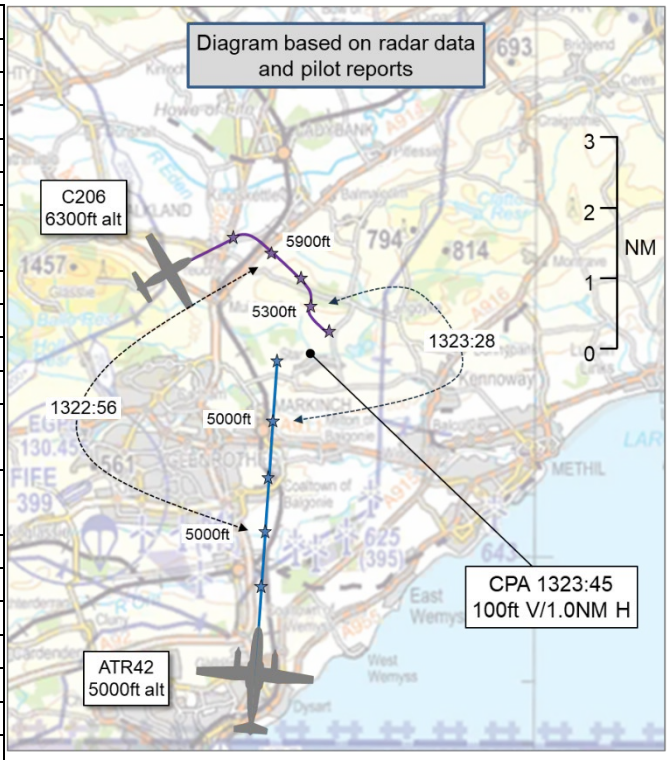
AIRPROX REPORT No 2023214

Date: 10 Sep 2023 Time: 1324Z Position: 5613N 00307W Location: 1.5NM northeast of Glenrothes

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	ATR42	C206
Operator	CAT	Civ Comm
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	Changing frequency
Provider	Edinburgh Radar	Scottish Control
Altitude/FL	A051	A050
Transponder	A, C, S+	A, C, S
Reported		
Colours	White, black, red, company	White, blue
Lighting	Landing, strobes, beacon	Red flashing beacon, navigation
Conditions	IMC	VMC
Visibility	<5km	>10km
Altitude/FL	5000ft	5000ft
Altimeter	QNH (1014hPa)	QFE (1001hPa)
Heading	360°	120°
Speed	200kt	90kt
ACAS/TAS	TCAS II	Not fitted
Alert	RA	N/A
Separation at CPA		
Reported	100ft V/1NM H	Not seen
Recorded	100ft V/1.0NM H	



THE ATR42 PILOT reports that, during cruise/divert from Edinburgh to Dundee following a runway closure at Edinburgh, the crew had been setting-up for the approach into Dundee. Three TCAS returns had been identified with one closing on a reciprocal [track] at 500ft below their altitude and had been climbing. That aircraft continued to climb within 2NM radius of the ATR42. An RA had been received at 100ft separation with climb command. ATC was informed and the RA cleared by 300ft and the ATR42 pilot requested ATC to continue climb to 6000ft to remain clear of other targets. The ATR42 pilot [judged that] the other traffic had been in IMC also but not in receipt of a service. […].

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

THE C206 PILOT reports that the pilot-in-command had carried out four lifts, all to heights of 9000ft-9700ft above Fife airfield. They report that the third lift had proceeded normally and that the aircraft had been equipped with a Garmin 296 colour display GPS. [They note that the track recorded but that they do not have the equipment to download it.] The FlightRadar24 track appeared to be an accurate record of the flight. The C206 had been climbed initially under the part of N864 airway that starts at FL85. The climb and request for entry into N864 had been made at around FL55 and request had been for entry "not above FL110". The run-in for the drop had been normal with the usual calls made to Scottish Control on 124.500MHz. There had been various patchy layers of cloud about but the aircraft had been clear of cloud and in sight of the surface at all times and the pilot had been following VFR when in the airway. The majority of the layer cloud had been below 4000ft. A listening watch is always kept on the Fife frequency (130.455MHz) in order to ascertain what activity there might be at and near the airfield. After the drop, Scottish Control had been informed that the descent had been commencing and a right turn had been made to take the aircraft north, away from that part of N864 where the base is FL65. Generally, the pilots flying for [operating company] try to avoid being in the airway as much as possible.

