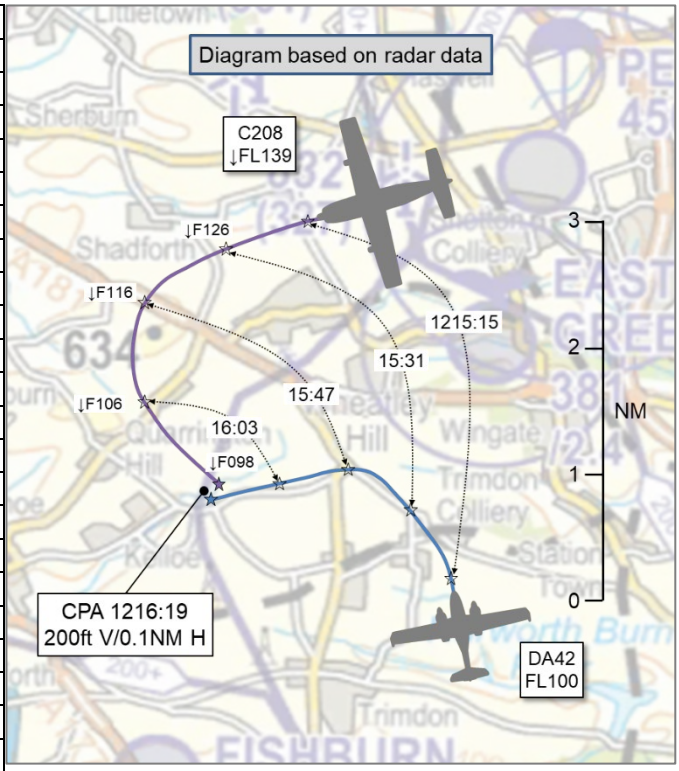
AIRPROX REPORT No 2021142

Date: 08 Aug 2021 Time: 1216Z Position: 5443N 00128W Location: 4NM SE of Durham

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	C208
Operator	Civ Comm	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	IFR	VFR
Service	Traffic	Basic
Provider	Newcastle Radar	Newcastle Radar
Altitude/FL	FL100	FL098
Transponder	A, C, S	A, C
Reported		
Colours	White, grey	White
Lighting	Strobes, posn, taxi	Beacon, strobes
Conditions	IMC	VMC
Visibility	<5km	>10km
Altitude/FL	FL100	NK
Altimeter	SPS (1013hPa)	QFE (980hPa)
Heading	270°	'South-west'
Speed	135kt	155kt
ACAS/TAS	Not fitted	TAS
Alert	N/A	None
Separation at CPA		
Reported	150ft V/200m H	Not Seen
Recorded	200ft V/0.1NM H	



THE DA42 PILOT reports that, during a positioning flight from [departure airfield] to [destination airfield], passing in proximity of Shotton airfield, they had a close proximity with another aircraft (a DHC-6 Twin Otter, [they thought]); most likely a paradrop aircraft operating from Shotton which was descending after a drop. Just after leaving Teesside airspace, ATC informed them that there were parachuting activities at Shotton airfield from surface to FL160. They were south of Shotton at FL100 inbound NASGEB on a northerly track and turned left onto a heading of 350° to avoid the airspace. Teesside ATC transferred them to Newcastle Approach. After establishing contact with Newcastle ATC, the controller confirmed that they had a Traffic Service because they were outside controlled airspace, that Shotton parachuting was in progress and gave them a heading 340° to stay outside of Shotton dropping zone. A few moments later (at 1216) the controller asked them to turn onto a heading of 270° because of traffic in the vicinity that was descending and getting close to them. Shortly after, the controller informed them that the traffic was at their 2 o'clock above, descending and tracking in their direction; the traffic was spotted at the declared position at approximately 0.5NM and, after assessment, they judged that the traffic would pass below and behind them so they maintained their heading and altitude ready to conduct an evasive manoeuvre if the traffic were to alter its flightpath. The traffic was identified as a DHC-6 Twin Otter [they thought] and it passed at a distance of approximately 200m and approximately 150ft below their aircraft in their 4 o'clock. Their position was on the 243° radial at 5.1 NM from Shotton airfield (radial and distance obtained from their SkyDemon application). They reported clear of traffic to Newcastle ATC and also reported an Airprox; the controller instructed them to resume their own navigation inbound NATEB.

