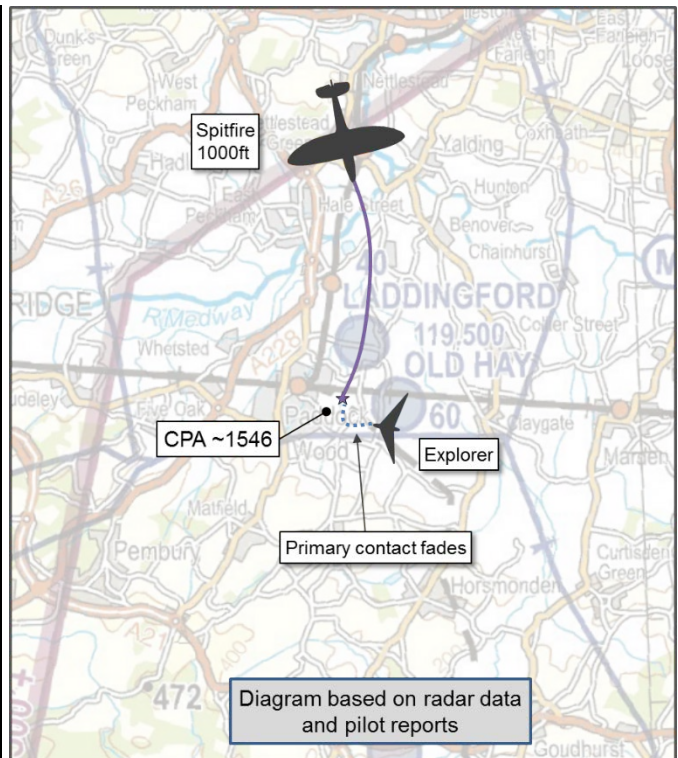


**AIRPROX REPORT No 2018112**

Date: 20 May 2018 Time: 1546Z Position: 5110N 00024E Location: ivo Old Hay Airfield

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	P&M Aviation Explorer (Trike)	Spitfire
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Listening Out
Provider		Biggin Hill
Altitude/FL		1000ft
Transponder	No Fitted	A, C, S
Reported		
Colours	White, blue, yellow	Grey, Green
Lighting	High intensity landing light	NK
Conditions	VMC	VMC
Visibility		10km
Altitude/FL	800ft	
Altimeter	QFE	
Heading	NR	
Speed	70kt	
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	0ft V/<200m H	NK
Recorded	NK	



**THE EXPLORER PILOT** reports that as part of the Kent Scout Microlight Team they use Old Hay as their operating base and are active throughout the summer, mainly on weekends. He noted that they often see a Spitfire flying around the area. On this occasion, he was conducting the last flight of the day and was in the circuit at 800ft. He was about to turn finals from base when he noticed a shadow on the ground approximately 600m north and slightly left of his position. He immediately turned right and saw the Spitfire pass close to his left, the passenger also saw the aircraft, which then continued its flight to the south.

He assessed the risk of collision as ‘High’.

**THE SPITFIRE PILOT** reports that he was flying his sixth sortie of the day, flying passengers in the Spitfire. He did not remember the incident, but noted that Class G airspace to the south-east of Biggin Hill is very busy and it is not uncommon to see 5 or 10 aircraft per sortie. The performance of the Spitfire largely outperforms most other GA platforms and it is normally him avoiding other aircraft. If his aircraft was ‘canopy on’ to the microlight in question then it was likely that he saw it and avoided it, but he couldn’t be certain that he had seen it.

**Factual Background**

The weather at Biggin Hill was recorded as follows:

METAR EGKB 201620Z 06008KT 010V100 9999 FEW035 18/10 Q1020=  
 METAR EGKB 201650Z 05008KT 020V080 9999 FEW035 17/10 Q1020=

## Analysis and Investigation

### UKAB Secretariat

The microlight and Spitfire pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard<sup>1</sup>. 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<sup>2</sup>.

### Summary

An Airprox was reported when an Explorer microlight and a Spitfire flew into proximity near Old Hay airfield at 1546hrs on Sunday 20<sup>th</sup> May 2018. Both pilots were operating under VFR in VMC, neither were receiving an ATS.

### **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available consisted of reports from the pilots of both aircraft and radar photographs/video recordings.

The Board first looked at the actions of the Explorer pilot. He was flying a visual circuit at Old Hay and was turning onto final when he saw a shadow on the ground, he turned right and saw the Spitfire pass to his left. No air traffic service was available to the pilot, the Spitfire was not on the same frequency, and without any CWS fitted there was no way for the Explorer pilot to know about the Spitfire prior to seeing him. The Board thought that this incident demonstrated to pilots the need maintain a robust look-out at all times, even in the visual circuit, and commended the Explorer pilot for doing so at a critical stage of flight.