By approaching the drop zone from the north they remain under the FL85 part of N864 as long as possible and by turning north after the drop they exit the FL65 area as quickly as possible. After the drop, the C206 pilot flew towards the village of Falkland maintaining descent and had then turned towards the village of Freuchie. They recall that it had been on this flight that they had heard their colleague in [2nd aircraft, not involved in this Airprox] on 130.455MHz saying that they had been climbing north of Falkland and the C206 pilot had made a call on the same frequency explaining their position and intentions (routeing towards Freuchie) so that the pilot of the 2nd aircraft would be aware of their position. The C206 pilot recalls that the 2nd aircraft had been at least 3000ft below them at the time and that they could not see it. After Freuchie they had turned roughly south-eastwards, continuing to descend and, around this time, they note that they would have QSY'd to Fife on 130.455MHz. When there is a lot of chatter on Scottish Control the C206 pilot tended to turn the volume down full on that radio after successful clearance to QSY. They [recall that] they had become aware that a situation might have been developing at Edinburgh Airport causing some disruption but did not fully understand what was happening until the fourth drop of the day. They descended towards East Wemyss and had been at all times clear of cloud and in sight of the surface. There had been some large, isolated cumulus clouds below 4000ft (but cannot recall the height precisely) but at all times they could see clearly ahead. There had been a slight haze in the lower air but nothing that caused any impediment to seeing objects clearly. The C206 pilot noted that they generally wait until the transponder shows FL59 before QSY'ing – that way they are sure that they are well clear of the FL65 portion of N864. This is so that their "clear of controlled airspace" call is always accurate. After they are no longer in contact with Scottish Control, their attention is always on what might be below them and report that they are wary of descending onto any GA aircraft that might be operating to the east of Glenrothes town. Their attention is therefore usually ahead and down. The village of Thornton is used as a visual reference by inbound aircraft and aircraft may hold in that area if the airfield is closed for a parachute jump. Vigilance in this area is therefore important. The C206 pilot recalled having seen no other aircraft on that drop and had not been aware of any other aircraft at any level during that lift other than [2nd aircraft] who they knew to be well clear and to the north of their position. Prior to QSY'ing, nothing they had heard on Scottish Control gave them any concern that another aircraft might be operating in the Fife airfield area. On reflection, the C206 pilot judged that they perhaps should have maintained a listening watch on Scottish for longer after they had QSY'd. The first they knew of this incident had been when informed by the Airport Manager at Fife airport on Tuesday 12th September.

THE EDINBURGH RADAR CONTROLLER reports that they had been the INT controller. On handover, the runway had been closed again due to yet another short-notice runway repair. The ATR42 had been No1 at the time and broken off the approach and held at the EDN at 4000ft. They eventually decided that they would like to divert to Dundee instead of Glasgow due to how busy it had been. The controller reports that they had coordinated 5000ft direct to the DND with a Traffic Service with Dundee [they recall]. As the ATR42 had been leaving controlled airspace the controller informed them and changed them to a Traffic Service. As they had been approximately 6NM northeast of PIPAR the controller had observed a 0033 squawk at 6000ft descending. They passed the traffic as "12 o'clock, 4NM indicating altitude 5700ft descending, not on this frequency, unverified". They then updated the traffic to "previously mentioned traffic now 2 o'clock range 1.5NM". The ATR42 pilot replied "TCAS RA". The controller acknowledged the TCAS RA. The ATR42 pilot then asked if they could climb to 6000ft which they approved and asked the Watch Manager to re-coordinate 6000ft with Dundee. Subsequently the Tay and Dundee Approach controller called to ask if the ATR42 had received an RA against the [aircraft squawking] 0033.

THE SCOTTISH CONTROLLER reports that Scottish Civil had not been in contact with either aircraft at the time of the conflict with the C206 having left the relevant frequency as per the LoA.