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

THE C208 PILOT reports that they were in the descent from a parachute drop at approximately FL150. During a later parachute lift to FL150, at approximately 14:50, Newcastle ATC asked them to telephone them after landing. During the call, they were informed that, during a parachute lift detail at

approximately 3 miles west of the centre of the Shotton Drop Zone, they came within 100ft of a Diamond DA42 at 1216. They were in a maximum rate descent at that time having dropped all parachutists. They were given to understand from Newcastle ATC that a Diamond DA42 had just been handed over from Durham Tees ATC. They were unaware of any communication between the Diamond DA42 and Newcastle ATC (nor Durham Tees ATC as the frequency was not tuned into their radios). They were also informed that Newcastle ATC attempted twice to call them on the radio but no reply was received. Despite maintaining a listening watch to Newcastle ATC on box 2 as is normal practice, they did not hear the radio calls. They had, however, received/responded to previous and subsequent calls. They would in no way dispute that Newcastle ATC made the calls; they are at a loss as to why they never heard them. For conspicuity, their red beacon, strobe lights, 0033 (parachuting) squawk and [on-board electronic conspicuity device] were all operating. However, the on-board SkyDemon did not show any traffic in the vicinity. Newcastle ATC informed them that, although it occurred in Class G airspace, they were required to file an Airprox. The flight was undertaken in good visibility and they did not see any aircraft. However, as the incident occurred whilst in a maximum rate descent, this may possibly be attributed to relative obscuration. They asked Newcastle ATC if they needed to complete an MOR, unaware of the procedure from a pilot's perspective. The controller suggested that they make a statement of events as they recalled them. They are a risk-averse parachute pilot – they only fly in VMC and have always responded to ATC calls and willingly accommodated any requests that ATC make. They are, as are their other pilot colleagues, truly appreciative of the service that ATC provides and would never knowingly disregard any communication from them (nor would they ever consider it prudent to do so).

THE TEESSIDE RADAR CONTROLLER reports that [the DA42 pilot] called northbound. Initially, they found it hard to understand what the pilot's intentions were but established that they wanted a Traffic Service to [destination]. The aircraft was tracking towards Peterlee airfield, which was active paradropping. The controller could see the paradropping aircraft manoeuvring north of Peterlee. They warned the pilot of this activity and told them where the airfield was. They did not give them Traffic Information on the other aircraft as it was outside the required parameters at the time. The pilot elected to head 340° to avoid. The controller passed this information to Newcastle ATC and transferred the aircraft at 12:14.

THE NEWCASTLE RADAR CONTROLLER reports that the details were passed by Teesside Radar of the overflying aircraft, including their squawk. The Teesside ATCO phoned to advise that [the DA42 pilot] had turned onto a heading of 340° when advised that Peterlee parachute centre was active. Teesside ATC also passed details of one of their outbounds which wanted to cross the border CTA. The controller's workload was 'level 2'. [The DA42 pilot] called on frequency at FL100 as they crossed the lateral limits of Teesside airspace. Teesside ATC had not changed the squawk but, as they had been informed of the aircraft's Teesside code, the aircraft was identified, given a Traffic Service and told to turn left heading 330° as the parachute area was active and the parachute aircraft was in their 1 o'clock 5 miles 5300ft above. The paradropping aircraft was heading west descending and Traffic Information was passed. The [DA42 pilot] was then instructed to turn left heading 270° with the intention of bringing [the aircraft] inside CAS as a right turn was impossible due to the possibility of parachutes in the air over the paradrop site. Both aircraft were parallel and the traffic was called in. Two attempts were made to contact the paradropping aircraft (the C208) but it was later found that [the pilot] had an intermittent radio even though they had checked-in earlier. The paradropping aircraft then turned left towards the [DA42] descending. The [DA42 pilot] was again given Traffic Information and they called visual with the paradropping aircraft when it was in their 1 o'clock under one mile. The paradropping aircraft passed the [DA42] 100ft below [the C208] with no lateral separation. The pilot of the [DA42] said that the paradropping aircraft was very close and that they would be filing a report.