For his part, the Spitfire pilot was flying in Class G airspace, also without an ATS. Some members wondered whether he would have been better served calling Farnborough for a LARS service, rather than listening out on Biggin Hill, bearing in mind that Biggin Hill are not radar equipped and therefore even if the pilot had asked for a service they would not be able to give Traffic Information on anything other than that which was on their frequency. That said, it was noted that the Microlight was not showing on the NATS radars and therefore it was unlikely that any ATC unit could have given Traffic Information in this case. Some members familiar with Biggin Hill operations also commented that Paddock Wood was an informal reporting point for Biggin Hill and so listening on the Biggin Hill frequency would have provided some information on aircraft joining the Biggin circuit from that area. However, more importantly, members noted that both Old Hay and Laddingford airfields were marked on the VFR chart, and the Board was quick to agree that by flying at 1000ft in their vicinity as shown on the radar replay, the Spitfire pilot had placed himself in conflict with the visual circuits of both. Choosing an altitude just 500ft higher would have provided a much more comfortable margin of avoidance and, in this respect, although noting that the airspace in the vicinity was congested, the Board noted that the base of controlled airspace in this area was at 3500ft and therefore the Spitfire pilot could easily have chosen to fly at a higher altitude without concern about infringing CAS.

In determining the cause of the Airprox, the Board quickly agreed that the Spitfire pilot had not avoided the pattern of traffic at Old Hay and had consequently flown into conflict with the microlight. Turning to the risk, the Board thought that it was unlikely that the Spitfire pilot had seen the microlight, otherwise he probably would have turned more markedly to increase the separation. Some members thought that because the microlight pilot was already in the turn when he saw the Spitfire, there was never a risk of collision. However, others argued that the turn taken by the slow-moving microlight was unlikely to have materially increased the separation and that, accordingly, safety had been much reduced below

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<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3225 Operation on and in the Vicinity of an Aerodrome.

the norm. After considerable debate, the latter view prevailed and the incident was therefore assessed as risk Category B.

**PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The Spitfire pilot did not avoid the pattern of traffic at Old Hay and flew into conflict with the microlight.

Degree of Risk: B.

Safety Barrier Assessment<sup>3</sup>

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

**Flight Crew:**

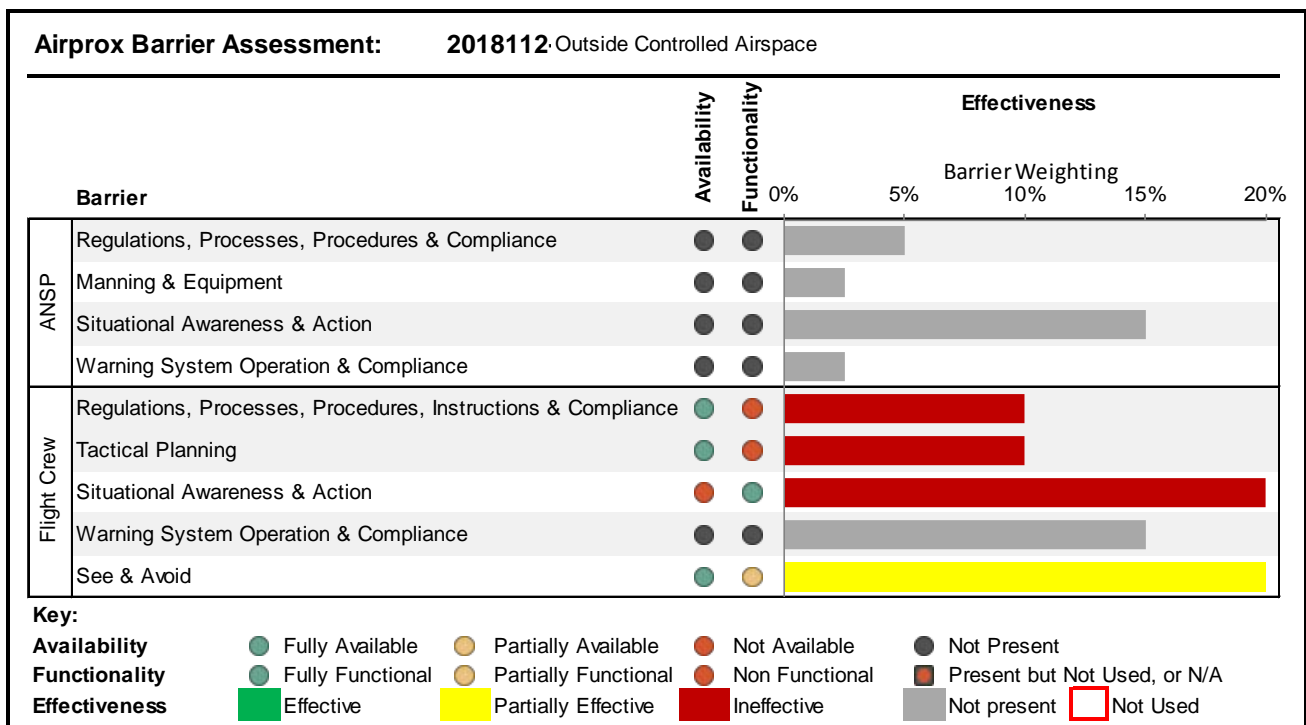
**Regulations, Processes, Procedures, Instructions and Compliance** were assessed as **ineffective** because the Spitfire pilot flew through the pattern of traffic in the Old Hay visual circuit.

**Tactical Planning** was assessed as **ineffective** because the Spitfire pilot did not give Old Hay a wide enough berth, either laterally, or vertically.

**Situational Awareness and Action** were assessed as **ineffective** because neither pilot had any information about the other aircraft prior to CPA.

**Warning System Operation and Compliance** were assessed as **not present** because neither aircraft was fitted with a CWS.

**See and Avoid** were assessed as **partially effective** because the microlight pilot was able to take avoiding action, albeit later than desirable and probably not to great effect.



<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).