:

METAR EGBB 101050Z 34008KT 9999 SCT035 17/09 Q1025=

Analysis and Investigation

CAA ATSI

ATSI had access to reports from both pilots, and the Shobdon AFISO. The area radar and R/T recordings were also reviewed. It was not possible to align the R/T time-codes with the radar and so times of transmissions are estimated, based on the radar replay. Screenshots in the report are taken from the area radar. All times UTC. Both pilots were operating under VFR, inbound to land at Shobdon and in receipt of a Basic Service, becoming an Aerodrome Flight Information Service.

At approximately 1025, the Shobdon AFISO was heard to respond to a call from the C152 pilot. He advised that runway RW08 was in use with a right-hand pattern, and the QFE was passed. The C152 pilot's transmissions were not recorded. This is considered likely due to the positioning of the aerial for R/T recorders at Shobdon, and it is known that transmissions by aircraft further than 10nm from Shobdon are generally not received by the system². It was noted that the AFISO prefixed the C152 callsign in this and all other transmissions to the pilot with the word 'student'³.

The AFISO requested the C152 pilot to report the airfield in sight, and advised him that it was a Basic Service. The AFISO was then involved with various other aircraft inbound to and outbound from the airfield. At approximately 1037, the C152 pilot, now audible on the recording and also prefixing his callsign with 'student', reported 3nm east of Leominster, (which is 8nm east of Shobdon), and that he had the airfield in sight. After questioning by the AFISO, the student pilot requested an overhead join. The AFISO requested that he report in the overhead which was acknowledged by the student pilot.

At approximately 1038 the C182 pilot reported being inbound. The AFISO advised that RW08 was in use with a right-hand pattern, and passed the QFE. Shortly afterwards, the AFISO requested a position report from the C182 pilot, which was given as 15nm east of the airfield. The AFISO acknowledged this, requested that the pilot report the airfield in sight and advised him that it was a Basic Service, Figure 1.

² There is no legislated requirement for AFIS units to record R/T.

³ CAP413 (Radio Telephony Manual) states that on initial contact, student pilots who are flying solo shall use the callsign prefix 'STUDENT'. Once acknowledged, it will not normally be necessary for student pilots to use the prefix in subsequent transmissions until making initial contact with other ATSU's, unless they feel they are being instructed to do something with which they are unfamiliar.

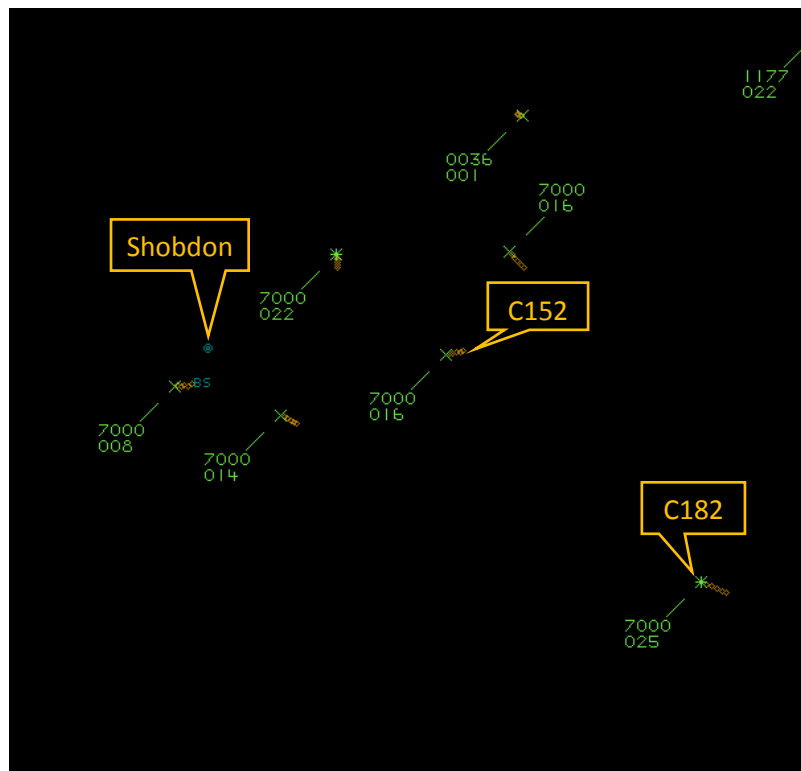


Figure 1 – 1038:18

At approximately 1043 the C152 pilot reported turning onto the deadside. The AFISO requested a call in the downwind position which was acknowledged by the student pilot, Figure 2.

