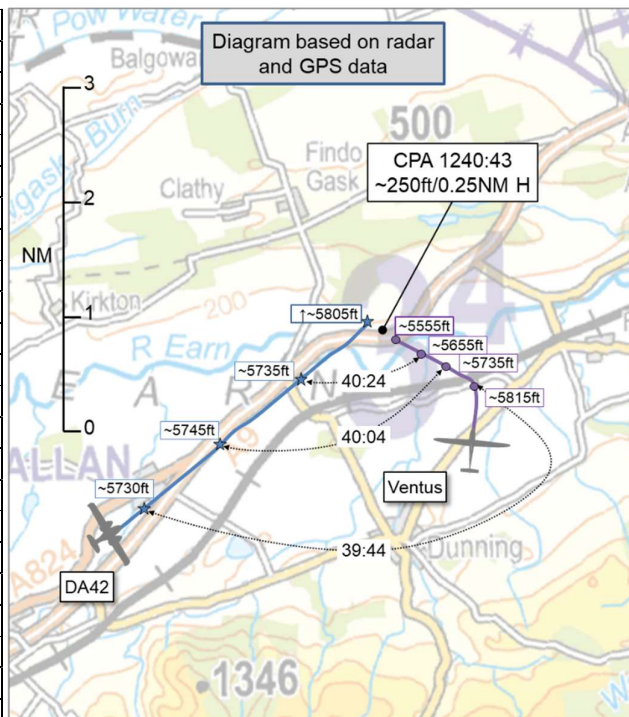


AIRPROX REPORT No 2025253

Date: 31 Dec 2025 Time: 1241Z Position: 5620N 00335W Location: 5NM southwest of Perth

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	Ventus
Operator	Civ FW	Civ Gld
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	None
Provider	Scottish Control	N/A
Altitude/FL	~5805ft	~5555ft
Transponder	A, C, S	Not fitted
Reported		
Colours	White	White
Lighting	Nav and strobes	Canopy strb/flshr
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude	6000ft	5600ft AMSL
Altimeter	QNH	QFE
Heading	040°	360°
Speed	140kt	53kt
ACAS/TAS	TAS	PowerFLARM
Alert	None	None
	Separation at CPA	
Reported	0ft V/1NM H	500ft V/0.5NM H
Recorded	~250ft V/0.25NM H	



THE DA42 PILOT reports that they were on their way [to their destination], having been [elsewhere] for instrument training. Flying at altitude 6000ft, with a Traffic Service from Scottish, a few NM northeast of EDONU.¹ The controller mentioned a contact, no height information, in their 12 to 1 or maybe 2 o'clock position. They do recall looking above and below in the stated direction but, from experience, they concentrated on looking below. Most times when no height information was available, the targets were low down. A short while later, their two students noticed the contact, and then so did they [the instructor]. They took control and climbed above the contact, only by a few hundred feet. According to their relative directions, the other traffic had right of way, although they were so close when they saw the traffic, they could not go behind, and just flew above. Their student in the front had an instrument flying hood on, although there was a student in the back who could look out. They were not in controlled airspace at this time. After they saw the traffic, and called visual, the controller did ask if they wanted to report, but they declined, as they were quite busy at the time. On reflection, they consider that there was a high chance of collision.

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

THE VENTUS PILOT reports that there were two aircraft visually observed around the time and area reported. The first was flying on a northwest heading. The aircraft was approximately 500ft below and ½NM distant. They did not lose sight of it as it passed and travelled away from them. The second aircraft observed was slightly further to the north, below them and travelling on an easterly heading and again there was no concern as it passed. Those were the only two aircraft observed at the stage of flight reported.

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

¹ EDONU is an airways reporting point approximately 1.5NM southeast of Dunning, 6.5NM southwest of Perth.

THE SCOTTISH CONTROLLER reports that the UK Airprox Board informed NATS that the pilot of [DA42 C/S] had retrospectively reported an Airprox between their aircraft and a glider, believed to have been [Ventus C/S], at 6000ft, 5NM southwest of Perth, outside controlled airspace. The pilot reported they had taken over control of the aircraft from their student and climbed above the glider. The pilot of [the DA42] was in receipt of a Traffic Service from the PC Tay controller at the time of the Airprox, and had been passed Traffic Information several times, commencing at a range of around 9NM from the primary target. The pilot of [the DA42] reported on frequency that they had visual with the other aircraft but did not mention the event was an Airprox at the time.

