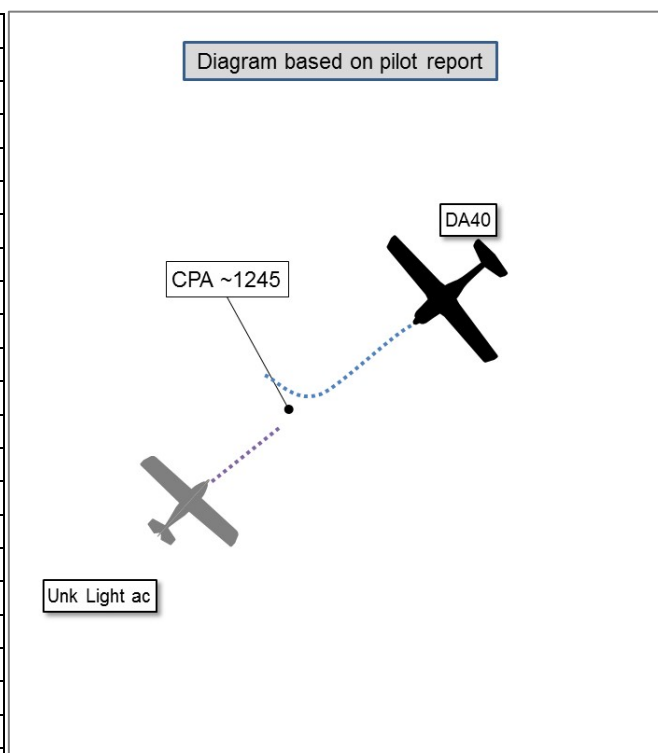


## AIRPROX REPORT No 2020010

Date: 29 Jan 2020 Time: ~1245Z Position: 5056N 00149W Location: Abeam Fordingbridge

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA40	Unk Light ac
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	NK
Service	Basic	Unknown
Provider	Bournemouth	NK
Altitude/FL	NK	NK
Transponder	A, C, S	NK
<b>Reported</b>		Not traced
Colours	White	
Lighting	Position, Strobe	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1700ft	
Altimeter	NK (1012hPa)	
Heading	248°	
Speed	120kt	
ACAS/TAS	TAS	
Alert	None	
<b>Separation</b>		
Reported	100ft V/30ft H	NK
Recorded	NK	



**THE DA40 PILOT** reports that she was carrying out a solo navigation flight as part of her flying training. The incident occurred on the leg between Redlynch and Dorchester. Her flight log showed that she turned at Redlynch at 12:42, at 12:45 she suddenly noticed another aircraft flying towards her head on and she immediately turned to the right to avoid the aircraft. She saw no corrective action from the other aircraft. At 12:46 she reported the incident to Bournemouth. She had no TAS indications and Bournemouth said they were not aware of any other aircraft in her vicinity. At the time she thought the other aircraft was a Cessna or Microlight, upon reflection she believed it was a Microlight.

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

**THE UNKNOWN LIGHT AIRCRAFT PILOT** could not be traced.

**THE BOURNEMOUTH CONTROLLER** reports that they were on duty as the radar controller working with SSR only. The DA40 student pilot was on frequency transiting under a Basic Service, squawking 7377 and operating to the north of the airfield. At 12:47 the pilot reported that she would be filing an Airprox when she returned to her base because she had got very close to an aircraft which she believed was a Cessna. At the time there were no contacts observed operating in the same area. The report was acknowledged, and she was informed that there were no contacts observed on the radar screen close to her position.

### **Factual Background**

The weather at Bournemouth was recorded as follows:

METAR EGHM 291250Z 27011KT 9999 FEW028 10/04 Q1012  
METAR EGHM 291220Z 27011KT 9999 FEW027 10/04 Q1012

## Analysis and Investigation

### UKAB Secretariat

The DA40 and unknown light aircraft 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 head-on or nearly so then both pilots were required to turn to the right.<sup>2</sup>

The DA40 can be seen on the radar replay routing to Redlynch, unfortunately the radar contact fades from radar prior to the pilot commencing a turn towards Dorchester and does not reappear, therefore the second aircraft could not be traced, or the recorded separation determined.

