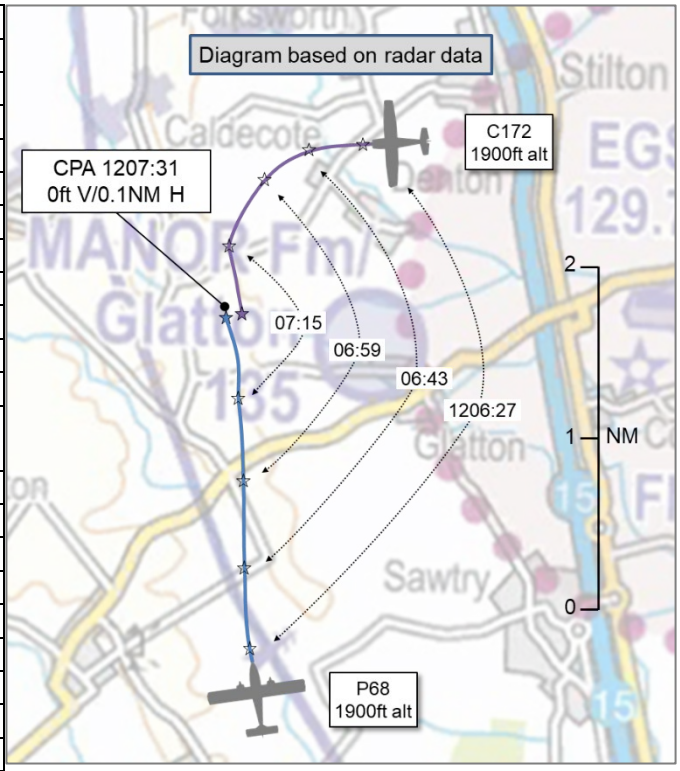
AIRPROX REPORT No 2021201

Date: 29 Sep 2021 Time: 1208Z Position: 5028N 00020W Location: 3NM W Conington

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	P68	C172
Operator	Civ Comm	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Traffic	None
Provider	Wittering Radar	N/A
Altitude/FL	1900ft	1900ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, blue	White
Lighting	Nav, Strobe, Beacon	Beacon, Taxy, Landing
Conditions	VMC	VMC
Visibility	>10km	5-10km
Altitude/FL	1600ft	2000ft
Altimeter	QNH (NK hPa)	QNH (NK hPa)
Heading	180°	070°
Speed	105kt	90kt
ACAS/TAS	Not fitted	SkyEcho
Alert	N/A	None
Separation at CPA		
Reported	0ft V/0.2NM H	Not seen
Recorded	0ft V/0.1NM H	



THE P68 PILOT reports that they were doing line 12 of the day when they suddenly had to break off due to traffic turning directly towards them from about 0.5NM away. At this point, they were in contact with Wittering on VHF-COM1 as they have radar and can provide Traffic Information. On VHF-COM2 they were monitoring Peterborough Conington airfield as it is close to the survey area. About 45sec before the occurrence, the Radar controller notified them of the traffic and they reported back that they were visual with the mentioned traffic. The traffic was crossing them from right-to-left at the same altitude which, on their present course, was no problem at all. When the traffic was in their 1 o´clock, it took a steep left turn, putting them on course directly towards the P68. Their immediate response was full power, and then a steep left turn to avoid. At this point, they estimated that the traffic was about 0.2NM from them. They then asked Wittering on VHF-COM1 if they had contact with the traffic to which they replied they didn't. They then asked Conington on VHF-COM2 and [recall them replying that] they didn't have contact with them either. They were told that they were squawking 7000 and probably not talking to anyone. After the event, they decided to leave the area and go to a less congested area.

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

THE C172 PILOT reports that they were looking for [destination airfield] and spoke to Conington Radio to advise they were in their vicinity and to ask for help finding the strip. They had planned their trip well and had used Brize Norton for an ATS on the way and they had [a TAS device] for seeing [sic] other aircraft, however none had been seen. They had their transponder on and were operating as a single pilot . From the information they have, they believe that the other aircraft was above them and point out that the C172 has no way of enabling the pilot to see another aircraft above them .

THE WITTERING CONTROLLER reports that they were providing a Traffic Service to the [P68 pilot] which was reduced from below due to the aircraft's low altitude and they had been given the relevant terrain warning. It was operating at 1560ft on the Wittering QFE. The [P68 pilot] was on a survey task

utilising north-south tracks, 15-20NM in length, to the south-east of Wittering. The [P68 pilot's] track took them through the Peterborough Conington ATZ and the aircraft pilot was instructed to obtain clearance through their airspace with them, which the controller believes that they did. The P68 pilot had been on the frequency for somewhere between 2 and 3 hours conducting this task. They don't fully recall all the intricate Traffic Information passed to the pilot, but they do recall the pilot reporting that an aircraft had got very close to them. They remember calling Traffic Information more than once and writing on the flight strip when it happened

The controller perceived the severity of the incident as 'Low'.