Factual Background

The weather at Dundee Airport was recorded as follows:

METAR EGPN 311250Z 27007KT 9999 FEW020 05/02 Q1021

Analysis and Investigation

NATS Safety Investigations

Summary

The UK Airprox Board informed NATS that the pilot of [DA42 C/S] had retrospectively reported an Airprox between their aircraft and a glider, believed to have been [Ventus C/S], at 6000ft, 5NM southwest of Perth, outside controlled airspace. The pilot reported they had taken over control of the aircraft from their student and climbed above the glider. The pilot of [the DA42] was in receipt of a Traffic Service from the PC Tay controller at the time of the Airprox, and had been passed Traffic Information several times, commencing at a range of around 9NM from the primary target. The pilot of [the DA42] reported on frequency that they had visual with the other aircraft but did not mention the event was an Airprox at the time.

Description and Investigation

Information available to the investigation included:

- CA4114 from (NATS Ref No: redacted)
- CA4114 from (NATS Ref No: redacted)
- NATS4118 Initial Watch Management Investigation Report (NATS Ref No: redacted)

The Diamond DA42 was on an IFR training flight from and to [departure/destination] via [waypoints]. The other aircraft involved was believed, based on information provided by the UK Airprox Board, to have been a Ventus motor glider. It was assessed probable that this was the intermittent primary radar contact detailed in the narrative below. Due to the lack of positive identifying information available, however, it is not possible to conclusively state this was the case. No other radar returns that correlate with the pilot's report were visible.

On the return leg from [waypoint to destination], the pilot of [the DA42] checked in with the PC Tay, Moray Low and Hebrides Low sectors controller at 1230:46 (all times are UTC) routing to [destination] then [waypoint] at 6000ft on QNH 1025hPa. The controller asked the pilot for the requested Service outside controlled airspace and the pilot responded Traffic Service. This was then agreed. The base of controlled airspace along the planned routing of [the DA42] was FL55 initially, rising to FL85 after EDONU.

The pilot of [the DA42] subsequently cancelled their flightplan leg to [waypoint] and stated instead they would be returning to [destination]. The controller passed this on to [the enroute] ATC. During this period, 10NM southeast of Perth, there was an intermittent primary-only target which, when visible, appeared to be tracking slowly northwest. This was approximately 21NM ahead of [the DA42] and south of its planned routing when the pilot checked in with the controller. The controller had no further information regarding this target throughout this event, nor definitive confirmation it

was a credible aircraft. The speed of the primary contact was such that, although still intermittent, it appeared it may cross ahead of [the DA42]. To that end, at 1237:34 the controller informed the pilot of [the DA42], "...there's an intermittent primary contact just in your 12 o'clock at about six miles, no height information, just outside controlled airspace". The pilot responded that they would, "...keep a good lookout for that".

In their Airprox report, the pilot of [the DA42] detailed, 'The controller mentioned a contact, no height information in our 12 to 1 or maybe 2 o'clock position. I do recall looking above and below in the stated direction, but from experience, I concentrated looking below! Most times when no height information is available, the targets are low down'.

Figure 1 shows the relative locations and trajectories of both [the DA42] and the primary target at this time, when they were 8.2NM from each other.