### Summary

An Airprox was reported when a DA40 and an unknown light aircraft flew into proximity near Fordingbridge at approximately 1245Z on Wednesday 29<sup>th</sup> January 2020. The DA40 pilot was operating under VFR in VMC and in receipt of a Basic Service from Bournemouth, the unknown light aircraft pilot could not be traced.

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

Information available consisted of reports from the DA40 pilot and the air traffic 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments. Although not all Board members were present for the entirety of the meeting and, as a result, the usual wide-ranging discussions involving all Board members were more limited, sufficient engagement was achieved to enable a formal assessment to be agreed along with the following associated comments.

The Board began by looking at the actions of the DA40 pilot. They acknowledged that the pilot was a solo student on a navigation exercise and as such they praised their look-out and action when they spotted the conflicting aircraft. The pilot was in receipt of a Basic Service; some members posited that it would be a better idea if pilots requested a more suitable service, e.g. Traffic Service, to obtain the maximum information to increase their situational awareness; this was considered especially prevalent for training flights. It was observed, however, that this would not have affected this Airprox because the unknown light-aircraft was not visible on radar displays nor was it known to the Bournemouth controller (**CF3**). The DA40 pilot saw the unknown light-aircraft late (**CF6**), probably due to the visibility profile of a small aircraft and carried out avoiding action that increased the separation between the aircraft.

The Board then turned to the actions of the unknown light-aircraft. Unfortunately, the aircraft did not display on any radar recording and could not be traced. Members wondered if the pilot had seen the DA40, saw the DA40 avoiding them or did not see the DA40 at all. As the other pilot could not be traced, it was not possible to determine the exact scenario from their perspective. The DA40 did not receive a TAS warning (**CF4**) and therefore, because it may have been a microlight, members agreed that the unknown light-aircraft was probably not transponder-equipped.

Turning to actions of the Bournemouth controller, he was operating SSR only and therefore did not see the non-transpondering aircraft (**CF2**), the DA40 was on a Basic Service and therefore the controller was not required to monitor the flight progress (**CF1**)

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

<sup>2</sup> SERA.3210 Right-of-way (c)(1) Approaching head-on.

Considering the risk, members agreed that the DA40 pilot saw the unknown light-aircraft and carried out emergency avoiding action that increased separation and the safety of the aircraft may have been compromised, safety not assured, a Risk Category B (CF5).

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

### Contributory Factors:

2020010			
CF	Factor	Description	Amplification
<b>Ground Elements</b>			
• <b>Situational Awareness and Action</b>			
1	Contextual	• ANS Flight Information Provision	Not required to monitor the aircraft under the agreed service
2	Contextual	• Situational Awareness and Sensory Events	The controller had only generic, late or no Situational Awareness
<b>Flight Elements</b>			
• <b>Situational Awareness of the Conflicting Aircraft and Action</b>			
3	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
• <b>Electronic Warning System Operation and Compliance</b>			
4	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
• <b>See and Avoid</b>			
5	Contextual	• Near Airborne Collision with Aircraft, Balloon, Dirigible or Other Piloted Air Vehicle	Piloted air vehicle
6	Human Factors	• Monitoring of Other Aircraft	Late-sighting by one or both pilots

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:

#### **Ground Elements:**

**Situational Awareness of the Confliction and Action** were assessed as **not used** because the unknown light-aircraft was not visible on the Bournemouth controller's radar display.

#### **Flight Elements:**

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

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the DA40's TAS did not alert.

**See and Avoid** were assessed as **partially effective** because the DA40 pilot saw the unknown light-aircraft late and carried out emergency avoiding action. It is not known if the unknown light-aircraft pilot saw the DA40.

<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](#).

**Airprox Barrier Assessment: 2020010** Outside Controlled Airspace

Barrier		Provision	Application	Effectiveness				
				Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓					
	Manning & Equipment	✓	✓					
	Situational Awareness of the Confliction & 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	■	■	■	■	□			