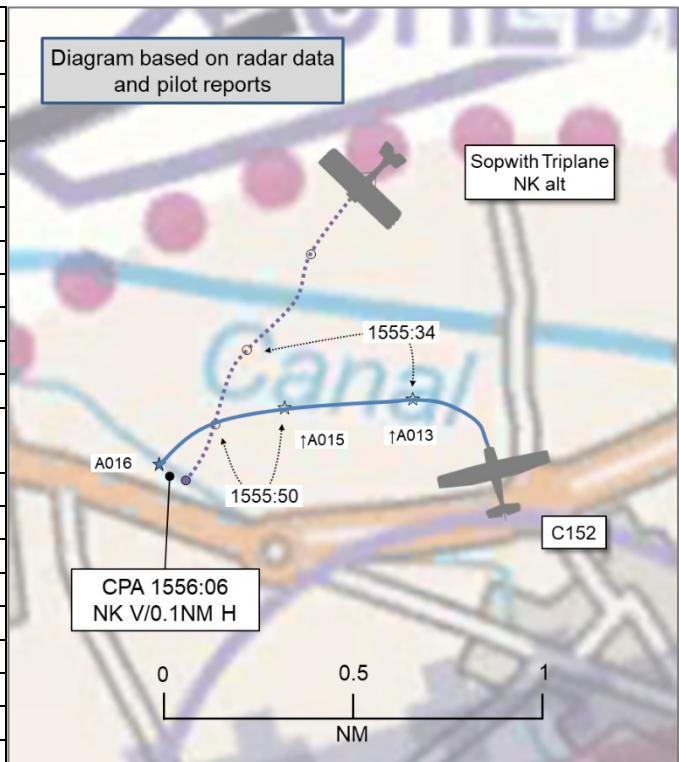


AIRPROX REPORT No 2022065

Date: 03 May 2022 Time: 1556Z Position: 5149N 00046W Location: 1.5NM NW Halton airfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	C152	Triplane
Operator	Civ FW	Civ FW
Airspace	Halton ATZ	Halton ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	Listening Out
Provider	Halton Radio	Halton Radio
Altitude/FL	1600ft	NK
Transponder	A, C, S	Not fitted
Reported		
Colours	Yellow	Cream
Lighting	Nav, Beacon, Strobe, Landing	Nil
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	1300ft	"Variable"
Altimeter	QNH (1021hPa)	QNH (NR hPa)
Heading	290°	~SW
Speed	65kt	65kt
ACAS/TAS	SkyEcho	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	50ft V/200m H	Not seen
Recorded	NK V/0.1NM H	



THE C152 PILOT reports that, following a departure from RW02 at Halton, they came close to what was believed to be a Sopwith Triplane on the crosswind/downwind leg. As they climbed, at approximately 1300ft (QNH) on crosswind, the Triplane appeared slightly lower, directly ahead, tracking right-to-left (north-to-south). The Triplane continued following almost exactly the RW02 downwind leg out towards the south-southwest. Immediately after spotting the aircraft they made a climbing right turn then left to overtake. They departed the circuit downwind towards the west.

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

THE TRIPLANE PILOT reports that they were returning from practise and DA renewal, navigating round the edge of Aylesbury to avoid flying over the built-up area. [They had been] flying away from Halton towards Stokenchurch, routing back to [destination airfield]. [They believe that the] Airprox was submitted by the pilot of an aircraft passing above them but they have no information about its position. [They recall] no aircraft noise, disturbed airflow, movement or motion being detected in vicinity of their Sopwith and so assume it was low risk. [They opine that] if photos had been taken from above then there was [adequate] separation. The pilot stated that they had been flying an oscillating flight path to clear airspace below and in front due the extremely limited visibility due to the wing position.

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

THE HALTON AIR/GROUND RADIO OPERATOR contributed to the local investigation which has been summarised below.