Factual Background

The weather at Edinburgh was recorded as follows:

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METAR EGPH 101320Z 04007KT 9999 SCT041 21/17 Q1014=
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Analysis and Investigation

NATS

The runway at Edinburgh had been closed at short notice due to surface degradation. The ATR42 had been transferred by the Tay sector controller to Edinburgh Radar descending to FL70 at 1251:39. A review of radar replay indicated that the ATR42 had entered a hold overhead Edinburgh at a lower altitude under the control of Edinburgh Radar for approximately 30min before diverting to Dundee. The ATR42 pilot had not been in receipt of a service from Prestwick Control after diverting. The pilot of the C206 displaying the squawk Mode A code 0033 had contacted the Tay sector controller at 1310:36 to request clearance to enter N864 not above FL110. A clearance had been issued by the Tay controller with a request that the pilot report ready to drop.

Prestwick Centre (PC) MATS Pt.2 TAY – Fife Paradropping 3.2.3.4, stated "*Aircraft must obtain a clearance to enter CAS from PC, and maintain two way communications with PC at all times within CAS*" as well as further bullet points including "*Aircraft must report intention to drop giving a minimum of 1 minute's notice, including their method of leaving CAS, i.e. by descent or laterally to the north. Aircraft must report leaving CAS and when changing to Fife Radio/Drop Zone controller. Aircraft may request a Basic Service from PC prior to entering and after leaving CAS*." The pilot of the C206 had not requested a [Basic] service from Scottish Control prior to entering or after leaving controlled airspace.

The pilot of the C206 reported ready to drop at 1316:31, and 'drop complete and descending clear' at 1321:02.

At 1322:57 the pilot of the C206 reported 'clear of controlled airspace and returning to Fife Radio'. The Tay sector controller had acknowledged this call, and then at 1323:10 transmitted "*And [C206 c/s], just be advised it looks as if there is an aircraft just south of you by about 3NM at 5000ft inbound to Edinburgh.*" There had been no response to this transmission suggesting the pilot had already switched to Fife Radio. Although the pilot of the C206 had been monitoring the Tay sector frequency prior to entering and after leaving controlled airspace, as per the Letter of Agreement and MATS Part 2 procedure for Fife paradropping, they had not been in receipt of a service [outside CAS] from Scottish Control therefore there was no requirement for the Tay sector controller to monitor the aircraft or any ability to provide Traffic Information.

CAA ATSI

The ATR42 had been receiving ATC vectors for an approach at Edinburgh when at 1258:35 the pilot had been sent to the Edinburgh hold due to an unexpected runway closure at Edinburgh. The Edinburgh radar controller had two other aircraft inbound and a transit aircraft at that time. At 1314:18 the pilot of the ATR42 had requested to divert to Dundee. During this period, the C206 had been climbing to 9700ft for a drop over Fife airfield 15NM northeast of Edinburgh Airport and 4NM north of the Edinburgh CTR/CTA. At the time the ATR42 pilot requested to divert, the C206 had been in a climb passing 7500ft overhead Fife airfield, speaking to but not receiving an ATS from Scottish Control.

The C206 pilot had reported "ready to drop" at 1316:31 with Scottish Control. At 1319:18 the Edinburgh radar controller had instructed the ATR42 pilot to climb to maintain 5000ft and route direct to the Dundee NDB which had been correctly readback by the pilot.

At 1319:48 the C206 had been seen to have commenced a descent.

At 1320:46 the ATR42 had been 5NM from the boundary of the Edinburgh CTA.

At 1321:52 the Edinburgh controller had advised the ATR42 pilot: "*just leaving controlled airspace. It'll be a Traffic Service outside*". The ATS had been acknowledged by the pilot.

The C206 pilot, having previously reported to Scottish Control at 1321:02 ‘’*drop complete and in a descent*’’, then reported being clear of controlled airspace and changing back to Fife Radio at 1322:57.

At 1323:06 the Edinburgh controller had advised the ATR42 pilot: “*Traffic Information. In your 12 o’clock range of about 3NM, erm, not on this frequency, indicating altitude 5700ft unverified*” which the ATR42 pilot acknowledged.

