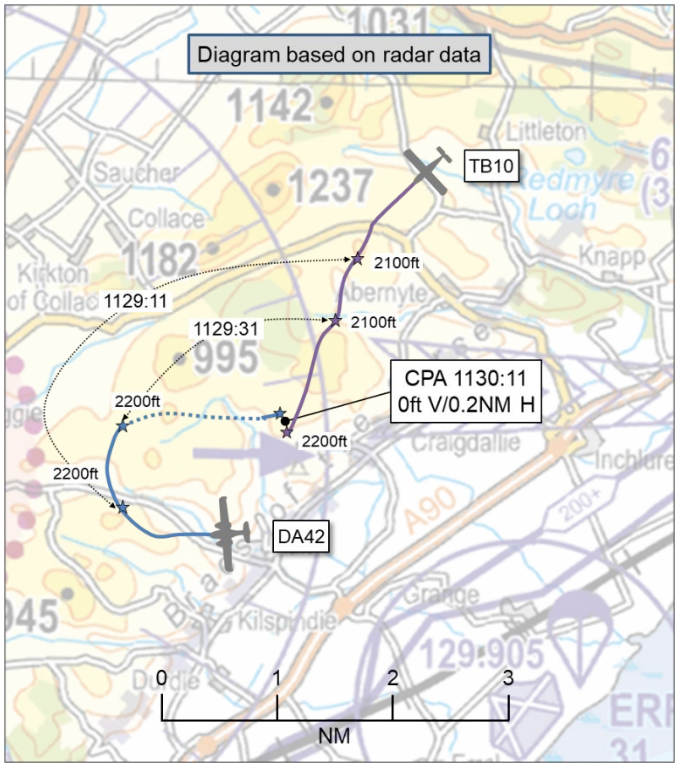
AIRPROX REPORT No 2024223

Date: 28 Aug 2024 Time: 1130Z Position: 5627N 00315W Location: 4NM east of Perth

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	TB10
Operator	Civ FW	Civ FW
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Basic
Provider	Dundee Approach	Scottish Information
Altitude/FL	2200ft	2200ft
Transponder	A, C, S	A, C, S
Reported		
Colours	White	Yellow/Blue
Lighting	Standard	Anti-collision
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	2000ft	2000ft
Altimeter	QNH	QNH
Heading	NK	190°
Speed	110kt	120kt
ACAS/TAS	TAS	Not fitted
Alert	Alert	N/A
Separation at CPA		
Reported	100ft V/<1NM H	0ft V/1000m H
Recorded	0ft V/0.2NM H	



THE DA42 PILOT reports that, on completion of a base turn for the NDB DME approach to RW09 [Dundee Airport], they intercepted the final approach track of 095° DND. As they were established, the aircraft started to descend from 2200ft to 1700ft. As they just started to speak to ATC, they received a traffic alert of traffic at 12 o'clock 100ft below. The traffic was a yellow Trinidad [they thought]. They turned their aircraft left to pass behind the other aircraft. After it passed to the southwest, they continued the approach and informed ATC of that traffic. The traffic was estimated to be less than 1NM and was straight and level with a track inclined towards them. They had been looking for a company DA42 to the north at Piperdam.

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

THE TB10 PILOT reports that they had flown to their [point of departure] earlier and were returning back to [their destination]. On their way up, their plan was to go through the Leuchars MATZ and overhead Dundee as this seemed the safer route. Leuchars required them to fly at 3000ft for a crossing which was not possible due to the cloudbase just above 2000ft. They therefore routed in between Perth and Dundee and asked for information on Dundee traffic. They assumed they would have a similar issue on return and therefore routed about 4-5NM east of Perth, with the aim of keeping away from both Perth and Dundee ATZs and slightly further from Dundee as they have larger traffic. It was a strong southwesterly wind, so they considered there was a threat from Dundee departures mainly and the RW09 approach to Dundee was unlikely to be used with a strong tailwind. This possibly gave them a bias to look left. (There is an RNP approach to RW27 at Dundee but there is only an ILS on RW09). They were about 4 to 5NM east of Perth and about 7NM west of Dundee. For them it was a 50/50 whether they spoke to Dundee or Perth, so they stayed with Scottish Information. Routeing over Perth did not seem like a good plan as the cloudbase would have put them through the circuit. They spotted a Diamond Twinstar on their right heading towards them possibly doing an Instrument Approach to

RW09 at Dundee. It looked as though [the DA42 pilot] had spotted them and was manoeuvring to pass behind them so they considered their best course of action was to stay on their track.