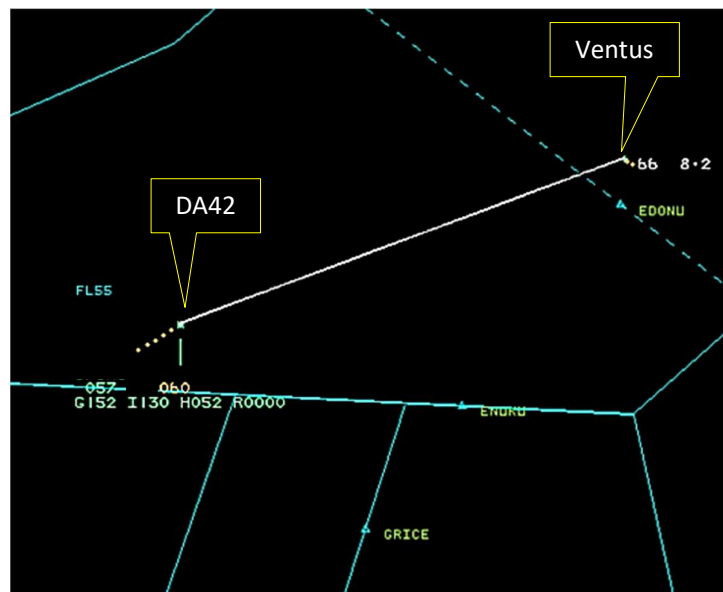


Figure 1

The controller updated this Traffic Information at 1239:02 "Previously mentioned primary, in your one o'clock at about, just appeared back on the radar, about four miles, if anything tracking northbound but no height information". The pilot responded that the traffic was "...not sighted". The aircraft were 4.8NM apart at this time and the primary-only target had turned onto a more northerly track and continued to occasionally drop from the radar picture and then reappear. At 1240:02 the controller provided a further update to the pilot, "...previously mentioned return is just in your twelve, well one o'clock to twelve o'clock, er range of about two miles, no height information. If anything tracking northwesterly. Just going into your twelve o'clock in the next ten seconds or so". There was no response from the pilot. The relative locations of each aircraft involved at this time are shown in Figure 2.

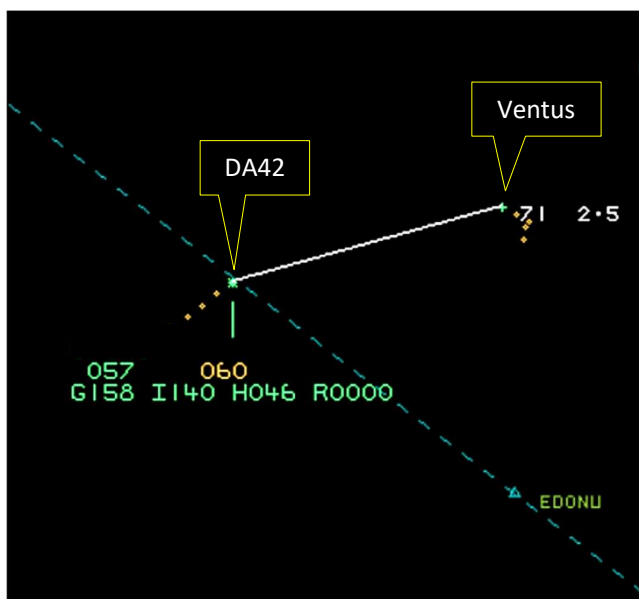


Figure 2

The controller then informed the pilot, at 1240:35, “*That primary contact is within a mile between your twelve and one o’clock, no height information*”. The pilot responded, after several seconds, “*We are now clear of that traffic*”. The controller asked if the pilot had gained visual contact with it and the pilot responded, “*Affirm we were visual, [c/s], thanks*”. The controller informed the pilot the target was in their 12 o’clock.

In their Airprox report, the pilot of [the DA42] stated, ‘*...my two students noticed the contact, and then so did I. I took control and climbed above the contact, only by a few hundred feet. According to our relative directions, the other traffic had right of way, although we were so close when I saw the traffic, I couldn’t go behind and just flew above. My student in the front had an instrument flying hood on, although there was a student in the back who could look out. We were not in controlled airspace at this time*’. The pilot concluded their report, ‘*On reflection, I consider that there was a high chance of collision*’. The pilot of [the DA42] described the other aircraft as a white, low wing, single engine motor glider and the UK Airprox Board believes this to have been [Ventus C/S]. The closest point of approach between [the DA42] and the primary target occurred at 1240:48 and was measured on NODE radar at 0.2NM, as shown in Figure 3, with the primary target passing behind [the DA42].

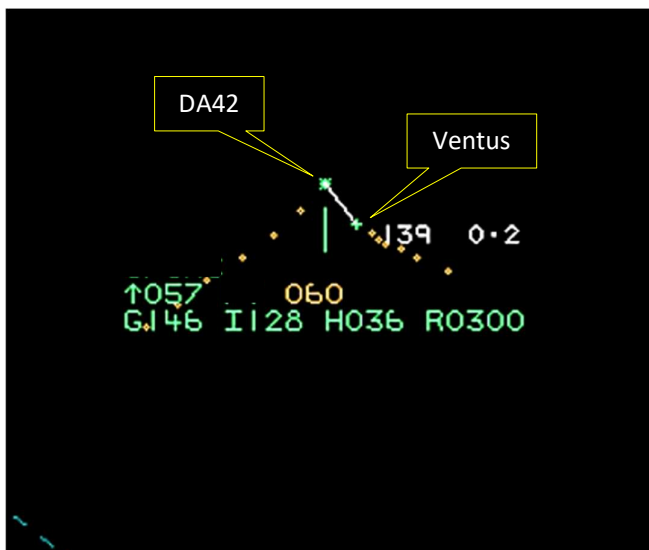


Figure 3 – Time 1240:48

On the next radar update [the DA42] had climbed to an indicated FL061, when the primary target was 0.3NM in their 5 o'clock position. The primary return passed through the [6] o'clock of [the DA42] at 1241:01 at a range of 0.5NM. The controller updated the pilot of [the DA42] at 1241:55 on other VFR traffic that was operating in the vicinity of Perth and asked if they wanted to change frequency to [enroute]. The pilot requested to do so and the controller terminated their Service and transferred the pilot to [their enroute frequency].