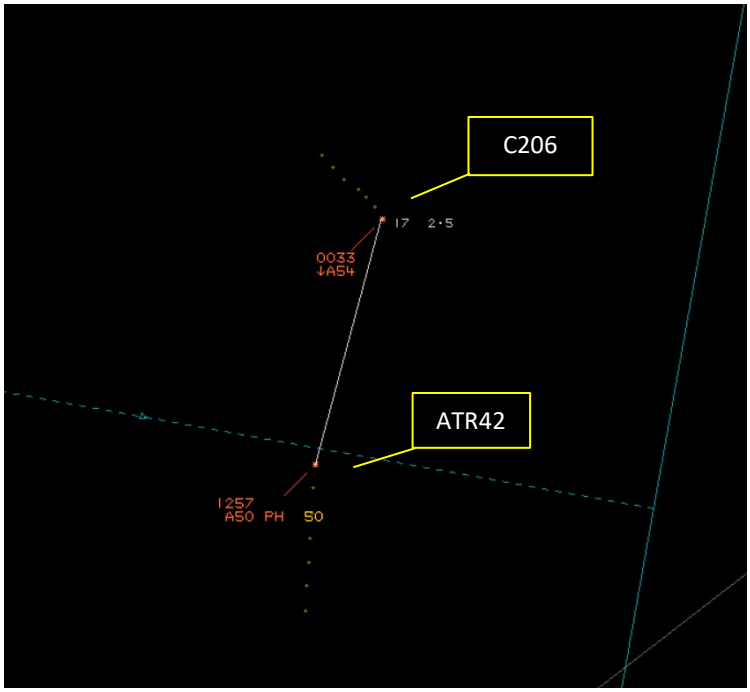


Figure 1 – 1323:10 (area radar STCA alerts – no STCA alert on Edinburgh displays)

At 1323:36 the Edinburgh controller advised the pilot: “*previously mentioned traffic now in your 2 o’clock range of one and a half miles*”.

At 1323:45 the ATR42 pilot called “*er that’s er. We are TCAS RA* (callsign)”. The controller acknowledged that call “*Roger*”.

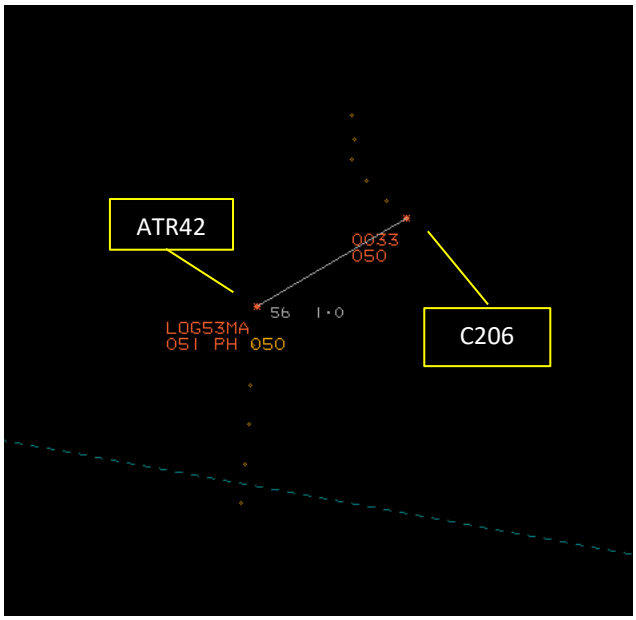


Figure 2 - CPA occurred at 1323:45. 100ft V/1.0NM H

At 1324:03 the ATR42 pilot requested a climb to 6000ft, approved by the controller, immediately following which the pilot had reported clear of the RA. The controller transferred the pilot to Dundee Approach at 1324:56.

Analysis

ATSI received copies of reports from both pilots and the Edinburgh radar controller. Investigation reports were also received from both Edinburgh ATC and Prestwick Centre. A review of the area radar replay and Edinburgh Radar RTF was also completed.

The decision to close the runway at Edinburgh came without warning due to a report of damage, with an estimated closure period of 1hr. The closure had also coincided with a change of ATC watch at the unit. At the time, the Edinburgh radar controller had just taken over the position and had been responsible for sequencing three inbound aircraft, including the ATR42, whilst also providing a service to a transit aircraft. Very quickly the workload increased with all three inbound aircraft indicating their intention to divert to Glasgow. A number of telephone calls had been made to coordinate with both Scottish Control and Glasgow ATC. Only one position in the approach room had been manned ("INT"). The Edinburgh unit investigation stated that the INT controller had believed it had not been necessary to open the FIN position as "the workload would fall to them, and the Watch Manager had been in the Approach Control Room providing support".