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

THE DUNDEE APPROACH CONTROLLER reports that [the DA42(1)] was carrying out a series of instrument approaches to RW09. At 1126 [the pilot] called beacon outbound for an NDB/DME approach. Approximately 30sec later [the pilot of another DA42(2)] called for join for circuits from the northwest. After being provided a Basic Service, [the pilot of DA42(2)] was instructed to hold at Piperdam to await [the DA42(1)] completing their NDB approach before being cleared for join. At 1128 [the pilot of DA42(2)] called again requesting to route to Broughty Castle for a straight-in approach RW27. That was approved.

They then called [the DA42(1) pilot] to ascertain their position and intentions after their NDB approach to ensure no conflict with [DA42(2)]. The pilot called they were base turn and intended to join the circuit after a low approach. They then immediately asked if there was traffic to affect. They were passed Traffic [Information] on the DA42(2), though that aircraft would not have been a factor and should not have been in the vicinity of the RW09 IAPs. The pilot said that they had a Traffic Alert in the cockpit and visually acquired a yellow light-aircraft that had crossed directly in front of them at the same level from north-to-south.

They reported the traffic was now clear and that they would continue their approach to port 4DME.

A call was then placed to Leuchars Radar who reported a 7401 squawk was visible to the southwest of Dundee.

Scottish Information was then called, and they reported [aircraft reg], a TB10, was going to [destination] from the north and was believed to have been routeing to the west of Dundee. That aircraft was a yellow Socata TB10 Tobago, matching the description given by the crew of [the DA42(1)]. The pilot of [DA42(1)] was asked to call Dundee on completing their flight. They subsequently rang in and said they had been looking for traffic in the Piperdam area having heard [the DA42(2) pilot's] radio calls. They said they were looking in that area when they saw the [TB10] passing left-to-right at the same level approximately ½ to 1NM ahead, between their position and Dundee. Their traffic alert equipment on board indicated the aircraft was 100ft below straight ahead. At the time, their position was approximately 7DME I-DDE.

THE SCOTTISH INFORMATION FISO reports that [the TB10 pilot] called 119.875MHz north of Montrose at 1104 routeing to [destination]. The pilot advised [their route].

Dundee called to say that an aircraft they were working had advised that they had another aircraft cross close to them, and Dundee believed that it was [the TB10], and it may have gone through their ILS. They offered the details on [the TB10] which they did not take, and they advised that if the aircraft working Dundee was going to file an Airprox they would call to update. No further communication from [Dundee] was received that day.

[The TB10 pilot] changed frequency to [their enroute frequency] at 1134.

The events described have not been checked for accuracy against the appropriate Radar and RTF recordings.

Factual Background

The weather at Dundee was recorded as follows:

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METAR EGPN 281120Z VRB01KT 9999 SCT020 18/14 Q1009
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Analysis and Investigation

Dundee Airport Unit Investigation

The investigation was based on ATS reports, flight progress strips, incident reports, local airspace configuration, photographs, a sketch of conflict or incident, and tape transcripts.

With regards to the controller's report, it was noted that the immediate control measure was the tracing action by Dundee ATC, identified by Leuchars and Scottish Information. The aircraft was believed to be a locally-based light-aircraft. Post incident action was noted as the potential to arrange a safety night with the TB10's base operators similar to previous events elsewhere.

