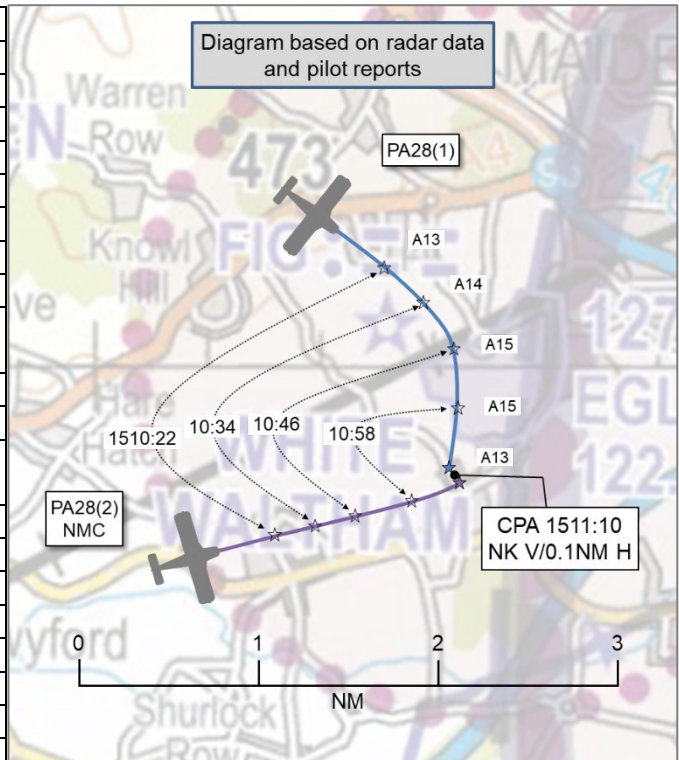


**AIRPROX REPORT No 2021038**

Date: 25 Apr 2021 Time: 1511Z Position: 5129N 00047W Location: White Waltham

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28(1)	PA28(2)
Operator	Civ FW	Civ FW
Airspace	Waltham ATZ	Waltham ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Waltham Radio	Waltham Radio
Altitude/FL	1200ft	NK
Transponder	A, C, S	A only no Mode C (NMC)
Reported		
Colours	White, blue	White, blue, yellow
Lighting	Strobes, landing	Strobes, nav, landing
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1200ft	NK
Altimeter	QFE (1023hPa)	QFE (NK hPa)
Heading	186°	NK
Speed	90kt	90kt
ACAS/TAS	PilotAware	Not fitted
Alert	None	N/A
Separation		
Reported	'extremely close' V /0m H	Not seen
Recorded	NK V/0.1NM H	



**THE PA28(1) PILOT** reports arriving at White Waltham from the north. They attempted to contact the A/G Operator at reporting point November, but did not hear anything back. They did hear the A/G Operator replying to some other pilots so initiated an orbit and attempted to contact 2 or 3 more times. Once in receipt of the aerodrome information (RW11 and QFE 1023), they proceeded towards the RW11 numbers. Just before calling at reporting point November another pilot reported being inbound from reporting point Whiskey. They were therefore aware of the other aircraft and expect to see it. The SkyDemon log showed ATZ entry at an altitude of 1280ft. When about 600m to the north of RW11 threshold, at 1357ft altitude as per SkyDemon, they heard the other pilot making a "Descending dead side" call. When making that call the other pilot did not mention 'overhead'. The PA28(1) pilot decided to delay their descent, kept a good lookout and made the call "[C/S] overhead descending dead side" as soon as they believed they were above the RW11 threshold, or just before. The SkyDemon track showed the position as about 60m east of RW11 numbers. Simultaneously, the PA28(1) pilot decided to maintain altitude/slowdown descent and the other pilot made a radio call, which was not recalled exactly, but was about them being on the dead side and descending. It was clear that the other pilot was aware of the PA28(1) and the PA28(1) pilot interpreted the call as a way to highlight that they were probably very close. The SkyDemon track showed a slight altitude gain at that moment with the highest point of 1440ft, but being aware of the altitude limit in the area due to Heathrow the PA28(1) pilot started a very slow descent, while maintaining a lookout. Using the SkyDemon log, the PA28(1) pilot estimated their altitude as between 1150ft and 1300ft when they saw the other aircraft directly underneath, travelling in the direction of the RW29 threshold. The other aircraft was not picked up by the PilotAware. The PA28(1) pilot thought that, in hindsight, they could have maintained altitude and remained in the overhead on the live side at 1200ft QFE when they heard the other pilot call "descending" and have encouraged the passenger to look specifically for that aircraft on the right side. They also thought that