Factual Background

The weather at Luton was recorded as follows:

METAR EGGW 031550Z AUTO 03003KT 340V070 9999 0VC021 13/09 Q1021

Analysis and Investigation

Halton Airfield Operations

A safety investigation was carried out by the Station Flight Safety Officer and the Airfield Operations Team which has been summarised below.

[The C152 pilot] was departing from RW02LH. At approximately 1300ft on QNH (airfield elevation 370ft) a Triplane passed ahead and slightly lower. The Triplane passed within 200m and 50ft below, tracking slightly tighter than the downwind leg for RW02LH, routing roughly north-to-south. No radio calls were heard from the Triplane pilot. Halton Radio was active at the time due to [the C152 pilot] departing. [The C152] pilot made a turn to avoid the Triplane.

The pilot of the Triplane was contacted and they confirmed that they had passed by Halton at that time. They confirmed that they navigate only by a chart due to the lack of electrics in the aircraft and that they were trying to squeeze between Aylesbury and the airfield. They did not call Halton Radio because they thought Halton closed at 1700 local. [The pilot was informed of the] opening days & times and that there is powered flying most days, gliding at times, ATZ crossings, drones operating nearby and Halton Radio can give information on a lot of this traffic if called. [The pilot stated] that Triplanes offer very limited vision ahead and that they often do not use the radio due to difficulties using a handheld radio in an open cockpit. [The pilot] claimed to have been at 2000ft, however the C152 pilot and the airfield manager both estimate the Triplane to have been at 1000ft. The C152 pilot supplied a photo showing the Triplane in which it can be seen that the Triplane is well below the C152.

UKAB Secretariat

An analysis of the NATS radar replay has been undertaken and the C152 was identifiable using Mode S. At the time of the incident there was a primary-only contact which aligned with the reported location of the Triplane. Therefore it would be reasonable to assume that the primary contact was the Triplane although it cannot be confirmed.

The C152 was first detected at 1555:20 as it passed 1200ft climbing out from RW02 at Halton on the crosswind leg. At this time the primary contact was to the northwest of the C152 at a range of 0.6NM (Figure 1).

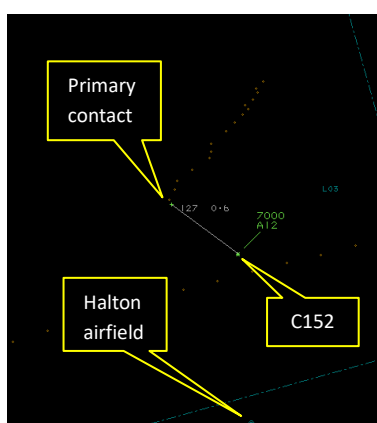


Figure 1 – C152 first detected.

The C152 was seen to continue the climb into the circuit whilst the primary contact tracked south-southwest. The C152 crossed behind the primary contact at 1555:58. The horizontal separation at this time was 0.1NM (Figure 2).

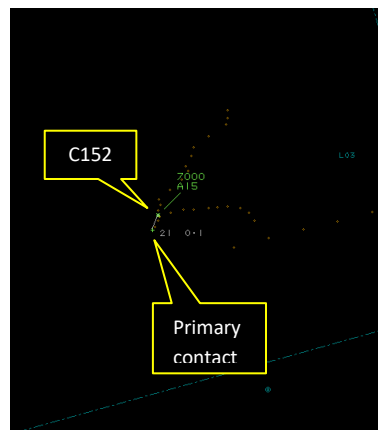


Figure 2 – C152 crossed behind primary contact.

Shortly afterwards, the C152 pilot took a photograph of the Triplane which appeared to be below the C152 and between the C152 and Halton airfield (Figure 3).



Figure 3 – Photograph taken by C152 pilot.

After crossing behind the primary track, the C152 was seen to overtake it. The measured horizontal separation remained at 0.1NM; however, on the radar replay the two returns were visually at their closest at 1556:06, the time of CPA (Figure 4).