Of note, Peterlee Parachute Centre phoned that morning to advise that they were active and, when the paradrop aircraft (C208) first became airborne, the pilot checked-in on the Newcastle Radar frequency. On each subsequent flight, the C208 pilot did not call Newcastle including the flight that became an Airprox. Two attempts were made to contact [the C208 pilot] during the incident but were unsuccessful.

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

Factual Background

The weather at Teesside International Airport was recorded as follows:

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METAR EGNV 081220Z 23016KT 9999 VCSH FEW012 SCT032 19/13 Q0997=
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Analysis and Investigation

CAA ATSI

The DA42 was en-route to [destination] receiving a Traffic Service firstly from Teesside and then, during the Airprox, from Newcastle ATC. The C208 had been climbing to FL160 to release parachutists within the notified Peterlee free-fall parachute drop zone centred on Shotton Airfield, and was maintaining a listening watch on the Newcastle Radar frequency on their "Box 2" as part of a Basic Service.

ATSI had access to reports from both pilots, the Teesside controller report, the controller and a unit investigation report from Newcastle, as well as RTF from both units and area radar recordings. Snapshots taken from the area radar replay in this report do not necessarily represent the radar display picture available to the controllers at the time and which were not supplied by either unit. The radar replay maps available to ATSI do not include the Peterlee parachute drop zone. The published Peterlee drop zone has been marked on some snapshots, but it is an approximate position only. Aircraft levels are displayed as Flight Levels.

The DA42 [pilot] contacted Teesside Radar at **1158:24** and a Traffic Service was agreed. The aircraft was 30NM south of Teesside at the time. The pilot advised that they were routing direct to "*ASGEB*".[1]

At **1204:00** the Teesside Radar controller passed the details of the DA42 to the Newcastle Radar controller via the direct telephone line – the DA42 was still more than 15NM south of Teesside at the time. The C208 had appeared on the radar replay earlier at **1200:40** and was in a climb passing an indicated FL61 on the coastline, to the east of the Peterlee drop zone (Figure 1). At **1206:05** the Teesside controller rang the Newcastle controller to pass details on a second aircraft airborne from Teesside routing north. The Teesside controller then advised that the DA42 [pilot] had "*asked to route own navigation to NATEB*", (reporting point overhead Newcastle), which was approved by the Newcastle controller (Figure 2).

