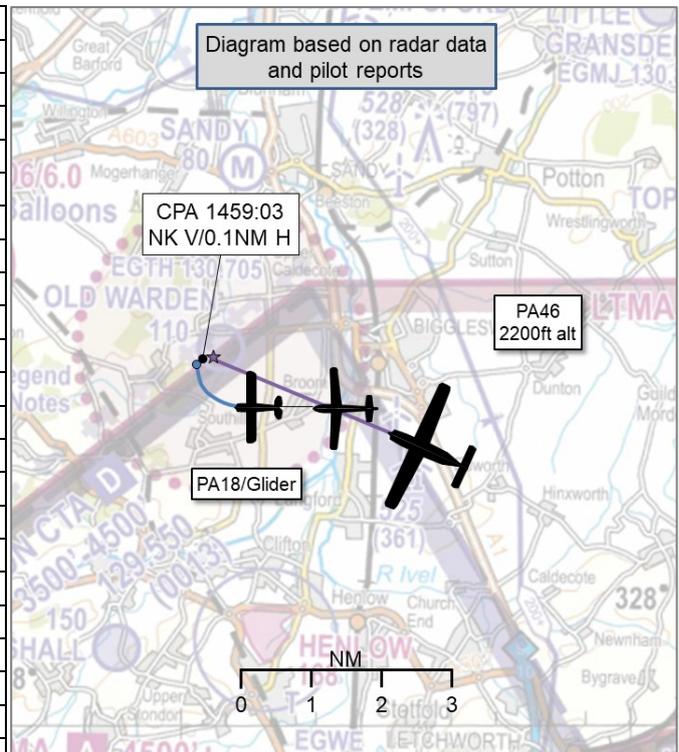


AIRPROX REPORT No 2020133

Date: 27 Sep 2020 Time: 1459Z Position: 5205N 00019W Location: Old Warden

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA18 and Glider	PA46
Operator	Civ FW	Civ FW
Airspace	Old Warden RA(T)	Old Warden RA(T)
Class	G	G
Rules	VFR	VFR
Service	AFIS	Listening Out
Provider	Old Warden	Cambridge
Altitude/FL	NK	2200ft
Transponder	Off	A, C
Reported		
Colours	Red	White, Blue
Lighting	Nav, Landing	Strobe, Wing
Conditions	VMC	VMC
Visibility	10km	>10km
Altitude/FL	2400ft	2300ft
Altimeter	QFE (1013hPa)	QNH (1013hPa)
Heading	020°	275°
Speed	55kt	175kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	None
Separation		
Reported	50ft V/90m H	250ft V/250m H
Recorded	NK V/0.1NM H	



THE PA18 PILOT reports that they were towing a glider into position for an air display. The climb to height was normal, and at around 2000ft QFE at the southern end of the aerodrome they turned onto runway heading (020°) to commence their run in for the glider to display. They continued runway heading climbing to 2300ft QFE at which point they informed the AFISO and the other displaying aircraft that the glider would be releasing in 30secs. During this call the glider pilot ignited the onboard display smoke system which is two smoke cannisters on each wing tip which produce a thick orange trail. About 10-20secs after this call, now at 2400ft, the other displaying aircraft, the Desoutter pilot called to say 'one going through the overhead in front of you Cub'. At the time of the call the PA18 pilot was looking at the rear viewing mirror to see the glider but then looked forward to see the PA46 fly in front of them, right-to-left, displaced about 50ft vertically and 300ft horizontally, crossing at 90° to them. At the time of the Airprox they were focused on both the display line and the position of the glider they were towing. They did not have time to carry out any avoiding action due to the late sighting of the other aircraft.

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

THE DESOUTTER PILOT WITNESS reports that they were flying whilst the PA18 towed the glider to height for their display. As planned the PA18 pilot gave a 30secs to release call, the Desoutter pilot's cue to finish their pass and go to a holding area. On looking to check the position of the PA18/Glider combination they saw the PA46 at, what appeared to be, the same height and very close to the PA18. They called the traffic to the PA18 pilot and FISO and finished their display.

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

THE PA46 PILOT reports that they were cruising at 2300ft on a westerly heading. They observed a slow moving PA18 with a glider in tow in their 10 o'clock high, which passed behind them on a northerly heading. No avoiding action was required because they did not consider there was a risk of collision.

They had experienced some difficulty with the passenger in the right-hand seat, they were constantly asking to try to fly the aircraft and, despite numerous requests for them not to do so, kept resting their hands and feet on the controls. This required keeping a watchful eye on them and it may have distracted the PA46 pilot's lookout and navigation on this occasion.

The pilot assessed the risk of collision as 'None'.