The Edinburgh controller had been aware of the presence of a number of unknown aircraft between Edinburgh and Dundee, including the [C206] aircraft. Once the diversion of the ATR42 to Dundee had been coordinated with Dundee, according to the unit investigation report, the controller issued a heading and level to the pilot of the ATR42 which would "keep the aircraft clear of contacts that had been visible at that time''.

Although the ATR42 pilot had been informed that they had been leaving controlled airspace they had not been pre-warned, nor the type of ATS that would be provided.

CAP493 Section 1: Chapter 6: ATS Surveillance Systems states:

1B.4 For flights leaving controlled airspace controllers should provide pilots with advance notice of:

(1) the lateral or vertical point at which the aircraft will leave controlled airspace.

Such notice should be provided between 5-10 NM or 3,000-6,000 ft prior to the boundary of controlled airspace;

….and with regards to ATS provision:

(2) the type of ATS that will subsequently be provided, unless the aircraft is coordinated and transferred to another ATS unit before crossing the boundary of controlled airspace.

The Edinburgh unit investigation stated that in considering the level of service provision, the INT controller had:

"considered TFC [traffic] to be appropriate taking into consideration various factors including radar coverage limitations to the north of Edinburgh CTR, meaning there had been an increased likelihood of unobserved 'pop-up' traffic with little time to issue traffic avoidance information, and traffic that was visible on the radar screen outside controlled airspace all of which may have made providing a Deconfliction Service challenging given the unusual situation they had been dealing with, and the potential for a sudden increase in workload resulting from traffic holding and potentially diverting due to the ongoing runway closure. Additionally, the INT controller knew from experience that [airline] aircraft often request direct routeings outside controlled airspace to and from Edinburgh, commonly requesting a Traffic Service".

The controller did not issue specific nor generic Traffic Information to the pilot of the ATR42 on the presence of the C206 operating between Edinburgh and Dundee either before leaving or after having just left controlled airspace.

Traffic Information had not been passed to the ATR42 pilot on the C206 until the aircraft were 3.7NM apart (the controller had stated 3NM in their transmission).

CAP774 UK Flight Information Services states that for aircraft in receipt of a Traffic Service:

> *The controller shall pass Traffic Information on relevant traffic and shall update the Traffic Information if it continues to constitute a definite hazard, or if requested by the pilot. However, high controller workload and RTF loading may reduce the ability of the controller to pass Traffic Information, and the timeliness of such information.*
>
> *Traffic is normally considered to be relevant when, in the judgement of the controller, the conflicting aircraft's observed flight profile indicates that it will pass within 3NM and, where level information is available, 3000 ft of the aircraft in receipt of the Traffic Service or its level-band if manoeuvring within a level block. However, controllers may also use their judgment to decide on occasions when such traffic is not relevant, e.g. passing behind or within the parameters but diverging.*
>
> *Controllers shall aim to pass information on relevant traffic before the conflicting aircraft is within 5NM, in order to give the pilot sufficient time to meet their collision avoidance responsibilities and to allow for an update in Traffic Information if considered necessary.*
>
> *Controller judgement is essential to ensure that Traffic Information is relevant and timely. Controllers should take account of the aircraft's relative speeds, lateral and vertical closure rates, and track histories. Distances displayed on ATS surveillance systems can be at variance to the actual distances between aircraft due to the limitations in accuracy of surveillance systems. Furthermore, some aircraft may not be displayed at all by ATS surveillance systems.*

The initial lack of and then subsequent delay by the controller in the provision of Traffic Information to the ATR42 pilot had not been commented upon in the Edinburgh unit investigation report. The Edinburgh controller did go on to update the Traffic Information but the ATR42 crew was likely already receiving the TCAS RA which they reported shortly afterwards on the RTF.

ATSI re-engaged with the unit to ask the question about the passing of Traffic Information:

Q. Was the controller not asked about why they did not pass Traffic Information on the C206 to the (ATR42) when they left controlled airspace? Whilst the (ATR42) track would remain clear of the [C206 operating area], it would still be passing in the vicinity, and generic Traffic Information on the activity might be considered relevant as well?

