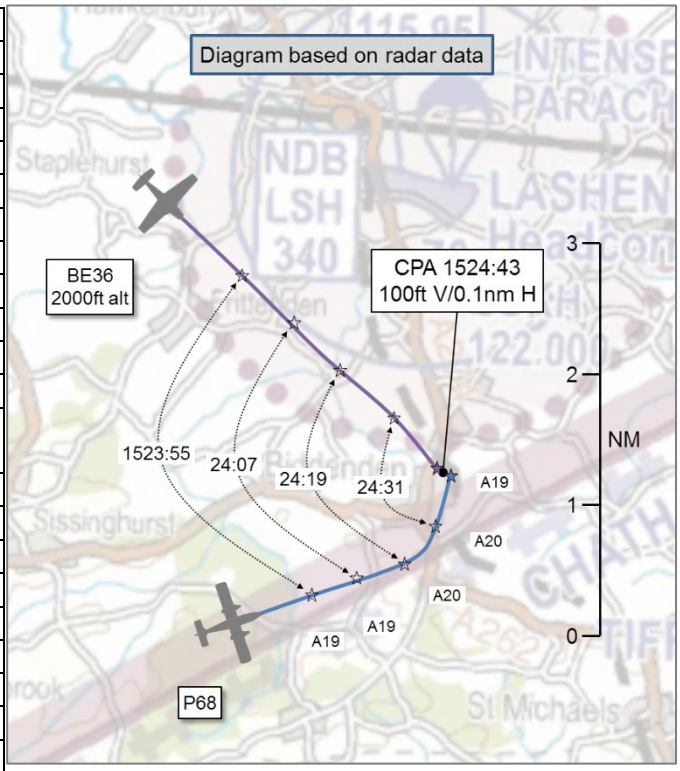
AIRPROX REPORT No 2019028

Date: 15 Feb 2019 Time: 1525Z Position: 5107N 00039E Location: 2nm south Headcorn

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	P68	BE36
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Basic
Provider	London Info	Farnborough
Altitude/FL	1900ft	2000ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White, blue	White, blue
Lighting	Nav, landing, taxi, HISL	NK
Conditions	VMC	VMC
Visibility	9km	10km
Altitude/FL	2000ft	2000ft
Altimeter	QNH (1026hPa)	NK
Heading	070°	135°
Speed	110kt	170kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	Unknown
Separation		
Reported	50ft V/200m H	0ft V/0.5nm H
Recorded	100ft V/0.1nm H	



THE P68 PILOT reports conducting a survey tasking consisting of multiple reciprocal passes between Headcorn and the MAY VOR at 2100ft. A line had just been completed, finishing 2.5nm southwest of Headcorn, 0.5nm outside the ATZ. Given this proximity, he was in communication with Headcorn Radio in addition to receiving a Basic Service from London Information (who had previously notified several transiting aircraft of the P68 activity in the area). When initiating a right turn to position for the subsequent survey pass, he and the task specialist (seated in the rear left of the cabin) saw traffic at the same moment, in the 8 o'clock position on a southerly heading, slightly below their level. Due to the high wing and engine placement, visibility between the 7 and 9 o'clock position in the P68 is poor, which contributed to the very late sighting of the other aircraft, which was only made as the engine was 'lifted' out of the way. Given the lack of time for alternative action, and the fact that the other aircraft was going to pass behind, the P68 pilot maintained the gentle right turn onto an approximately easterly heading before rolling level and attempting to re-establish visual contact with the traffic to the starboard side. Again, due to the engine placement, he was unable to immediately spot the traffic. However, the observer did see it and reported it as continuing south at the same level. Once satisfied the aircraft was no longer a factor they continued the tasking.

He assessed the risk of collision as 'High'.

THE BE36 PILOT reports that he had the P68 'on TCAS' and in sight at 2nm and observed an avoidance manoeuvre from the other aircraft, coming from right-to-left, after crossing clear of the traffic having made a right descending turn to remain clear.

He assessed the risk of collision as 'Medium'.

THE LONDON INFORMATION FISO reports that the P68 pilot called on frequency to report conducting a survey between Mayfield and Headcorn, VFR between 2000ft and 2400ft. He was given the London QNH and confirmed to remain outside CAS (especially due to the proximity of the Gatwick CTA). The pilot was also informed of parachuting at Headcorn. The pilot reported leaving the frequency at 1537.