THE OLD WARDEN AFISO reports that Restricted Airspace (Temporary) was in force for an air display at Shuttleworth/Old Warden from 12:45Z until 17:30Z; the display commenced at 13:00Z. At 14:53Z a PA18 departed, towing a Fauvel tailless glider, and climbed into the overhead for the glider to commence a display. At about 14:58Z, as the tug/glider combo was flying along the RW02 centreline prior to releasing the glider, a PA46 was observed to pass overhead on a westerly track at about 2500ft, later reported by the PA18 pilot at 2300ft. The PA46 was first seen by the glider pilot and then by the PA18 pilot who reported it to be 50ft vertically (below) and 200ft horizontally from the tug/glider combo. The glider was released shortly afterwards and commenced its display. After landing the PA18 pilot reported he would be filing an Airprox. Tracing action was attempted with Farnborough Radar North and Cranfield ATC but neither unit was working the aircraft.

Factual Background

The unofficial weather at Old Warden was recorded as follows:

34009KT 9999 OVC025 12/08 Q1013= (Cloud base reported by Super Cub pilot)

Analysis and Investigation

UKAB Secretariat

The PA18 and PA46 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 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.²

A copy of the NOTAM advising airspace users of the Old Warden RA(T) is at Figure 1.

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- J1647/20 NOTAMN

Q) EGTI/QRTCA/IV/BO/AW/000/035/5205N00019W004

A) EGTH          B)          2009271245          C)          2009271730

E) RESTRICTED AREA (TEMPORARY) AT OLD WARDEN. RESTRICTION OF FLYING
REGULATIONS HAS BEEN MADE UNDER ARTICLE 239 OF THE AIR NAVIGATION
ORDER 2016.
AIC M061/2020, WHICH INCLUDES A CHART, REFERS. NO ACFT IS TO FLY WI
THE AREA BOUNDED BY A STRAIGHT LINE BETWEEN 520258N 0001553W AND
520225N 0002056W THENCE CLOCKWISE BY THE ARC OF A CIRCLE OF 3 NM
RADIUS CENTRED ON 520512N 0001907W TO 520258N 0001553W. EXCEPT ACFT
FLYING IN ACCORDANCE WITH A PERMISSION OF THE FLYING DISPLAY
DIRECTOR AT OLD WARDEN AERODROME WHO MAY BE CONTACTED ON TELEPHONE
NUMBER 01767 627918 OR 07875028876. THIS RESTRICTION OF FLYING ALSO
RELATES TO THE OPERATION OF ALL UNMANNED AIRCRAFT SYSTEMS.
2020-09-0034-AS6.

F) SFC          G)          3500FT AMSL

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Figure 1: Old Warden NOTAM

¹ SERA.3205 Proximity.

² SERA.3225 Operation on and in the Vicinity of an Aerodrome.

The radar replay of the track of the PA46 and PA18 up to CPA is at Figure 2.

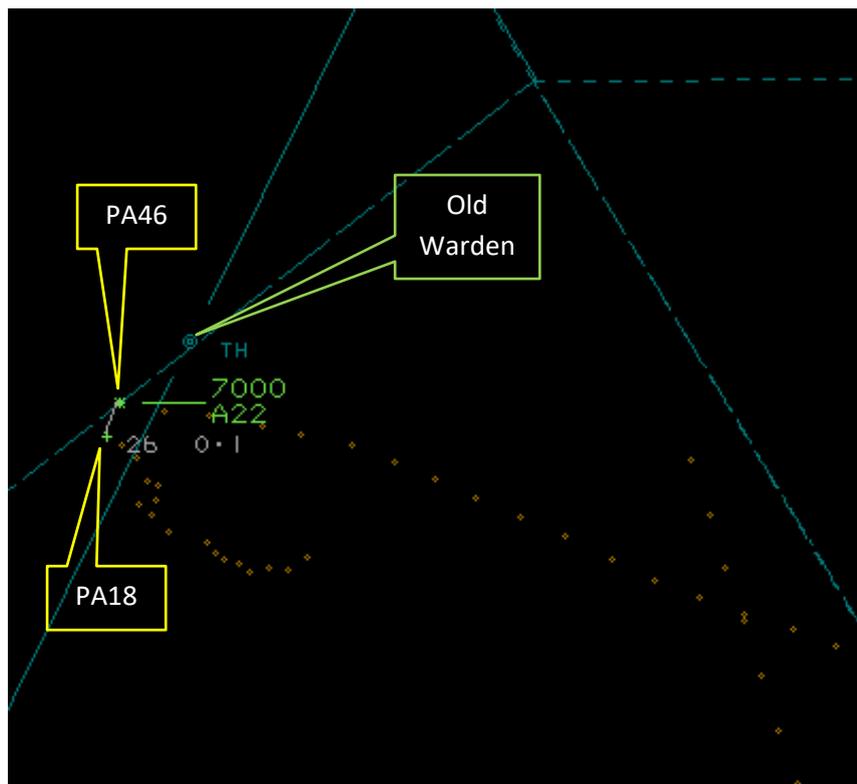


Figure 2: 14:59:03 CPA

Summary

An Airprox was reported when a PA18 and a PA46 flew into proximity at Old Warden at 1459Z on Sunday 27th September 2020. Both pilots were operating under VFR in VMC, the PA18 pilot in receipt of an Aerodrome Flight Information Service from Old Warden and the PA46 pilot listening out on Cambridge Approach.