A. The controller believed that when they had been leaving, the parachute aircraft had been either in or to the west of the restricted area [Fife parachuting site – Class G airspace]. They had not anticipated that it would have continued to the east of that area. They admit they should have passed that the restricted area had been active, however, they were trying their best due to the extreme circumstances and correctly believed that the track of the ATR42 would have kept it clear from the area. This had been discussed and debriefed.

On the area radar replay, in the period approaching CPA, the C206 had been observed in a left turn away from the ATR42. According to the C206 pilot's report this had been purely coincidental and had not been avoiding action by them as they had been unaware of the presence of the ATR42.

The Scottish Control controller, who had been speaking to the C206 pilot earlier whilst they had been inside controlled airspace, did attempt to pass Traffic Information to them on the ATR42, but the C206 pilot had already left the frequency by then.

ATSI noted that when the ATR42 had been transferred to Dundee the Traffic Service had not been terminated. Dundee is not surveillance equipped and provides a Procedural Service to IFR inbound and outbound aircraft.

ATSI also noted that normally aircraft requiring a Lower Airspace Radar Service in this area would be transferred to Leuchars. However, Leuchars LARS had not been available.

In response to the additional questions submitted by ATSI, the Edinburgh controller wanted to add that: "the overall picture of what happened that day due to a short notice runway closure with at least 10 inbounds due within the following 15 minutes isn't actually being taken into consideration. This had also happened during the handover at the start of their shift so perhaps they hadn't been as up-to-speed as they could have been".

CAP493 (Section 8: Chapter 1: Aeronautical Information Service) provides clear guidance on watch and position handovers. With regards to taking over a position;

5. Handing-Over an Operational Position

5.1 The responsibility for the accuracy of a hand-over lies with the person vacating an operational position. If the traffic levels are very high or the traffic situation complex, consideration should be given to splitting the position, where this is possible, before the hand-over takes place. The order in which information should be passed from one controller to another should be as follows:

(1) General information, including any variations from routine operations;

(2) Other supplementary information relating to the position;

(3) The detailed traffic situation.

5.2 Controllers taking-over should be alert to the possibility of errors and omissions in the information being provided and must verify the data transferred to them by a thorough check of the situation display, flight progress strips and any other relevant information. Only when they are completely satisfied that they have a total awareness of the situation, should they indicate to the controller handing-over that they are ready to accept responsibility for the operational position. On the occasions when controllers hand-over a busy and complex situation, they should remain available adjacent to the position for a short period following the hand-over. This will enable the accepting controller to seek immediate clarification of any points that may arise during this time.

With regards to the potential for opening the FIN position, when questioned by ATSI the unit confirmed that aircraft approaching the airfield and those in the hold, normally remain with the INT controller. The sequence for approach is established by the INT controller who would then pass the aircraft to FIN. If a FIN controller had been available, they would in these circumstances have been expected to support the INT controller by answering telephone calls and carrying out coordination. As it happens, the Watch Manager was present in the approach room and carried out these functions.

With regards to a lack of STCA at the time, the unit investigation stated: "It is noted in the initial investigation that the short-term conflict alert (STCA) alert did not display at any time. This had been raised by the unit investigator with the unit Air Traffic Engineering Manager, who explained how the STCA system predicts the risk of collision".

In this case as the aircraft's tracks had not been predicted to cross and were diverging, the STCA system would not have considered there to be a risk of collision and therefore would not activate in this area.

ATSI questioned the lack of STCA as reported by the unit and sought clarification:

Q. On the area radar the STCA alerted initially as a Low (white) and then High (red) severity? Why would the Edinburgh STCA not do so also particularly as […] both aircraft came into close proximity. Has this been closed, and is the unit comfortable that STCA won't alert in this situation?

A. The STCA is configured to cover the area that lies within ATCSMAC to the north of the Edinburgh Control Zone. The rationale behind this is to cut down on spurious STCA alerts in an area of high GA activity. Historically this has been considered as appropriate as traffic would normally be transferred to Leuchars LARS on leaving controlled airspace. In light of the news that Leuchars will cease to provide this service, an impact assessment will be carried out to ascertain if this remains appropriate and, if not, the system will be reconfigured.