THE WITTERING SUPERVISOR reports that their recollection of events is consistent with the narrative contained in the report filed by the controller involved. They were aware that [the P68 pilot] was unwilling to adjust their task profile by height, track or time and that the Wittering controller was working hard issuing accurate Traffic Information. The pilot was able to convey their intent clearly although some aspects of their phraseology were non-standard. Namely, upon being advised of conflicting traffic, their consistent response was "*Roger Traffic Information*". This did not enable the controller to determine whether the pilot had gained sight of the conflicting aircraft as called.

THE CONINGTON RADIO OPERATOR believes that the pilot was no longer in contact with them at the time of the Airprox.

Factual Background

The weather at Wittering was recorded as follows:

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METAR EGXT 291250Z 28018KT 9999 BKN029 14/06 Q1018 RMK BLU
METAR EGXT 291150Z 29020KT 9999 BKN029 13/06 Q1018 BLU
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Analysis and Investigation

Military ATM

The P68 pilot was conducting line 12 of the day and reported that they had to break-off due to the C172 turning towards them around 0.5NM away. They reported that they received Traffic Information from Wittering ATC and were also monitoring Peterborough Conington due to its proximity to the survey site. They reported that the C172 was crossing left-to-right at the same altitude which did not pose a hazard, however, it was reported that the C172 took a steep left turn towards the P68 which was then required to take avoiding action. Separation was reported as 0.2NM horizontally and 0ft vertically.

The C172 pilot reported that they were looking for [destination airfield] and had spoken to Peterborough Conington to operate in their vicinity whilst locating it. They reported that they were using [EC equipment] to see other aircraft although none were observed. They did not observe the P68 at any point.

The Wittering controller reported that they were providing a Traffic Service to the P68 which had been reduced due to the limits of surveillance cover. Multiple sets of Traffic Information were passed by the Wittering controller prior to the Airprox.

Figures 1 – 5 show the positions of the P68 and the C172 at relevant times during the Airprox. The screenshots are taken from a replay using the NATS radars which are not utilised by Wittering ATC, therefore, may not be entirely representative of the picture available to the Wittering controller.

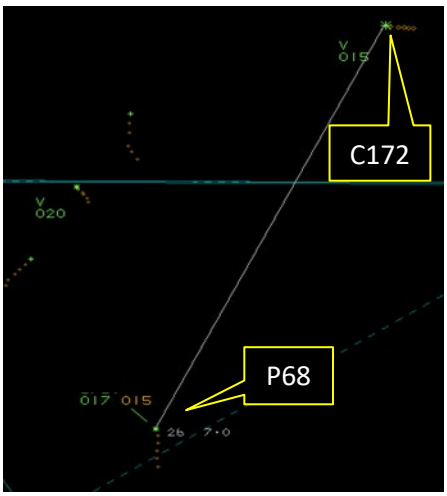

Figure 1- Unrelated Traffic Information passed.

The P68 was passed Traffic Information regarding other conflicting tracks. Separation was 7NM and 200ft.

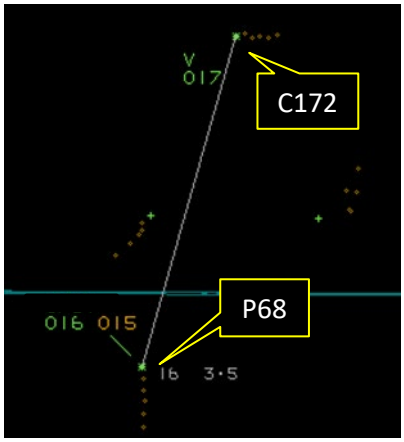

Figure 2 - Further Traffic Information provided to the P68 pilot.

The Wittering Controller provided further Traffic Information 1min 41sec later regarding further unrelated traffic. The P68 pilot reported not visual with this traffic. Separation was 3.5NM and 100ft.

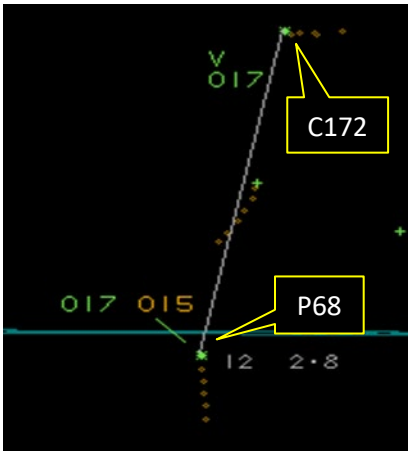

Figure 3 - Further Traffic Information provided to the P68 pilot.

Further Traffic Information was passed regarding another unrelated track which was acknowledged by the P68 pilot. Separation reduced to 2.8NM and 0ft.

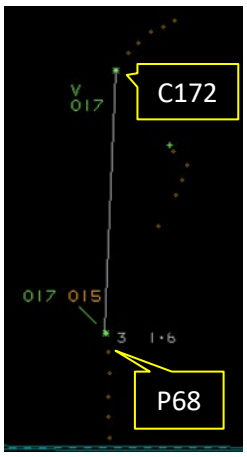

Figure 4 – Traffic Information passed which included C172.