Background: [The DA42 pilot] was on a local training sortie and was carrying out instrument training at Dundee utilising the ILS and NDB approach procedures. Halfway through the final approach when approximately 7NM west of Dundee Airport, the instructor reported to Dundee ATC that another aircraft had just passed ahead of them on a southerly track at similar altitude and between half a mile to a mile ahead of them. The instructor described it as a yellow [TB10] and had noted that it had not made any change in direction of travel. The instructor later stated that their traffic alert equipment had provided an 'amber' warning at the time, indicating that the aircraft was 100ft below their level and straight ahead of them. At the time, Dundee ATC was working another [DA42] which was operating VFR in the vicinity of Piperdam (approximately 4.6NM northwest of Dundee Airport) but was not in communication with a [TB10]. Dundee ATC contacted Leuchars LARS and asked if they were working traffic to the west of Dundee and they advised they were not. However, there was a 7401 squawk to the southwest of Dundee routeing south and that aircraft would be in communication with Scottish Information. Dundee ATC then contacted Scottish Information, and they stated that they were in communication with that traffic and that it was a [TB10], [aircraft registration], which was inbound to [destination airport].

The investigation analysis was as follows:

DUNDEE ATCO - The Dundee Approach controller started duty at 0826. At the time of the incident, they had been on watch for 19min after receiving a break of 1 hour and 30 minutes duration. At the time of the incident, the controller had only two aircraft on the Dundee frequency, which were DA42(2) and the [Airprox DA42] which was carrying out instrument approach training.

For a period, the assistant who was on duty took a lunch break and therefore the controller would have had to carry out regular Met observations and answer all phone calls that would normally be covered by the assistant. Despite the extra workload, having to cover the assistant duties, the controller would not be considered to have been overloaded. The first that the controller knew of the presence of the transiting aircraft to the west was when the instructor in [the DA42] reported it. There had been no phone calls from Leuchars LARS or Scottish Information informing them of the traffic and therefore they were in no position to warn [the DA42 pilot]. Once aware of the transiting aircraft, the controller endeavoured to ascertain if any adjacent units were in communication with the aircraft and discovered that it was in RT contact with Scottish Information. Due to the lack of information concerning the approaching transiting aircraft, Dundee ATC was in no position to do any more than they could at that point in time.

SCOTTISH INFORMATION -

The UK AIP, GEN 3.3 Air Traffic Services, 3 Types of Service, 3.3 Area Control Centre Air Traffic Services, 3.3.1 states.

3.3 Area Control Centre Air Traffic Services

3.3.1 Area Control Centre (ACC) ATS within the UK FIRs encompass the provision of surveillance and non-surveillance Area Control, Alerting, and UK Flight Information Services, to traffic not under the jurisdiction of an approach or aerodrome control unit. This includes the provision of a Basic Service as defined at ENR 1.1, subsection 2 by ACC Flight Information Service Officers (FISO). In addition to a Basic Service, the FISO will:

a. On receipt of a request for joining or crossing clearance of Controlled Airspace or Advisory Routes either:

i. inform the pilot that he should change frequency in time to make the request direct to the appropriate ATC Unit at least ten minutes before ETA for the entry or crossing point; or

ii. obtain the clearance from the appropriate ATC Unit himself/herself and pass it to the pilot on the FIR frequency.

b. Pass ETA to destination aerodromes in special circumstances, such as diversions, or at particular locations when traffic conditions demand it. Normally, however, pilots who wish destination aerodromes outside Controlled Airspace to have prior warning of arrival should communicate direct with ATC at the aerodrome concerned, at least ten minutes before ETA.

c. Accept airborne flight plans and pass the information to the appropriate authority.

The above states that the Scottish Information Service provides a Basic Service to aircraft in communication with them and this will include the following as stated in UK AIP ENR 1.1 subsection 2.3

2.3 Basic Service

2.3.1 Basic Service provides advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.

2.3.2 Basic Service is available under IFR outside controlled airspace in any meteorological conditions, or under VFR.

2.3.3 Pilots should not expect any form of traffic information from a controller/FISO and the pilot remains responsible for collision avoidance at all times. However, where a controller/FISO has information that indicates that there is aerial activity in a particular location that may affect a flight, they should provide traffic information in general terms to assist with the pilot's situational awareness. This will not normally be updated by the controller/FISO unless the situation has changed markedly, or the pilot requests an update.