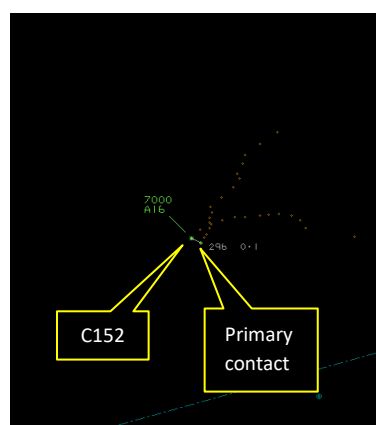


Figure 4 – CPA.

The C152 and Sopwith Triplane 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

¹ (UK) SERA.3205 Proximity.

aircraft in operation.² An aircraft must not fly, take off or land within the aerodrome traffic zone of an aerodrome unless the commander of the aircraft has obtained information from the air/ground communication service to enable the flight to be conducted safely within the aerodrome traffic zone.³

Summary

An Airprox was reported when a C152 and a Sopwith Triplane flew into proximity 1.5NM northwest of Halton airfield at 1556Z on Tuesday 3rd May 2022. Both pilots were operating under VFR in VMC, the C152 pilot in receipt of an AGCS from Halton Radio, the Sopwith Triplane pilot was not in receipt of an ATS.

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 reports from the appropriate operating authorities. 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 C152 pilot and members had been encouraged that the pilot had been carrying additional EC equipment; however, this had been incompatible with the equipment carried on the Triplane (**CF7**). Members discussed whether the C152 pilot had had any prior awareness of the Triplane and concluded that they had not (**CF6**). The Board then agreed that the C152 pilot had become visual with the Triplane at an early stage and had taken appropriate action to provide separation.

Next, members discussed the actions of the Triplane pilot and a GA pilot member highlighted some of the additional considerations that they would have had when operating an aircraft of this design. The Board acknowledged these and then focused on the routing chosen by the pilot. Following an examination of a VFR chart, members agreed that there had not been a navigable gap between Halton ATZ and Aylesbury (**CF5**) and, by attempting to follow this routing, the Triplane pilot had unknowingly entered Halton ATZ without having first established contact with the Halton Air/Ground Radio operator to obtain the required information (**CF1, CF2, CF3**). Members had been encouraged that the pilot had flown an oscillating flight path to help improve visibility for lookout, however, this had not entirely mitigated the obscuration caused by the centre wing (**CF9**). Members agreed that the Triplane pilot had not been aware that they had been in such proximity to Halton and so had not had any prior awareness of the presence of the C152 (**CF6**). Members then agreed that the Triplane pilot had not sighted the C152 (**CF8**) and, as such, the Triplane pilot had not avoided the pattern of traffic which it had formed (**CF4**).

The Board then considered the actions of the Air/Ground operator and acknowledged that they are only able to pass information on to pilots and that, as the PA28 pilot had not made contact with them, there had been none available.

Finally, the Board considered the risk involved in this Airprox. Members noted that the pilot of the Triplane had not had any awareness of the presence of the C152, nor had they become visual with it. However, the C152 pilot had become visual with the Triplane early enough to enable them to take action to provide separation and, although safety had been degraded, members were satisfied that there had been no risk of collision. Consequently, the Board assigned a Risk Category C to this event.

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

³ The Rules of the Air Regulations 2015, Section 3, Article 11(5).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**Contributory Factors:**

	2022065			
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	• Airspace Infringement	An event involving an infringement / unauthorized penetration of a controlled or restricted airspace.	E.g. ATZ or Controlled Airspace
3	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
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
5	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				
6	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				
7	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				
8	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
9	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other

Degree of Risk: C

Safety Barrier Assessment⁴

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 C152 pilot was operating with an Air Ground Communications Service and, as such, the Air/Ground Operator can only pass information to pilots.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the Triplane pilot had not requested the required information from the A/G Operator prior to entering the ATZ.

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 Triplane pilot had not requested the required information from the A/G Operator prior to entering the ATZ and there is insufficient space between Aylesbury and the Halton ATZ for aircraft to transit between the two.

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

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC device carried by the C152 pilot had not been able to detect the Triplane.