Traffic Information regarding the C172 and two other conflicting tracks was passed 26sec after the last set of Traffic Information. Separation decreased to 1.6NM and 0ft. Fifteen seconds after the Traffic Information was passed the P68 pilot reported that they had the traffic.

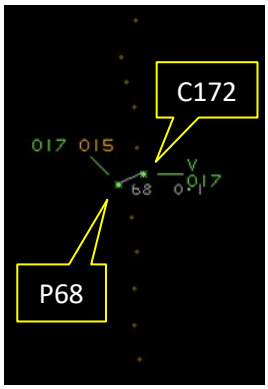

Figure 5 - CPA.

The CPA was measured at 0.1NM and 0ft.

It was evident due to the amount of Traffic Information that was passed that the Wittering controller was monitoring the situation and providing updates to the P68 pilot as they transited towards a busy portion of airspace. Traffic Information was passed slightly later than required however, but not overloading the P68 pilot with multiple sets Traffic Information simultaneously may have enabled the pilot to retain better awareness. The C172 pilot had planned to use Brize Norton for a service however, their location would have been outside the limits of Brize Norton radar coverage. They were not in receipt of an ATS at the time of the Airprox which potentially reduced their awareness, relying on their [EC equipment] whilst searching for their landing site.

UKAB Secretariat

The P68 and C172 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] If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.[2]

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

Summary

An Airprox was reported when a P68 and a C172 flew into proximity 3NM west of Conington at 1208Z on Wednesday 29th September 2021. Both pilots were operating under VFR in VMC, the P68 pilot in receipt of a Traffic Service from Wittering Radar and the C172 pilot 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, reports from the air traffic controllers 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 P68 pilot and noted that they had been operating under a Traffic Service and had been passed Traffic Information on a number of occasions. The P68 pilot had become visual with the C172 prior to receiving specific Traffic Information on it and had maintained their track and altitude until the point at which the C172 pilot altered their track towards the P68, resulting in the P68 pilot becoming concerned by the proximity of the C172 (**CF5**) and then taking late avoiding action.

The Board then considered the actions of the C172 pilot and highlighted the need to maintain a thorough lookout when completing other tasks such as looking for their destination airfield. The Board agreed that the C172 pilot had not gained visual contact with the P68 and considered that this non-sighting had been contributory to the Airprox (**CF4**). The Board appreciates that aircraft design can affect lookout, and that the high-wing aspect of a C172 can obscure other aircraft from view, which the Board felt had happened on this occasion (**CF6**). A GA member advised the Board that GA pilots are generally taught that it is good practice to "lift the wing" to aid lookout prior to making a turn. Members agreed that utilising nearby ATS units to aid with finding small airfields can be beneficial, and discussed whether a surveillance-based service provider, such as Wittering, may have been more appropriate in this instance. Members agreed that it would be prudent for pilots to include this in their pre-flight planning elements which would help them to find destination airfields. The Board noted that the compatible EC equipment carried by the C172 pilot did not issue an alert when it would have been expected (**CF3**) and, as the pilot was not in receipt of an ATS, there had been no avenue for them to have prior knowledge or situational awareness regarding the P68 in the vicinity (**CF2**).

Turning to the actions of the Wittering Radar controller, it was noted by the Board that they had been busy in the time prior to the Airprox and, although they had passed Traffic Information to the P68 pilot on a number of occasions regarding other aircraft, specific Traffic Information regarding the C172 had been first passed when the distance between the two aircraft had reduced to 1.6NM, which would have been later than preferred (**CF1**).

Finally, when assessing the risk of the Airprox, the Board considered that the C172 pilot had had no situational awareness regarding the P68 and, without an ATS, had been relying on their lookout alone for collision avoidance. Although the P68 pilot had become visual with the C172 at an early stage, which had been before they had received Traffic Information regarding it, the turn which had been made by the C172 pilot towards the P68 at close range had required the P68 pilot to initiate late avoiding action. Members agreed that there had been a risk of collision (**CF7**), but that the action of the P68 pilot had generated sufficient separation to reduce the risk of collision – although not remove it entirely – and that safety had been much reduced. Accordingly, the Board assigned a Risk Category B to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021201			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
2	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance			
3	Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
	• See and Avoid			
4	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
5	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
6	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other
	• Outcome Events			
7	Contextual	• Near Airborne Collision with Aircraft	An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles	

Degree of Risk: B

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 **partially effective** because, as a result of the controller passing Traffic Information to the P68 pilot relating to other aircraft, Traffic Information relating to the C172 was passed later than would otherwise have been expected.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the C172 pilot had no prior awareness of the presence of the P68. This barrier was considered to be no longer pertinent for the P68 because, by the time the P68 pilot had received Traffic Information to aid their situational awareness, they were already visual with the C172.

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

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the equipment carried on the C172 did not alert to the presence of the P68 when it would have been expected to have done so.

See and Avoid were assessed as **partially effective** because, although the P68 pilot was visual with the C172 early and at a point which time no avoiding action was required, the turn made by the C172 pilot toward the P68 required the P68 pilot to take late avoiding action.