the small separation between overhead join and circuit heights (400 feet) was a significant contributing factor. The other pilot having a transponder or any other suitable EC device could have helped, especially since White Waltham appeared to have a PilotAware ground station visible and active on the SkyDemon app. The PA28(1) pilot thought the most significant factor was that the other pilot most likely did not do the full overhead join, but rather went directly from point Whiskey roughly in the direction of the RW29 threshold and descended along the way without making the flightpath rectangular i.e. not going parallel to RW11 and then turn towards RW29 threshold numbers. The PA28(1) pilot was shocked by the idea that if they had not reduced the rate of descent there was a good chance of a mid-air collision rather than an Airprox. The PA28(1) pilot stated that they would like to use this report as a learning opportunity, discover the other pilot's perspective and know what they both could have done better in the situation.

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

**THE PA28(2) INSTRUCTOR** reports that they were informed by the West London Aero Club (WLAC) CFI that an Airprox report had been filed by a third party involving the aircraft in which they were PIC. At the reported Airprox time they were returning to White Waltham on the third flight of six that day. Whilst the Instructor was aware of multiple departing and arriving traffic as well as traffic in the circuit, they were not aware of a conflict at the specific time. As such, they were reliant upon the timing to form their best recollections of the events of that particular flight, which was a Trial Lesson with a student pilot and a passenger in the rear seat. The arrival back at Waltham would have been an overhead join for RW11, left hand circuit. The PA28(2) Instructor had briefed both individuals on the lookout procedure and use of the clock code to reference sighted traffic. The trial flight in question was conducted in a triangular track in the local area and the Instructor stayed on Waltham Radio frequency for the duration of the flight. The Instructor stated that they were keen to identify the cause of the conflict reported in the third party Airprox report.

**THE WALTHAM A/G OPERATORS** report that they had no recollection of the event and no entries were made in the Ops Log.

## Factual Background

The weather at Heathrow was recorded as follows:

METAR COR EGLL 251520Z AUTO 05011KT 350V090 9999 NCD 13/02 Q1027 NOSIG=

## Analysis and Investigation

### UKAB Secretariat

Both PA28 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> If the incident geometry is considered as converging then the PA28(1) pilot was required to give way to the PA28(2).<sup>2</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>3</sup> The White Waltham AIP entry<sup>4</sup> states:

- a. Aircraft arriving at White Waltham aerodrome are to approach by one of the reporting points November, Sierra or Whiskey shown on the Traffic Zone Chart at AD 2-EGLM-4-1.
- b. Aircraft are to arrive overhead the aerodrome at 1200 FT QFE and then carry out a standard overhead join from this height.