2.3.4 Basic Service is available at all levels and the pilot remains responsible for terrain clearance at all times.

2.3.5 Unless the pilot has entered into an agreement with a controller to maintain a specific course of action, a pilot may change heading, route, or level without advising the controller. A controller will not issue specific heading instructions; however, generic navigational assistance may be provided on request.

As stated in paragraph 2.3.3 above, the pilot of [the TB10] should not have expected any form of Traffic Information from Scottish Information, particularly as they may not have been in communication with any other aircraft in the vicinity of [the TB10's] route and they certainly were not aware of the presence of [the DA42].

Any statement from or reporting action taken by the Scottish Information officer was not available for this report therefore any analysis of their actions can only be ascertained from the recorded telephone conversations between them and Dundee ATC. When informed of the incident, the officer did appear extremely surprised and quickly identified the likely aircraft that had transited through the Dundee approach. The officer was happy to pass any details required by the Dundee controller and was concerned that they should inform their own supervisor as they would shortly be finishing their shift. At one point the officer stated that *"….maybe I should have just chucked [them] to Leuchars...."*, however, due to other issues at the time, this action was not carried out. It may have been prudent for the officer to have telephoned Dundee ATC to inform them of the transiting TB10 once they were made aware of the aircraft's route, however it is not part of their specific responsibilities.

The DA42 was operated by a company which regularly uses Dundee Airport for instrument training and the instructors are extremely familiar with the Dundee procedures and airspace. [The DA42

pilot] had booked-in to carry out [instrument approaches] and had established communication with Dundee Approach at 1038 following a co-ordination call between Leuchars LARS and Dundee Approach at 1032. The crew had requested a Basic Service while carrying out the approaches and this had been acknowledged by ATC. The first two approaches were completed without incident, and they were cleared for a third approach, an NDB DME approach to RW09. The student reported beacon outbound at altitude 3000ft QNH at 1126 and was requested to report base turn complete.

In a subsequent phone call to Dundee ATC, the instructor stated that "..*we turned the corner (turn onto the final approach track) and heard that our company Diamond was holding at Piperdam, so I was looking for Piperdam to make sure we were going away and then I just noticed this thing moving left-to-right same level. The traffic alert went off and it said hundred feet below and (the other aircraft) never made any alteration [they] just kept [their] course going and we moved to the south…"*

During the RT exchange with Dundee ATC the controller discounted the observed aircraft as [the other DA42] and stated that it appeared to be a yellow [TB10]. When requested, the crew confirmed they were base turn complete, and the approach and subsequent go-around were executed without any further issue.

Transiting Aircraft – [TB10] Scottish Information ascertained that the transiting aircraft that most likely came into [proximity] with [the DA42] was a [TB10] which matched the colour of aircraft seen by the pilot of [the DA42]. In an interview the pilot [explained their routeing rationale as per their report]. The pilot did not anticipate traffic utilising the instrument approach for RW09. The pilot also stated that the cloud level prevented them from climbing above 2400ft. The pilot stated that they did see the [DA42] but at that point the aircraft appeared to be turning to go behind them and therefore they felt there was no need to take avoiding action. The pilot did mention during interview the charges concerning the Air Navigation Service Fee, but had stated that this had not been a factor in deciding not to contact Dundee ATC prior to the transit. Despite the aircraft receiving a service from Scottish Information, the pilot was ultimately responsible for collision avoidance as stated in UK AIP ENR 1.1 General Rules, 2 UK Flight Information Services, 2.2 Service Principles, 2.2.1

> **2 UK Flight Information Services**
>
> **2.2 Service Principles**
>
> 2.2.1 Within Class G Airspace, regardless of the service being provided, pilots are ultimately responsible for collision avoidance and terrain clearance, and they should consider service provision to be constrained by the unpredictable nature of this environment.