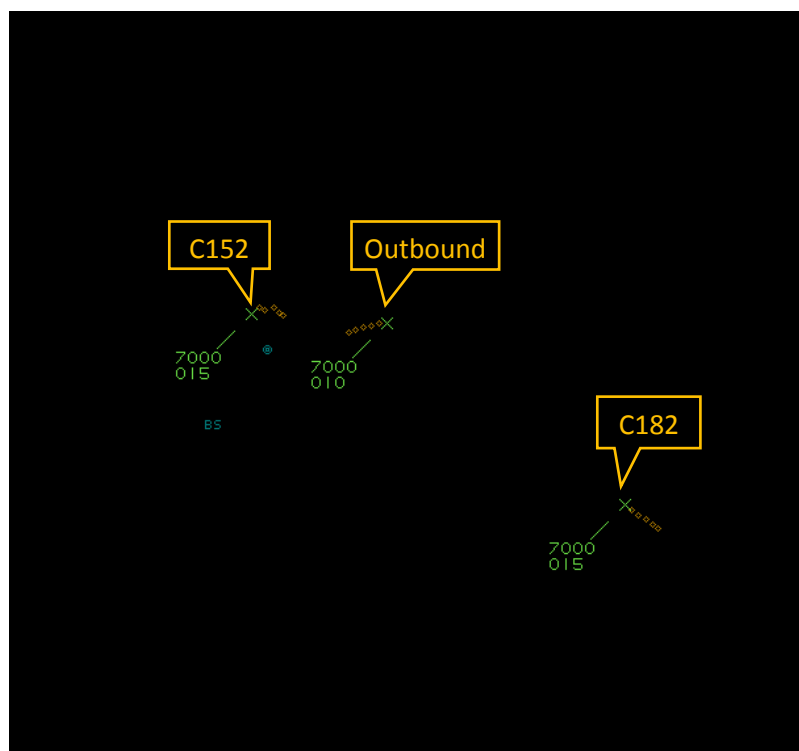


Figure 2 – 1043:40

At approximately 1044 the C182 pilot reported the airfield in sight and advised that he would be joining downwind. The AFISO acknowledged this and passed Traffic Information to him on an outbound aircraft and to the outbound pilot on the C182. At approximately 1045 the C182 pilot reported downwind and was requested by the AFISO to report final, Figure 3.