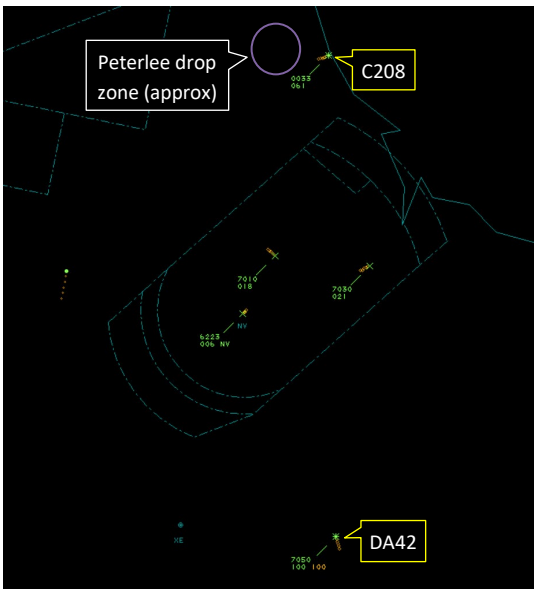

Figure 1 – 1204:00

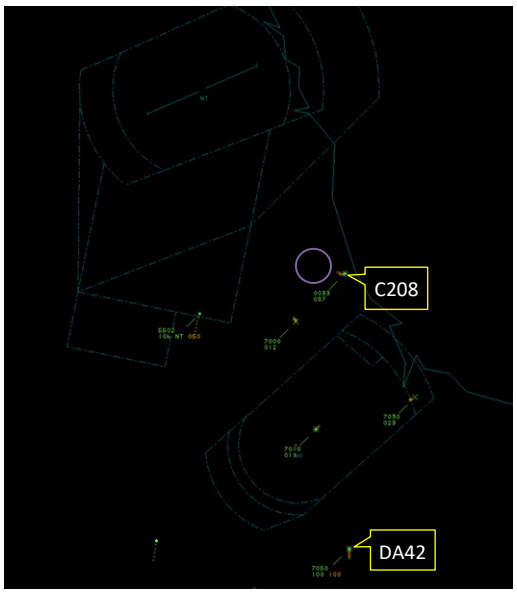

Figure 2 – 1206:05

[1] ASGEB – IAF waypoint for RNP approach RW25 at Newcastle.

At **1212:30** the Teesside controller asked the DA42 pilot to confirm that they were routing to NATEB. The pilot advised that they were routing to ASGEB (Figure 3). The Teesside controller acknowledged this and advised "*Peterlee airfield is active – paradropping up to FL160 – the airfield is in your 12 o'clock range of 8 miles*". This was acknowledged by the pilot who requested a "*left turn to avoid*" which was approved by the controller at **1213:00**, after they had dealt with another aircraft on their final approach. The DA42 pilot advised that their heading would be 340° (Figure 4).