Conclusion

The Airprox occurred when the pilot of [the DA42], in receipt of a Traffic Service from the Tay controller, assessed they had come into close proximity with a motor glider, believed to be [Ventus C/S] at 6000ft, 9NM southwest of Perth. The Closest Point of Approach occurred between [the DA42] and the primary target, believed to be [Ventus C/S] at 1240:48 and was recorded on Multi-Track Radar as 0.2NM. It is not possible from radar to ascertain the vertical distance between the two aircraft, but the pilot of [the DA42] reported that the glider was at the same altitude. The incident was resolved by the pilot of [the DA42] visually acquiring the other aircraft and climbing above, as it passed them.

CAA ATSI

On reviewing the NATS PC controller investigation, ATSI had nothing further to add.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and the DA42 was positively identified using Mode S data. There was a further primary radar track with no height information. Further analysis of third-party aircraft tracking software was undertaken and neither the DA42 nor the Ventus were detected using ADS-B sources. Both the DA42 and Ventus pilots provided their GPS navigation data files. CPA was assessed to have been at 1240:43 with 250ft vertical and 0.25NM lateral separation, when the DA42 passed in front of the Ventus from left-to-right and above it in a climb.

The DA42 and Ventus pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.² If the incident geometry is considered as converging then the DA42 pilot was required to give way to the Ventus.³

Comments

AOPA

When flying, everyone's situational awareness is improved when Air Traffic Control is used. In this case, one pilot was obtaining the best service available, the other was not. More importantly, they were not communicating with air traffic [control]. Added to this, the modes of electronic conspicuity equipment available to the pilots did not alert them to each other. Until the Department for Transport announces a common standard, this will continue.

BGA

Of the two contacts recalled by the Ventus pilot, the first is clearly not the reporting DA42 though the second may be so, with traffic direction somewhat misattributed after the event. It is possible though that the DA42 was not sighted at all, and different traffic was seen by the glider pilot.

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3210 Right-of-way (c)(2) Converging.

The DA42 pilot apparently sighted the Ventus very late though the glider was carrying a canopy flasher – a recent innovation providing forward pulsed red lights from inside the glider canopy and offering enhanced protection in the near head-on case. It is not clear that the side-lobe observable intensity in the constant bearing situation here will have been useful though.

We assume the instructor was in the right-hand seat and would have been well placed to see the Ventus, but had their scan compromised by training the left-hand seat pilot. The rear seat pilot's location is not stated. It is not clear how *“their two students noticed the traffic”* when one was wearing an instrument flying hood.

The DA42 pilot reports that their scan for the *“no height information”* traffic was focused downwards. The Ventus was in fact at a similar level but flew higher for some of their cross-country flight – reaching over 9000ft QNH. This is entirely routine and cross-country glider flights often go higher, indeed much higher. Better understanding of the ways that aviators employ available airspace would assist target acquisition.

We are not sure of the exact capability and configuration of the glider's electronic conspicuity equipment, but if it provided for reception of not only SRD860 signals but also 1090MHz transmissions (as appears likely from the information provided), it is perhaps surprising that it did not give a bearingless alert when in proximity to the DA42's Mode A/C/S responses to the interrogations reported by NATS. If the DA42's transponder had been connected to a position source, a more useful alert might have been made.

Summary

An Airprox was reported when a DA42 and a Ventus flew into proximity 3NM southwest of Perth at 1241Z on Wednesday 31st December 2025. The DA42 pilot was operating under IFR in VMC in receipt of a Traffic Service from Scottish Control, and the Ventus pilot was operating under VFR in VMC not in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data for the flights of both aircraft, a report from the air traffic controller involved and a report from the appropriate operating authority. 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.