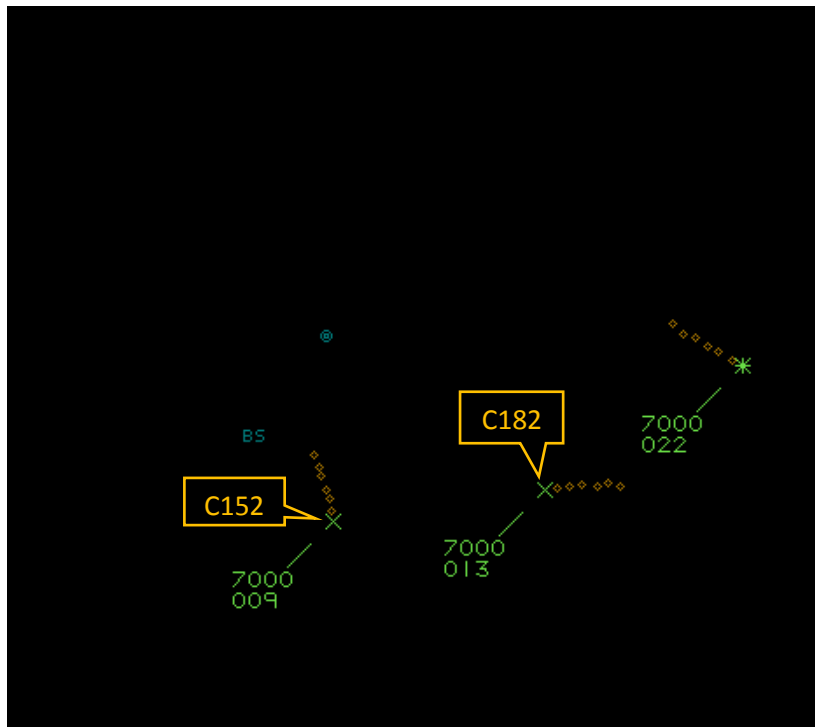


Figure 3 – 1045:20

Shortly afterwards the C152 pilot also reported downwind, Figure 4.

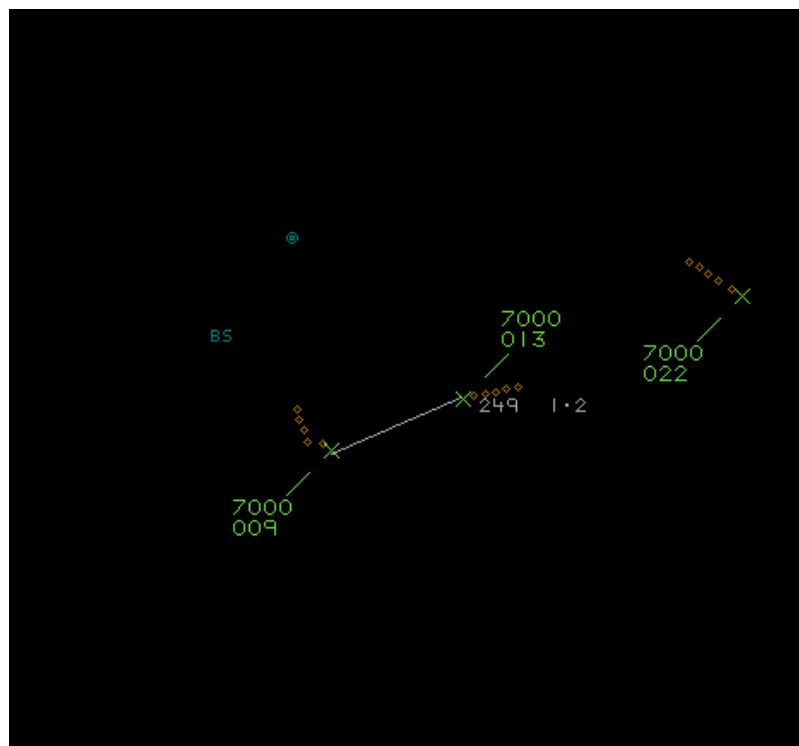


Figure 4 – 1045:10

The AFISO acknowledged this and at approximately 1045:35, asked the C152 pilot to confirm whether he was eastbound at that time. The student pilot asked the AFISO to repeat the message, who then received an acknowledgement and confirmation of easterly track from the C152 pilot, Figure 5.