Dundee NDB Instrument Approach – Dundee's instrument approaches are located outside controlled airspace. CAA publication CAP1535 The Skyway Code states that,

> VFR traffic operating near aerodromes outside controlled airspace should be aware that there may be IFR traffic using IAPs and should avoid crossing them at similar altitudes to that of the procedure, unless talking to the relevant ATSU. IAPs outside controlled airspace are indicated by 'feathered arrows'. Note the feathers only align with the main instrument runway. There may also be approaches to other runways. Pilots are recommended to contact the aerodrome ATSU if flying within 10 NM of an aerodrome marked with IAP feathers.

The approach procedure that [the DA42 pilot] was completing was the NDB (Loc)/DME approach to RW09 (Figure 1).

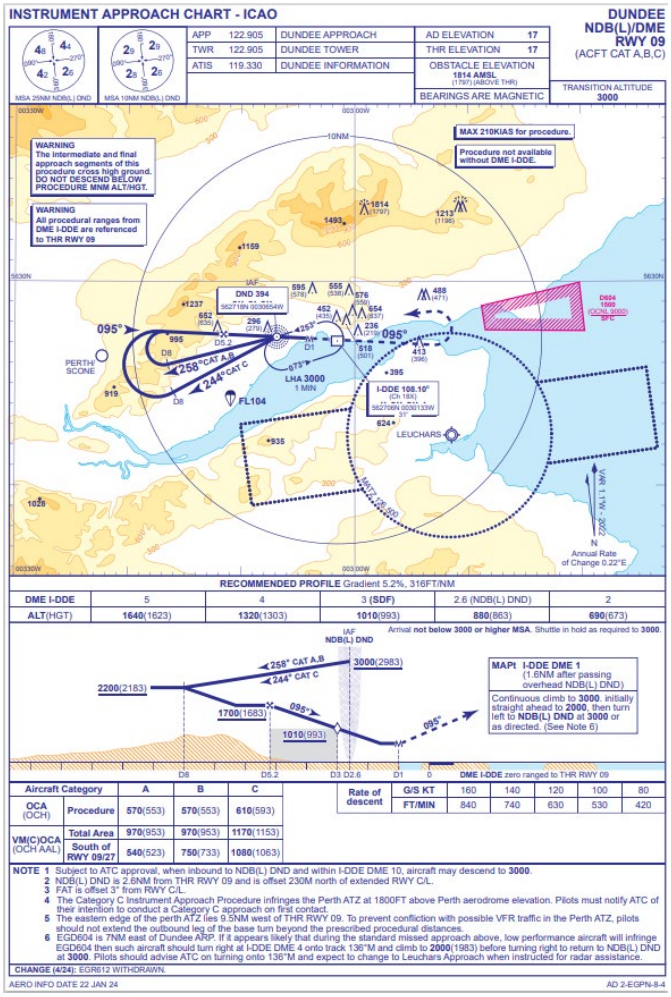


Figure 1 – Dundee NDB(Loc)/DME Approach RW09 procedure

At the approximate point of the Airprox, [the DA42] would have been descending from 2200ft Dundee QNH to not below altitude 1700ft Dundee QNH.

Charges And Conditions Of Use – In April 2024, HIAL revised the charges for landing fees and services provided at all HIAL airports. As part of this revision, an 'Air Navigation Service Fee' was introduced alongside the landing fee.

The investigation officer assumed that this charge was only applied to aircraft that land at an HIAL-operated airport, however, while conducting this investigation it was highlighted that there appeared to be a level of misconception by general aviation pilots that they will in fact be charged this navigation fee if they request a service from ATC when transiting past the airport and requesting a Basic Service from that unit's ATC when not actually landing at that airport.