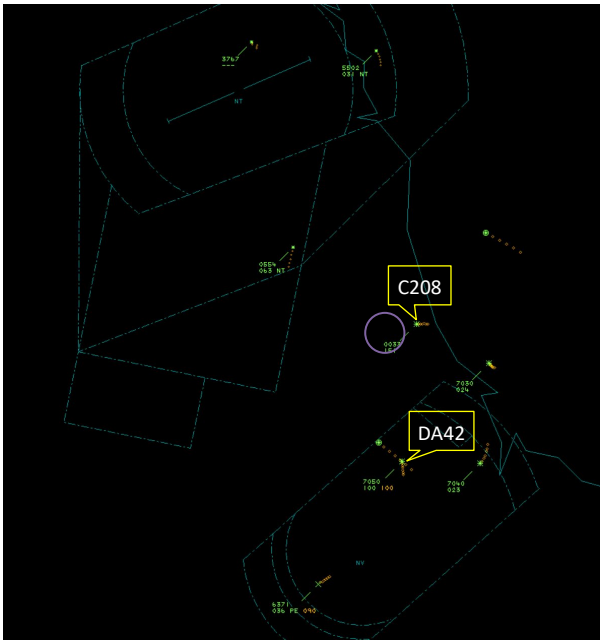

Figure 3 – 1212:30

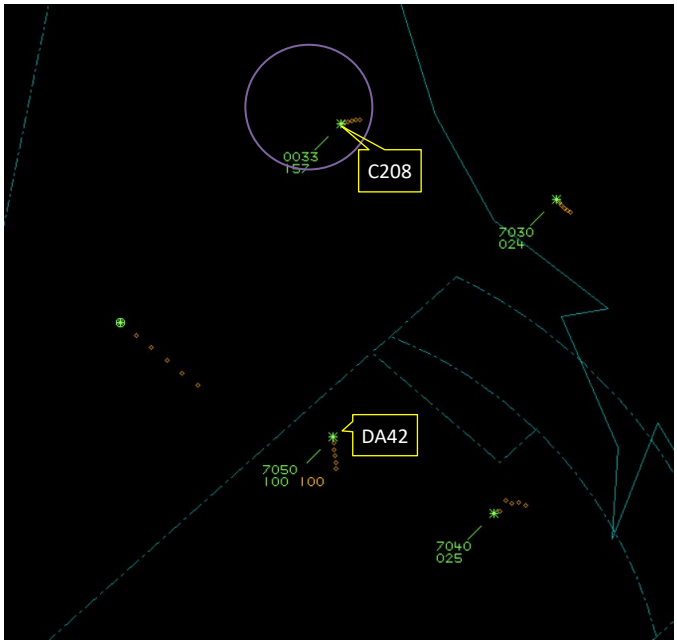

Figure 4 – 1213:12

At **1213:46** the Teesside controller rang the Newcastle controller again to advise that the DA42 was "*actually routing Alpha Sierra Echo Bravo* (sic*) – I don't know where that is. He's hard to understand. I've told him about Peterlee, and he's now turning left heading 340 to avoid. He's on his own* - (interrupted by Newcastle controller) *on his own nav*" which was acknowledged by the Newcastle controller (Figure 5). **At 1214:00** the Teesside controller instructed the DA42 pilot to contact Newcastle Radar (with the frequency) (Figure 6).

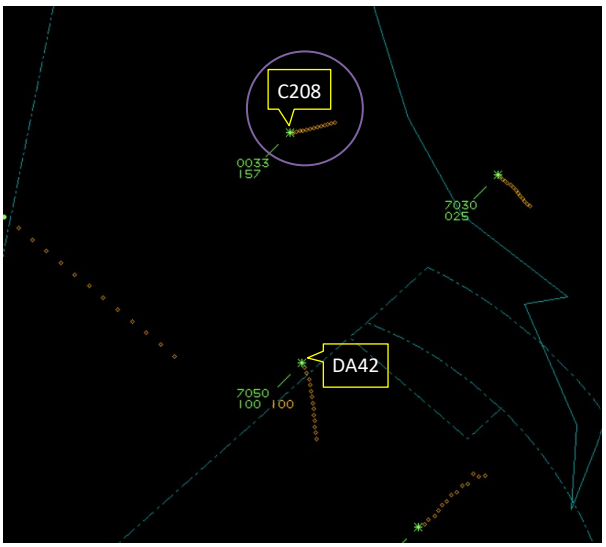

Figure 5 – 1213:46

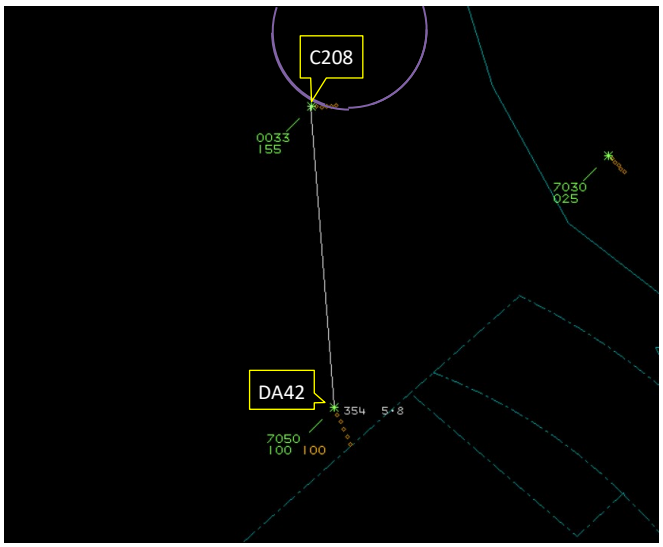

Figure 6 – 1214:00

At **1214:17** the pilot of the DA42 reported on the Newcastle Radar frequency, advising that they were heading 340° and maintaining FL100. The Newcastle Radar controller who was under training and under the supervision of an On-the-Job Training Instructor (OJTI) acknowledged this, advising that it was a Traffic Service, and instructed them to "*fly heading of 330 degrees - that will er take you clear of the Peterlee parachuting centre*" which was readback correctly by the pilot. The