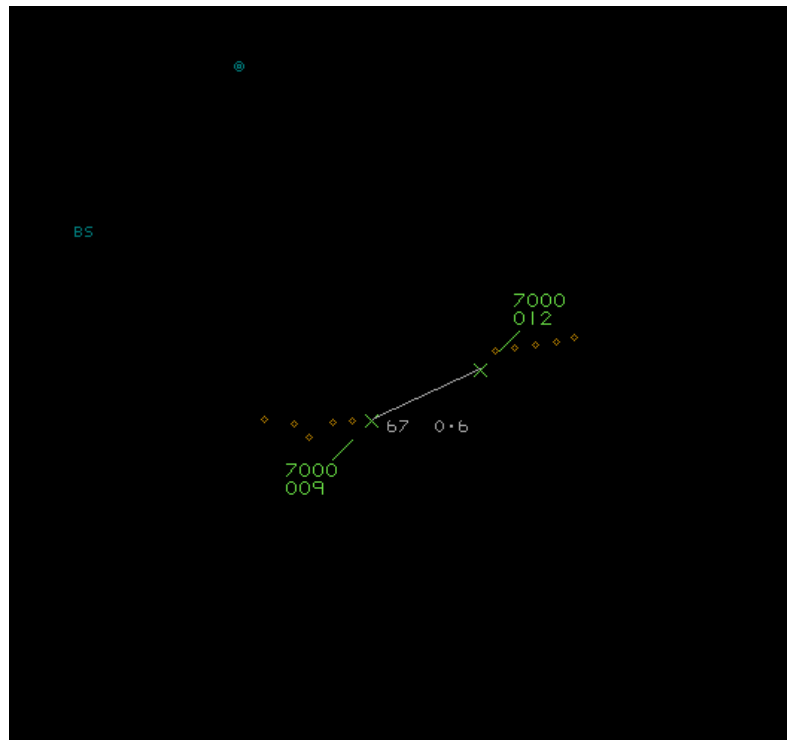


Figure 5 – 1045:35

CPA was assessed as taking place at 1045:53, with the C182 pilot having initially made a turn to the left, followed by a sharper turn to the right, and with the aircraft separated by 0.2nm laterally and 300ft vertically, Figure 6.

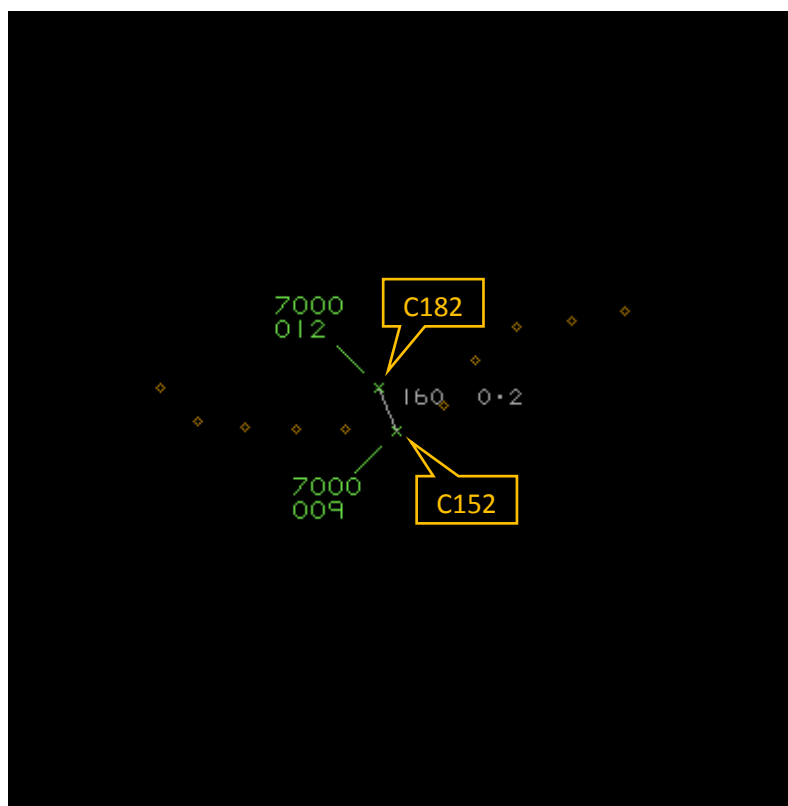


Figure 6 – 1045:53

It was estimated that about 15 seconds after CPA, the AFISO reminded the C152 that:

'It's a right-hand pattern for zero eight. You need to make a one eighty and er join downwind going west'

The student pilot replied:

'[C/S] doing a one eighty'.

ATSI were unable to confirm whether a correct readback of the runway in use (RW08), passed by the AFISO to the C152 pilot at approximately 1025, was received. ATSI assumed that an accurate readback was received, as the AFISO did not issue a correction. The student pilot reported seeing the C182 on his left-hand side before observing it make a right turn to pass further to the left.