And

- a. All joins normally overhead at 1200 FT QFE; circuit height 800 FT QFE

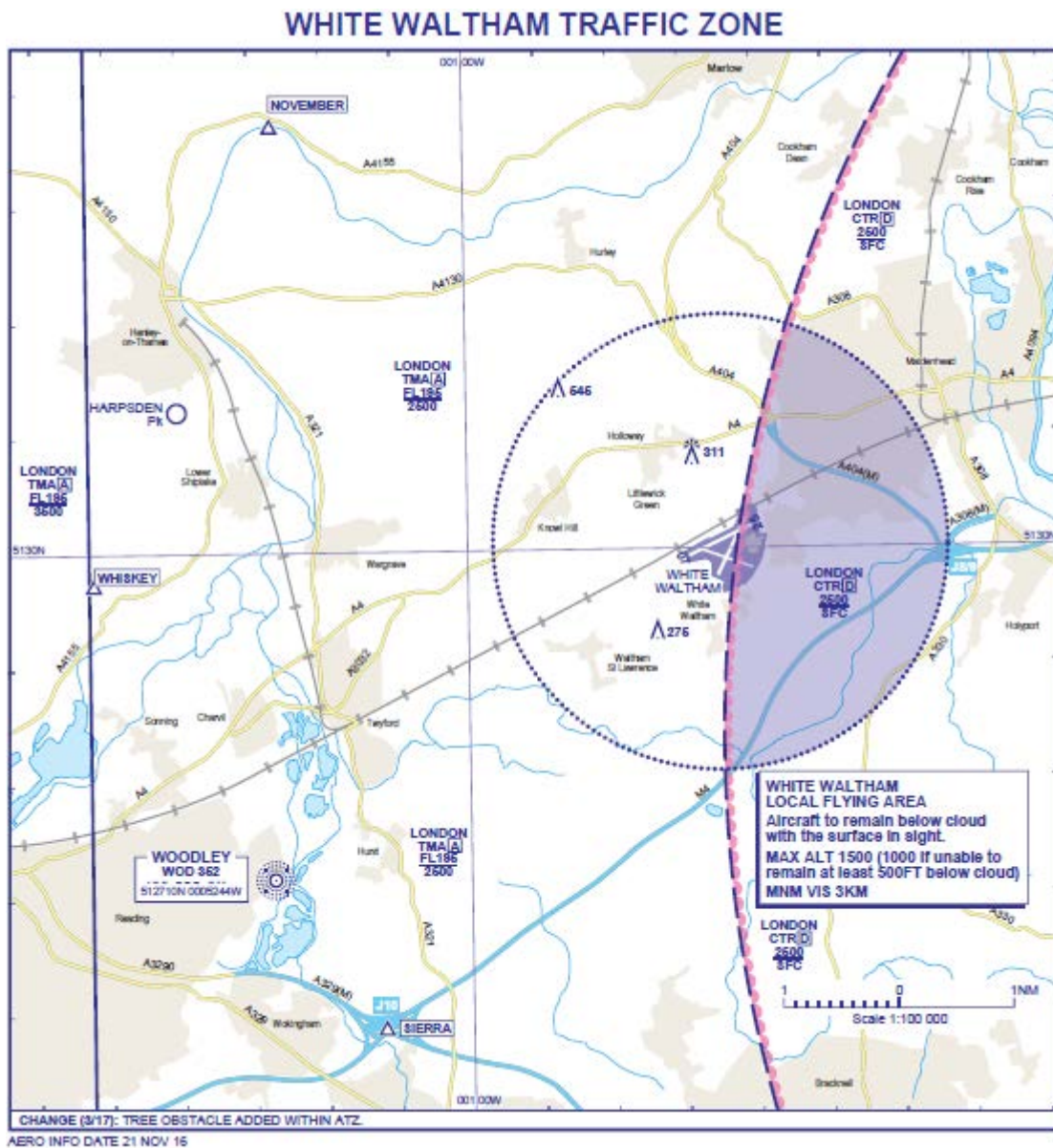
<sup>1</sup> (UK) SERA.3205 Proximity.

<sup>2</sup> (UK) SERA.3210 Right-of-way (c)(2) Converging.

<sup>3</sup> (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome (b).

<sup>4</sup> EGLM AD 2.22 FLIGHT PROCEDURES, 1 REPORTING POINTS AND ARRIVALS and 4 CIRCUITS

The White Waltham Traffic Zone Chart, AD 2-EGLM-4-1, is reproduced below:



The White Waltham website<sup>5</sup> states:

Aircraft should position to arrive in the overhead at 1,200ft QFE followed by a descent on the deadside to cross the upwind end of the runway at 800ft QFE to join the circuit pattern on the downwind leg. All fixed wing circuits are normally flown left hand except for runway 29 and 07 and 07R, which are normally a right hand circuit.

The Skyway Code depicts the overhead join<sup>6</sup> as follows:

<sup>5</sup> <https://www.wlac.co.uk/start-your-flying-experience-with-a-trial-flying-lesson-at-the-west-london-aero-club/pilot-information/>