THE FARNBOROUGH CONTROLLER reports that he was bandboxed as LARS North and East. The Airprox was declared on the London Information frequency, was not reported to him at the time and he had no recollection of the event.

Factual Background

The weather at Gatwick and Lydd was recorded as follows:

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METAR EGKK 151520Z 15005KT CAVOK 14/05 Q1025=
METAR EGMD 151520Z 18007KT CAVOK 10/07 Q1026=
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Analysis and Investigation

UKAB Secretariat

The P68 and BE36 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 converging then the BE36 pilot was required to give way to the P68[2].

Summary

An Airprox was reported when a P68 and a BE36 flew into proximity near Headcorn at 1525Z on Friday 15th February 2019. Both pilots were operating under VFR in VMC, the P68 pilot in receipt of a Basic Service from London Information and the BE36 pilot in receipt of a Basic Service from Farnborough LARS East.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and reports from the FISO and controller involved. 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 BE36 pilot's actions and were struck that despite him having the P68 on TAS and seeing it at 2nm he had continued his straight-and-level course until within 1nm, when he had made a slight turn to the right. He had presumably observed the traffic converging from the right and was aware that he was required to give way to it yet ultimately closed to a separation of 100ft vertically and 0.1nm laterally. The Board considered that such actions did not constitute 'giving way' (**CF1**, **CF4**, **CF6**) and that he had had the information necessary to do so (**CF3**), should he have chosen to. In this respect, members also noted that the BE36 pilot had observed an 'avoidance manoeuvre' from the P68, confirmation if it was needed that he had not acted sufficiently to give way.

The Board then discussed the incident from the P68 pilot's perspective and noted that neither he nor the observer had seen the BE36 until at about CPA. Members noted that the P68 pilot had highlighted the issue of restricted areas of lookout due to the design of the P68 airframe and noted that either pilot requesting a surveillance-based FIS would have provided an additional barrier (**CF2**). Moreover, the Board felt that there was scope for further mitigation, particularly given the operating areas and altitudes of aircraft routinely conducting survey work, and resolved to recommend that, 'The P68 operating company consider the incorporation of a TAS'.

[1] SERA.3205 Proximity.
[2] SERA.3210 Right-of-way (c)(2) Converging.

Turning to the risk, some members felt that the incident warranted a risk rating of B in that the recorded separation indicated that safety had been much reduced below the norm. However, the majority felt that the BE36 pilot had increased separation slightly and, combined with his being visual with the P68 at range meant that although safety had been reduced, there had been no risk of him colliding with it; risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

Contributory Factors:

CF	Factor	Description	Amplification
	Flight Elements		
	• Regulations, Processes, Procedures and Compliance		
1	Human Factors	• Flight Crew ATM Procedure Deviation	Regulations/procedures not complied with
	• Tactical Planning and Execution		
2	Human Factors	• Communications by Flight Crew with ANS	Appropriate Surveillance-based ATS not requested by pilot
	• Situational Awareness of the Conflicting Aircraft and Action		
3	Human Factors	• Lack of Action	Pilot flew into conflict despite Situational Awareness
	• Electronic Warning System Operation and Compliance		
4	Human Factors	• Interpretation of Automation or Flight Deck Information	CWS misinterpreted or not optimally actioned
	• See and Avoid		
5	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots
6	Human Factors	• Lack of Action	Pilot flew into conflict

Degree of Risk: C.

Recommendation: The P68 operating company consider the incorporation of a TAS.

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 **not used** because neither pilot was in receipt of a FIS that would provide SA.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the BE36 pilot did not give way sufficiently to the P68 converging on his right.

Tactical Planning and Execution was assessed as **partially effective** because neither pilot requested a surveillance based FIS.

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

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the BE36 pilot continued into conflict despite having TAS-based SA at range.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the separation at CPA was such that the Board surmised that the BE36 pilot had not acted sufficiently on his TAS warnings.

See and Avoid were assessed as **partially effective** because the BE36 pilot closed to 100ft vertical and 0.1nm lateral separation from the P68, despite having seen it at range.