The Board first considered the actions of the DA42 pilot, and noted that they had been conducting instrument training with a second student observing from the rear seat of the DA42. Members noted that the pilot had been provided with Traffic Information on an aircraft which may conflict, but no altitude information had been available to them. The Board observed that the pilot had not seen a comparable track on their electronic conspicuity (EC) device and that the pilot had assumed to look down for the potential conflicting aircraft advised by the Scottish controller. Fortunately, the students had seen the glider, after which the instructor also became aware of its relative position, which at that time had been at approximately the same level as them. However, in the short time to the point of CPA, their relative altitudes were such that the instructor of the DA42 had been sufficiently concerned to have taken control and climbed over the glider's track by approximately 250ft (**CF6**). Members agreed that the pilot had, mistakenly, prioritised looking below their aircraft when they had only had generic situational awareness of the position of the Ventus (**CF2**) and, to their detriment, the DA42's TAS had been unable to detect the presence of the Ventus (**CF3**). The Board noted that the pilot had not taken the opportunity to report the Airprox on frequency, but had decided to do so later. Members wanted to remind pilots, in general, that reporting an Airprox at or shortly after the time it occurs is strongly recommended, as this will aid the ATC unit involved to record the event while the information is both available and memorable.

Turning their attention to the actions of the Ventus pilot, the Board noted that the pilot had been flying in shared Class G airspace without having been in receipt of a FIS, although members acknowledged that, as the glider had not been equipped with a transponder and had started to descend, this may not

have been practical. Nonetheless, on discussing the practicalities of R/T, members felt that the Ventus pilot could have called Scottish Information and notified their position for the purposes of increasing situational awareness for other airspace users, stating that an earlier call on the ascent would be much more useful than leaving the opportunity to do so for the descent. The Board agreed that GA pilots, in general, should be aware of the likely operational considerations of other aircraft within shared airspace, and recommended a range of Safety Sense Leaflets available from the CAA⁴, the most pertinent of which were perhaps those relating to the use of RT and also Collision Avoidance. As such, members wondered if the Ventus pilot had considered fitting a modern transponder, both lightweight and with a long battery life, and to make more use of their radio and FRTOL. As it was, members agreed that the Ventus pilot had had no situational awareness of the presence of the DA42 (CF2), as they had neither been in communication with Scottish Control nor received an alert from their EC device as might have been expected (CF4). The Board determined that, although the Ventus pilot had seen two aircraft during their flight, neither of those had been the DA42, which had passed over the Ventus and not below them as described by the Ventus pilot (CF5).

Briefly turning their attention to the actions of the Scottish controller, the Board agreed that the controller had demonstrated a high level of 'controllership' in the early passing of Traffic Information from an intermittent primary radar track, which in itself had only provided them with generic situational awareness, with no height information (CF1). Members also commended the controller for prompting the DA42 pilot to file an Airprox report.

In drawing their conversation to a close, the Board concluded that the DA42 pilot had seen the Ventus in time to take effective avoiding action. Members agreed, therefore, that although safety had been degraded, there had been no risk of collision. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2025253				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Ground Elements				
• Situational Awareness and Action				
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
Flight Elements				
• Situational Awareness of the Conflicting Aircraft and Action				
2	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late, inaccurate or only generic, Situational Awareness
• Electronic Warning System Operation and Compliance				
3	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
4	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
• See and Avoid				
5	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
6	Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: C.

⁴ [Safety Sense Leaflets | UK Civil Aviation Authority](#)

Safety Barrier Assessment⁵

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the DA42 pilot only had generic situational awareness of the position of the Ventus, and the Ventus pilot had no situational awareness of the presence of the DA42.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the DA42's EC equipment could not detect that of the Ventus, and the EC fitted to the Ventus did not alert as might have been expected.

Airprox Barrier Assessment: 2025253		Outside Controlled Airspace		Effectiveness				
Barrier		Provision	Application	Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 5%]				
	Manning & Equipment	✓	✓	[Green bar to 2.5%]				
	Situational Awareness of the Conflicting & Action	!	✓	[Green bar to 15%]				
	Electronic Warning System Operation and Compliance	○	○	[Grey bar to 2.5%]				
Flight Element	Regulations, Processes, Procedures and Compliance	✓	✓	[Green bar to 10%]				
	Tactical Planning and Execution	✓	✓	[Green bar to 10%]				
	Situational Awareness of the Conflicting Aircraft & Action	✗	✓	[Red bar to 20%]				
	Electronic Warning System Operation and Compliance	!	✗	[Red bar to 15%]				
	See & Avoid	✓	✓	[Green bar to 20%]				
Key:		Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	!	✗	○				
Application	✓	!	✗	○				
Effectiveness	■	■	■	■	□			

⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).