<sup>6</sup> Skyway Code v3 (CAP1553S), Aerodrome Operations, Arrival and Departure Procedures, page 103



when joining for RW11 with a left hand circuit ((UK) SERA.3225 (c)). There followed a robust discussion concerning the application of the relevant regulations to joining procedures at White Waltham. On the one hand, the PA28(2) pilot appeared to join at the correct altitude for an overhead join but tracked directly to the crosswind position and then turned downwind, reportedly at circuit height. On the other hand, the PA28(1) pilot did not descend once on the deadside and also did not turn to remain in the overhead once they became aware of the potential conflict with PA28(2). Members agreed that it was important that everyone operating from White Waltham was aware of the procedure for joining and that the procedure was notified accurately and consistently. It was noted that the joining information contained in the White Waltham AIP entry and website stated variously that aircraft 'are to arrive overhead', 'All joins normally overhead' and 'should position to arrive in the overhead'. Members felt that although the intent was clearly that pilots join via the overhead, the instructions were not sufficiently consistent and hoped this Airprox report would serve as a prompt to White Waltham to align their joining advice. Members initially felt that the PA28(2) pilot had joined correctly but after further discussion noted that in addition to the White Waltham AIP entry, the Skyway Code advice at the bottom of page 103 was that 'If arriving from the other side of the aerodrome to that depicted [i.e. the deadside] circle overhead so as to start from a similar position [i.e. the liveside]. It was therefore agreed that the PA28(2) pilot had also not joined correctly (CF2) and that neither pilot had been able to integrate with the other aircraft (CF3). The PA28(2) pilot had not assimilated the PA28(1) pilot's R/T call of 'overhead descending deadside' (CF5) and hence had no SA on the position and potential conflict with PA28(1) (CF4), although the PA28(1) pilot had heard the PA28(2) pilot's similar call (CF4), which afforded a degree of SA, and had remained at the joining altitude. Unfortunately, the A/G Operator had no SA on the conflict (CF1), the PA28(1) TAS did not alert (CF6) and neither pilot saw the other aircraft until after CPA (CF7). After further discussion members agreed that although the PA28(2) radar replay did not show a Mode C altitude, the PA28(1) pilot's report and effective non-sighting, the PA28(2) pilot's non-sighting and the lateral separation at CPA were such that it was felt safety had been compromised (CF8).

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**

### Contributory Factors:

	2021038			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
x	<b>• Situational Awareness and Action</b>			
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late or no Situational Awareness
<b>Flight Elements</b>				
x	<b>• Regulations, Processes, Procedures and Compliance</b>			
2	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
x	<b>• Tactical Planning and Execution</b>			
3	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
x	<b>• Situational Awareness of the Conflicting Aircraft and Action</b>			
4	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

5	Human Factors	• Understanding/Comprehension	Events involving flight crew that did not understand or comprehend a situation or instruction	Pilot did not assimilate conflict information
x	• Electronic Warning System Operation and Compliance			
6	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
x	• See and Avoid			
7	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
x	• Outcome Events			
8	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.

Recommendation: Nil.

### Safety Barrier Assessment<sup>7</sup>

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 **ineffective** because the A/G Operator had no SA of the confliction.

#### **Flight Elements:**

**Regulations, Processes, Procedures and Compliance** were assessed as **partially effective** because the PA28(1) pilot turned right towards the overhead and the PA28(2) pilot did not join through the overhead.

**Tactical Planning and Execution** was assessed as **partially effective** because the PA28 pilots did not integrate with each other when joining the visual circuit.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **partially effective** because the PA28(2) pilot was not aware of the PA28(1)'s position and did not assimilate the PA28(1) pilot's radio calls.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the PA28(1) TAS did not alert.

**See and Avoid** were assessed as **ineffective** because the PA28(2) pilot did not see the confliction and the PA28(1) pilot saw the PA28(2) after CPA, effectively a non-sighting.

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

<b>Airprox Barrier Assessment: 2021038</b>		Outside Controlled Airspace						
<b>Barrier</b>		<b>Provision</b>	<b>Application</b>	<b>Effectiveness</b>				
				<b>Barrier Weighting</b>				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Conflicition & Action	✗	✗					
	Electronic Warning System Operation and Compliance	○	○					
Flight Element	Regulations, Processes, Procedures and Compliance	!	!					
	Tactical Planning and Execution	✓	!					
	Situational Awareness of the Conflicting Aircraft & Action	!	✓					
	Electronic Warning System Operation and Compliance	!	✗					
	See & Avoid	✗	✗					
<b>Key:</b>		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	✓	!	✗	○				
Application	✓	!	✗	○				
Effectiveness								