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.

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.

Old Warden had an air display notified as Temporary Restricted Airspace (RA(T)). This was of 3NM radius and from surface to 3500ft AMSL, which had been notified via a NOTAM (Figure 1).

The Board began by looking at the actions of the PA46 pilot. The GA members said that the PA46 has a relatively quick cruise speed and they would have been better served requesting a suitable ATS to increase their situational awareness rather than just listening out on the Cambridge frequency. In addition, members agreed that at 2200ft the PA46 pilot should have also communicated with Old Warden AFIS (**CF6**). Whilst considering the planning aspects of the Airprox relating to the RA(T) at Old Warden, members discussed the merits of electronic flight bags, which (when properly configured) can provide relevant and timely information to flight crews. However, regardless of the source of information the Board considered that the PA46 pilot should have checked the en-route NOTAMs as part of their

pre-flight planning as this would have alerted them to arrange their flight to avoid the RA(T) at Old Warden (CF3). Although the PA46 pilot saw the PA18/glider combination they did not believe they needed to avoid it and therefore they did not alter their course or height to provide adequate separation from the PA18/glider (CF12), this and their flight profile took them through the RA(T) and into conflict with the PA18/glider combination (CF2 & 5).

Turning to the actions of the PA18 pilot, the Board wondered why they had their transponder turned off, the pilot was contacted but chose not to reply to the request for further information (CF4). Because the transponder was selected off the TAS fitted to the PA46 could not identify the PA18 and therefore not alert the PA46 pilot to the presence of the PA18 (CF8). The PA18 pilot was looking in their rear-view mirror, at the glider they were towing (CF9), when they heard the Desoutter pilot passing Traffic Information about the PA46 in front of them (CF7), the PA18 pilot then looked forward to see the PA46 cross their nose (CF11).

The Old Warden AFISO was not aware of the presence of the PA46 until the Desoutter pilot warned the PA18 pilot of the PA46 and, as the PA46 was unknown traffic, the AFISO was not able to pass Traffic Information to the PA18 pilot (CF1).

The Board then looked at the risk. The PA18 was towing a glider which reduced their manoeuvrability. They were operating within a notified RA(T) and well below the upper level of the RA(T). The PA46 had infringed the RA(T) and had not communicated with any Old Warden AFIS or a suitable Air Traffic unit. Because the PA18's transponder was selected off it was not possible to observe the recorded altitude separation, but the aircraft at CPA came within 0.1NM laterally. The Board agreed that these factors meant that safety was not assured and there was a risk of collision, a Risk Category B (CF10).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2020133		
CF	Factor	Description	Amplification
	Ground Elements		
	• Situational Awareness and Action		
1	Contextual	• Situational Awareness and Sensory Events	The controller had only generic, late or no Situational Awareness
	Flight Elements		
	• Regulations, Processes, Procedures and Compliance		
2	Human Factors	• Flight Operations Documentation and Publications	Regulations and/or procedures not complied with
	• Tactical Planning and Execution		
3	Human Factors	• Flight Planning and Preparation	
4	Human Factors	• Transponder Selection and Usage	Selected off or incorrect selection
5	Human Factors	• Airspace Infringement	
6	Human Factors	• Communications by Flight Crew with ANS	Pilot did not communicate with appropriate ATS provider
	• Situational Awareness of the Conflicting Aircraft and Action		
7	Contextual	• Situational Awareness and Sensory Events	Pilot had no, late or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance		
8	Technical	• ACAS/TCAS System Failure	Incompatible CWS equipment
	• See and Avoid		
9	Human Factors	• Distraction - Job Related	Pilot looking elsewhere
10	Contextual	• Near Airborne Collision with Aircraft, Balloon, Dirigible or Other Piloted Air Vehicle	Piloted air vehicle
11	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots
12	Human Factors	• Lack of Action	Pilot flew into conflict

Degree of Risk: B.

Safety Barrier Assessment³

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 Old Warden AFISO did not know about, or see, the PA46 and therefore could not pass Traffic Information to the aircraft in the Old Warden RA(T).

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the PA46 pilot entered the NOTAM'd RA(T). The PA18 pilot reported their transponder as off.

Tactical Planning and Execution was assessed as **ineffective** because the PA18 pilot had selected their transponder as off. The PA46 pilot had not adequately planned their flight to avoid the Old Warden RA(T) and infringed the notified area. The PA46 pilot, also, did not communicate with Old Warden whilst transiting overhead the ATZ.

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

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the PA46 was fitted with a TAS but this could not identify the non-transponding PA18.

See and Avoid were assessed as **ineffective** because neither pilot saw the other aircraft in time to materially affect the separation.

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