Because of this, it came to the reporter's attention that some pilots are deciding not to contact Dundee ATC if operating adjacent to Dundee Airport, which means that ATC does not have a complete picture of potential traffic in the vicinity of the Dundee instrument approach procedures which, ultimately, will have a detrimental impact on the safety of all airspace users. The following comments concerning this navigation fee have also been observed on a forum associated with [an aviation] magazine,

"A navigation fee?? Is that a fee for using ATC services in general? Or for instrument approaches?" "An obvious question resulting from that is: What does the customer actually receive for the price of VFR navigation fees levied by HIAL?" "Is it possible to provide a "navigation service " without radar cover ?"*

The comments above highlight that there is a level of confusion over this navigation fee. Although not a factor in this incident, it is disturbing to believe that the wording of this charge could lead to pilots deciding not to contact Dundee ATC when flying in close proximity to the instrument approach procedures. Following a request, the definition of the Air Navigation Service Fee, as well as confirmation as to which operations this would apply to, has been received from HIAL and states:

"The navigation fee covers all aspect of air navigation service provision, including Communication, Navigation, Surveillance (CNS), Meteorological (MET) and Air Traffic Services (ATS) – both Air Traffic Control (ATC) and Aerodrome Flight Information Service (AFIS), as applicable. Therefore, the navigation fee for air navigation services will apply to both IFR and VFR operations. HIAL will only charge air navigation service fees for landing, practice approach or touch and go movements, whereby the communication is for that purpose only."

The above confirms that pilots transiting past Dundee Airport in receipt of either a Basic or a Procedural Service would not be charged for the privilege.

ADSB-B Data Source – An ADS-B data source was analysed for calculation of CPA. The investigator stated that from the lat/long positions obtained via an ADS-B data source, at this point the two aircraft were approximately 0.365NM apart horizontally and 125ft apart vertically, noting that the exact accuracy of the data shown cannot be verified.

As a result of this investigation, the following 3 recommendations were made,

(1) that HIAL amend each of their airport's Landing Fee and Charges website pages to include the definition of the term 'Air Navigation Service Fee' and to what type of operations it will apply,

(2) that Dundee ATC informs any airfields in the vicinity of the definition of the term 'Air Navigation Service Fee' and to what type of operations it will apply, and to ask that this information is distributed to all the pilots and operators based thereon.

(3) that Dundee ATC arranges a Safety Presentation Talk at [a local airfield] to describe the approach procedures in place at Dundee and that ATC can be contacted to provide a service when traffic wishes to transit Dundee.

In summary, an Airprox was filed due to a [TB10] flying through the instrument approach procedure while a [DA42] was operating. Despite [the TB10 pilot] being in communication with Scottish Information, Dundee ATC was not informed of its presence so could not warn [the pilot of the DA42]. The pilot assumed that Scottish Information would pass details to Dundee ATC, although it remains the pilot's responsibility to remain clear of or contact the appropriate ATSU when wishing to transit an Instrument Approach Procedure that is outside controlled airspace.

Some pilots have stated that the HIAL Air Navigation Service Fee has dissuaded them from contacting Dundee ATC, however this was not a factor in this incident. It is recommended that HIAL amend the relevant website pages to include a definition of the Air Navigation Service Fee and also that the definition be distributed to all adjacent airfields. A further recommendation is that Dundee ATC should arrange to provide a Safety Presentation to pilots based at [a local airfield] as soon as is practical.

CAA ATSI

The report from ATSI noted that the Dundee controller would not have been aware of the presence of the TB10 and had been unable to pass Traffic Information.

Furthermore, Scottish Information is not a surveillance-based service, so the pilot of the TB10 would have been better advised to have obtained a service from Dundee for transit through an area where aircraft may well be flying IFR, or completing instrument approaches.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken and both aircraft were positively identified using Mode S data. The DA42 radar returns were not available between 1129:17 and 1130:07.