The AFISO report indicated that due to variable winds, the runway in use at the start of operations at 0800 was RW26 with a left-hand pattern. It then changed to RW08 right-hand at 0835 and RW26LH at 1115. ATSI did not have access to flight plan information, but considered the possibility that the C152 student pilot had been briefed for, and departed on RW26, and had not fully assimilated that the runway had changed before their return.

In the summary and analysis of his own actions, the AFISO noted that reciprocal traffic information had not been passed to the C182 and C152 pilots. His own situational awareness appeared to have been impacted by the incorrect position report received from the C152 pilot.

ATSI discounted the possibility that R/T from the AFISO could be considered to have been ambiguous or likely to have been taken as an instruction by either pilot. On the whole, R/T and procedures were standard. The point at which the AFISO said to the C152 that he needed to make a 180 (degree) turn, was not considered to be an instruction, but rather, advice. CAP797 states:

'To facilitate the integration of arriving aircraft with existing circuit traffic, in addition to the provision of traffic information, AFISOs may provide advice on the published aerodrome joining procedures and/or a suggested course of action to the traffic situation'.⁴

At the time the AFISO passed advice on making a turn to the student pilot of the C152, the aircraft had already passed each other and the conflict had been resolved. Both pilots were operating in Class G airspace and were responsible for their own collision avoidance.

UKAB Secretariat

The C182 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 hazard⁵. 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 operation⁶.

Summary

An Airprox was reported when a C182 and a C152 flew into proximity at 1046 on Thursday 10th August 2017. Both pilots were operating under VFR in VMC, both in receipt of an Aerodrome Flight Information Service from the Shobdon AFISO.

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 ATC authority.

⁴ CAP797 – Section 2, Chapter 8, Para 8.96.

⁵ SERA.3205 Proximity.

⁶ SERA.3225 Operation on and in the Vicinity of an Aerodrome.

Members quickly agreed that this incident occurred as a result of the student pilot mistakenly turning the wrong way having reached the overhead, and that this was most likely due to a combination of inexperience and habitual practice having only flown RW26 left-hand circuits previously. The Board noted that, nevertheless, it was the student pilot's responsibility to integrate with traffic in the visual circuit, and that by turning the wrong way he had introduced serious risk to both himself and other airfield users. Some members wondered whether the potential for a runway change had been evident and specifically briefed during the student's preparation for the flight, and whether the instructor had also refreshed the student on the procedures for joining RW08 if it were necessary; a timely reminder for all pilots to consider unexpected changes in airfield status prior to flight, the Board hoped that this was a lesson that had likely been well learned by the student concerned.

Turning to the risk, in the event, although the plan range separation between the aircraft had reduced significantly, the Board noted that they remained separated in height at all times. That being said, the potential for a more serious outcome had been present and there was some discussion about whether safety had been much reduced below the norm (Category B). However, in this case, the Board felt that each pilot had seen the other aircraft in time to take effective avoiding action and, allied with the apparent 300ft height separation throughout, the risk was agreed as Category C.

PART C: ASSESSMENT OF CAUSE, RISK AND SAFETY BARRIERS

Cause: The C152 student pilot mistakenly turned the wrong way downwind and flew into conflict with the C182.

Degree of Risk: C.

Safety Barrier Assessment⁷

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

ANSP:

Situational Awareness and Action were assessed as **ineffective** because the AFISO was not aware of the relative tracks of the aircraft until at about CPA and hence could not pass information to either pilot.

Flight Crew:

Regulations, Processes, Procedures, Instructions and Compliance were assessed as **ineffective** because the C152 pilot did not conform with the pattern of traffic formed by other aircraft in operation at Shobdon.

Tactical Planning was assessed as **ineffective** because the C152 pilot conducted his overhead join in the wrong direction.

Situational Awareness and Action were assessed as **ineffective** because neither pilot was able to form a correct mental picture of the other's flight-path before CPA.

See and Avoid were assessed as **partially effective** because the separation was such that avoiding action was achieved at a late stage.

⁷ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