Conclusion

The Airprox occurred in Class G airspace with only the pilot of the ATR42 in receipt of an ATS. Under a Traffic Service the pilot remains responsible for collision avoidance.

The provision of more timely Traffic Information on the C206 to the ATR42 pilot by the Edinburgh radar controller before they had left controlled airspace, and before both aircraft were within 5NM of each other, might have improved the ATR42 pilot's situational awareness. The ATR42 pilot might have then had more time to make a decision on whether to take up a track which would have provided greater lateral separation from the C206 or to request a heading from ATC to achieve the same.

UKAB Secretariat

The ATR42 and C206 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 head-on or nearly so then both pilots were required to turn to the right.[2]

Summary

An Airprox was reported when an ATR42 and a C206 flew into proximity 1.5NM northeast of Glenrothes at 1324Z on Sunday 10th September 2023. The ATR42 pilot had been operating under IFR in IMC and in receipt of a Traffic Service from Edinburgh. The C206 pilot had been operating under VFR in VMC, had been changing frequency from Scottish Control to Fife Radio and had not been in receipt of a service.

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.

Board members firstly considered the actions of the ATR42 pilot, accepting that their decision to divert had been triggered by issues at their planned destination. Members noted that the ATR42 pilot had been cleared to Dundee and established on a Traffic Service once clear of controlled airspace. Noting that the Fife parachuting area had been active, which had led to the C206 tasking in the area, the Board wondered whether the ATR42 pilot might have asked for a higher level of Air Traffic Service had they known of that activity. In the circumstances that prevailed, the Board agreed that the ATR42 pilot had gained only late situational awareness (**CF5**) of the C206 through a TCAS RA (**CF6**) and a relatively late Traffic Information call from Edinburgh and had at no stage gained visual with the C206 (**CF7**).

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

In considering the actions of the C206 pilot, members thanked the pilot for their comprehensive and honest report of events, noting their desire to act consistently in this relatively routine task. They noted the pilot's habit of reducing the radio volume [on the Scottish Control frequency of 124.500MHz] once clear of controlled airspace and opined that, in this case, it had inevitably denied the pilot situational awareness (**CF5**) of the unfolding events at Edinburgh. Together with an evolving weather situation, the Board considered that that lack of situational awareness had contributed to the pilot not having seen the ATR42 at any stage (**CF7**).

The Board then reviewed the role played by the Edinburgh controller in this event. Members accepted that the situation at Edinburgh had greatly increased the workload and that the unavailability of a LARS from Leuchars had added to it. In the case of the ATR42, it was noted that the pilot had not been pre-warned of the service available to them on their departure from controlled airspace and opined that the controller had possibly been too busy to have offered a Deconfliction Service in this case anyway which, in addition, had likely led to late Traffic Information (**CF2**) concerning the C206 for the ATR42 pilot. The Board noted the decision to bring in additional controller support had not been taken (**CF1**) and that, in this dynamic situation, such a move would have greatly supported those whose workload had increased due to diversion activity (**CF3**). Additionally, members highlighted the lack of electronic system support in this case, noting that the STCA system at Edinburgh had been prioritised for other areas of responsibility for the unit and, had it been available, would in all likelihood have triggered an alarm between the ATR42 and C206 (**CF4**).

When determining the risk of the Airprox, the Board considered the reports from both pilots together with that of the controllers involved. They noted that, although neither pilot had seen the other aircraft before CPA, the ATR42 pilot had initiated avoiding action due to a TCAS RA enabling a minimum separation of 100ft vertically and 1NM horizontally, and that whilst the ATR42 pilot may have wished for more separation, their action had ensured that there had been no risk of collision; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023214			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Manning and Equipment			
1	Organisational	• ATM Staffing and Scheduling	An event related to the planning and scheduling of ATM personnel	
	• Situational Awareness and Action			
2	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
3	Human Factors	• Task Monitoring	Events involving an individual or a crew/ team not appropriately monitoring their performance of a task	Controller engaged in other tasks
	• Electronic Warning System Operation and Compliance			
4	Technical	• Conflict Alert System Failure	Conflict Alert System did not function as expected	The Conflict Alert system did not function or was not utilised in this situation
	Flight Elements			
	• Situational Awareness of the Conflicting Aircraft and Action			
5	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			
6	Contextual	• ACAS/TCAS RA	An event involving a genuine airborne collision avoidance system/traffic alert and collision avoidance system resolution advisory warning triggered	
	• 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

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:

Manning and Equipment were assessed as **partially effective** because Edinburgh could have considered bringing an additional controller in to share the workload.