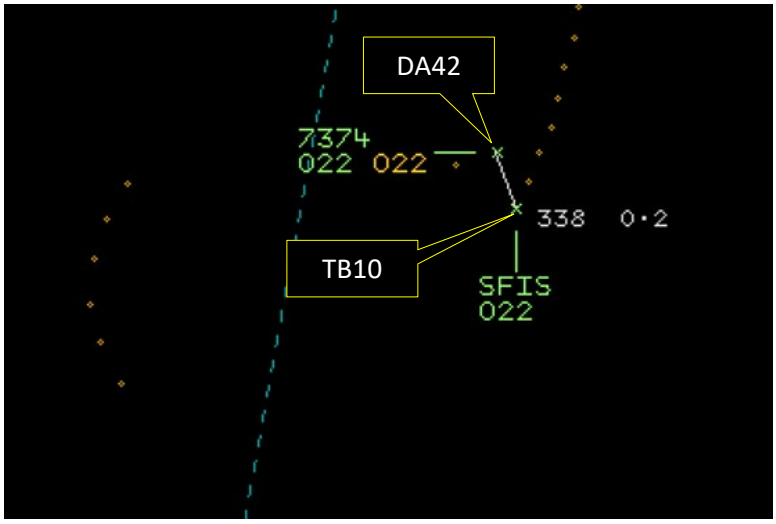


Figure 2 – 1130:11 CPA separation 0.2NM and 0ft

CPA was assessed to have occurred at 1130:11 with 0.2NM horizontal and 0ft vertical separation.

The DA42 and TB10 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] If the incident geometry is considered as converging then the TB10 pilot was required to give way to the DA42.[2]

Summary

An Airprox was reported when a DA42 and a TB10 flew into proximity 4NM east of Perth at 1130Z on Wednesday 28th August 2024. The DA42 pilot was operating under VFR in VMC in receipt of a Basic Service from Dundee Approach and the TB10 pilot was operating under VFR in VMC in receipt of a Basic Service from Scottish Information.

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 controller and FISO 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 discussed the actions of the TB10 pilot and wondered if the pilot had been concerned about the navigation charges, but noted that this had not been reported as having been an issue. Although this was not a factor in this instance, members agreed that it was important to make the charges and their applicability clearer. Members understood that the pilot's plan for this flight had been affected by the events of their previous flight, noting that they had decided not to fly through the Leuchars MATZ because of the expectation to be asked to climb to 3000ft when unable to do so. Controller members felt that the pilot had only needed to inform Leuchars that they had been unable to climb, so that Leuchars could have altered their plan as necessary by either providing a service through the ATZ or rerouting the aircraft around it. Nonetheless, the Board agreed that the pilot's plan to remain with Scottish Information had been ineffective in this case and that they had not communicated with an appropriate FIS provider (**CF2**). The Board opined that Leuchars may have been an option for a surveillance-based service. However, given the chosen routing, members felt that Dundee would have

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3210 Right-of-way (c)(2) Converging.

been the better choice for a FIS as the TB10 passed through the approach area for Dundee airport which was known to be commercially active. The Board agreed that, given the service provided at the time, the TB10 pilot had had no situational awareness of the presence or position of the DA42 traffic (**CF3**). The Board also agreed that the TB10 pilot had sighted the DR42 late as it had passed behind them (**CF5**).

Moving their attention to the actions of the DA42 pilot, the Board felt that their flight planning had been appropriate and satisfactory. However, it was mentioned that the DA42 pilot could possibly have spoken to their company traffic rather than risk being distracted by looking for it. Nevertheless, members agreed that, when the DA42's TAS had issued a Traffic Alert (**CF4**), it had provided the pilot with late situational awareness (**CF3**) of the presence of another aircraft, but which had contributed to their achieving a sighting of the TB10. The Board noted that the pilot had then been concerned by the proximity of the TB10 (**CF6**) and so had manoeuvred behind it.

After an already lengthy discussion on the advantages of radar services available from Leuchars, with some members considering that Dundee Airport might wish to investigate the installation of surveillance equipment of their own, the Board then considered the actions of the Flight Information Service providers in use. The Board agreed that neither the Scottish Information FISO nor the Dundee Approach controller had been required to monitor the TB10 or DA42 aircraft, both having been delivering a Basic Service to the pilots of those aircraft (**CF1**).

Concluding their discussion, members agreed that safety had been degraded and that the DA42 pilot had been concerned by the proximity of the TB10 but that, ultimately, the DA42 pilot had sighted the TB10 early enough to have taken timely and effective avoiding action to prevent the aircraft from coming into close proximity and, as such, no risk of collision had existed. The Board therefore assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024223			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
	Flight Elements			
	• Tactical Planning and Execution			
2	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
	• Situational Awareness of the Conflicting Aircraft and Action			
3	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			
4	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
	• See and Avoid			
5	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late 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.

Safety Barrier Assessment[3]

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

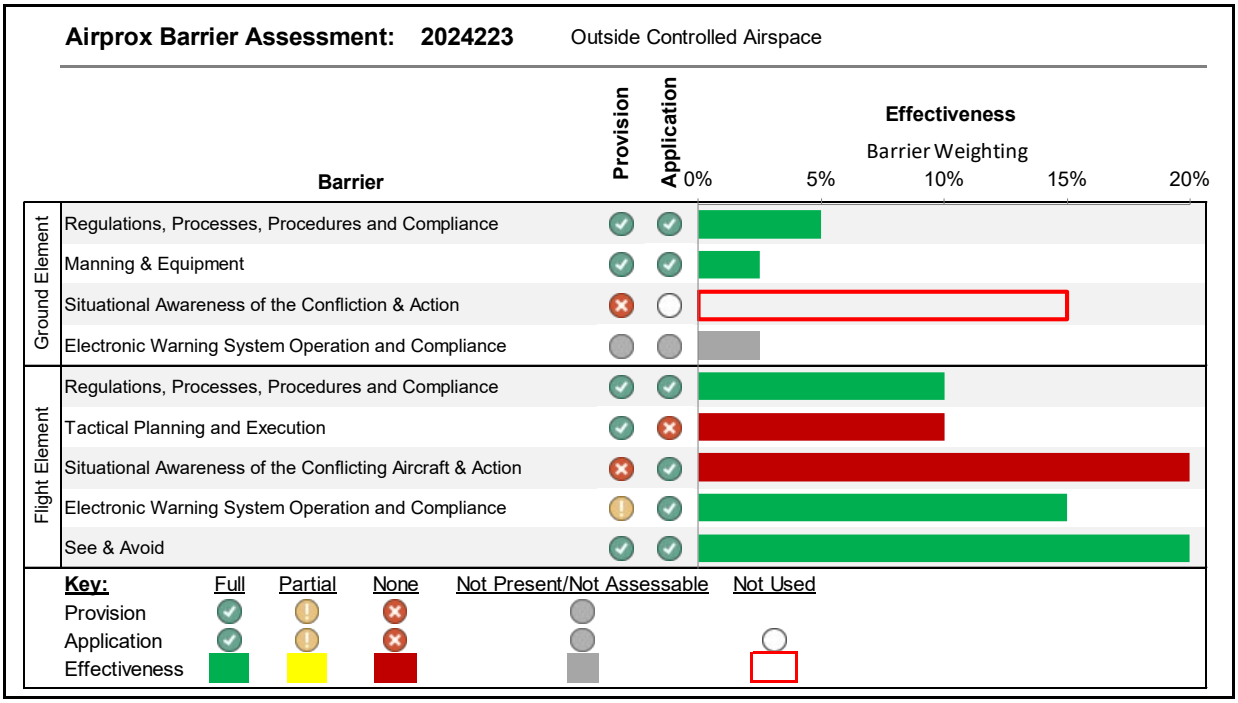
Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **not used** because neither the Scottish Information FISO nor the Dundee Approach controller were required to monitor their respective aircraft's flight under the terms of a Basic Service.

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because the TB10 pilot, flying in proximity to an IAP outside controlled airspace, could have contacted Dundee for Traffic Information.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the TB10 pilot had no situational awareness of the DA42's presence or position, and the DA42 pilot had late situational awareness of the presence of the TB10.



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