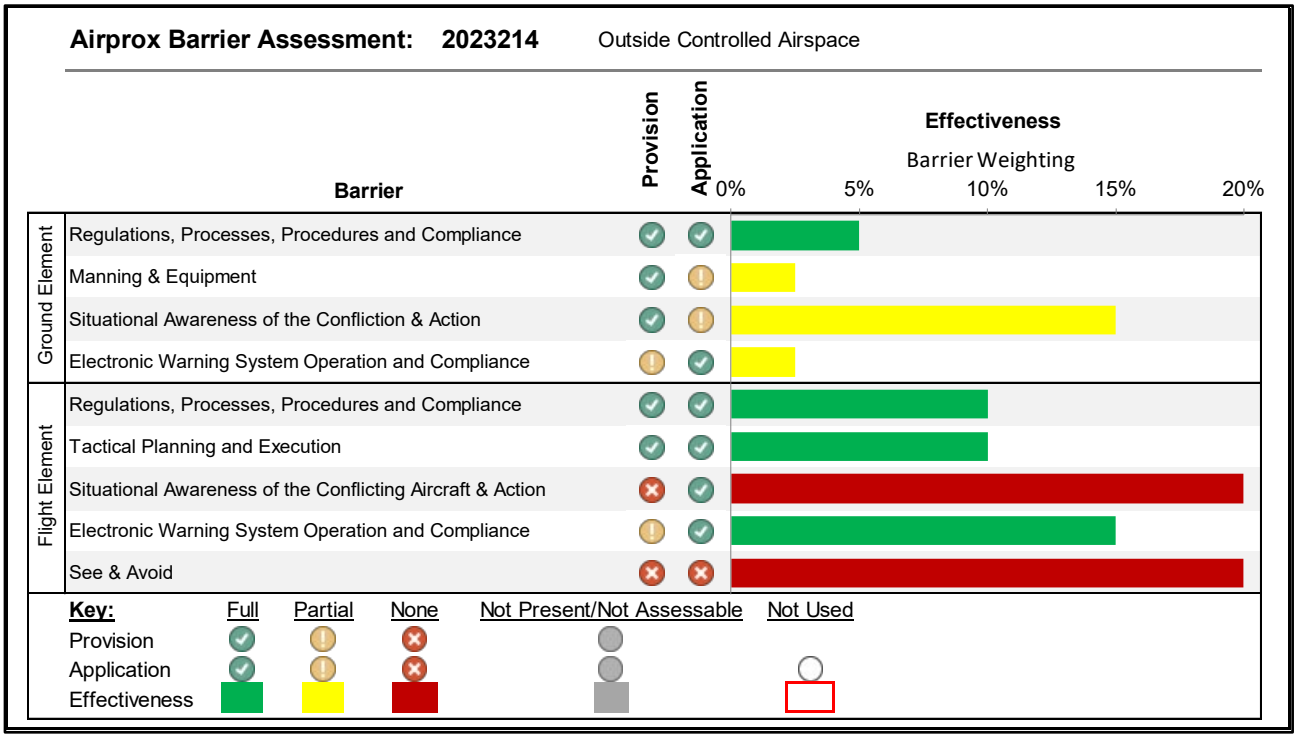
Situational Awareness of the Confliction and Action were assessed as **partially effective** because the Edinburgh controller had been subject to a high workload – due to the high number of diverting aircraft – and had provided only late Traffic Information for the ATR42 pilot (when the separation from the C206 was 3.7NM).

Electronic Warning System Operation and Compliance were assessed as **partially effective** because the STCA had not been configured for use in the Airprox area.

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the ATR42 pilot had gained only late situational awareness of the C206, and the C206 pilot had no situational awareness of the ATR42.

See and Avoid were assessed as **ineffective** because neither pilot had gained sight of the other aircraft.



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