Newcastle controller then passed Traffic Information; "*traffic er right one o'clock range of 5 miles is a paradropping aircraft at FL150*". The DA42 [pilot] requested that the controller repeat the information as "*we had another station calling at the same time*", (note - not on the Newcastle Radar frequency), which the controller did at **1214:50** (Figure 7). The Newcastle controller then took another initial call from the aircraft outbound from Teesside routing north, and confirmed a Deconfliction Service with them. Then, at **1215:18**, the controller instructed the DA42 [pilot] to "*fly heading 270 degrees*" which was readback by the pilot. The controller, who was also providing a Deconfliction Service to an aircraft inbound to Newcastle, gave that aircraft a turn onto base leg before, at **1215:38**, attempting to call the pilot of the C208 (twice) but for which they received no reply (Figure 8).

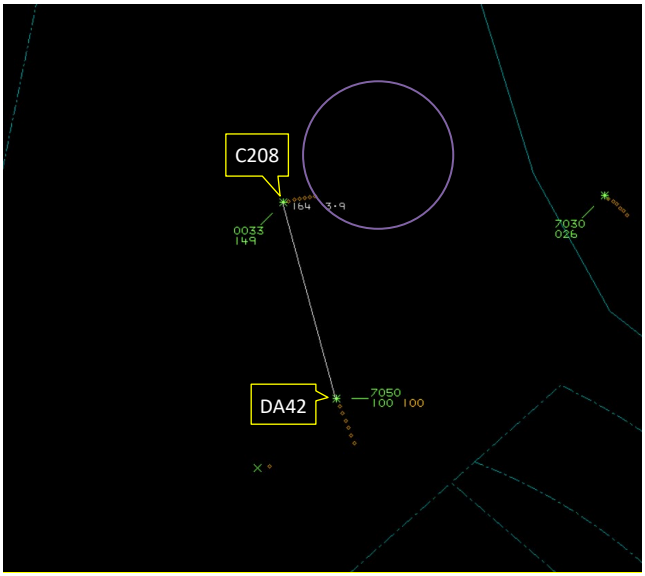

Figure 7 – 1214:50

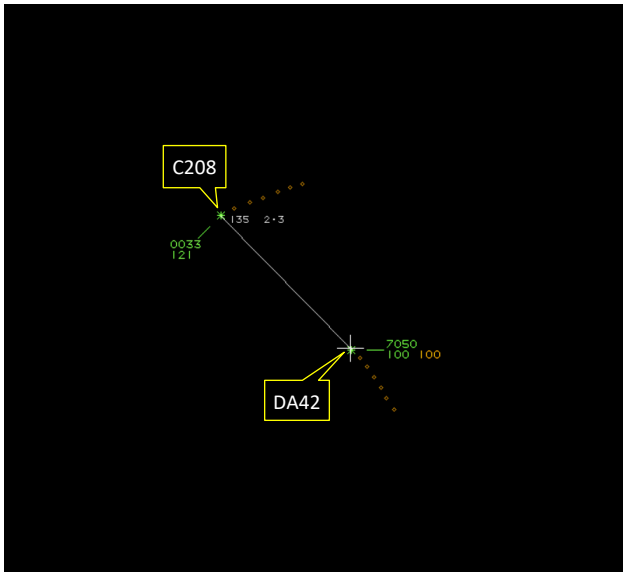

Figure 8 – 1215:38

The controller then received a call for climb from the Teesside outbound aircraft which they initially ignored and instead, at **1215:54**, passed updated Traffic Information to the DA42 [pilot]; "*traffic in your right one o'clock, range of two miles, er descending through FL110 – report visual*". The DA42 pilot reported that they were visual at **1216:03** (Figure 9). At **1216:08** an aircraft departing Newcastle called on the radar frequency but was initially ignored by the controller. At **1216:17** the controller issued a turn onto the ILS for the inbound aircraft. CPA occurred at **1216:19** with the aircraft separated by 0.1NM laterally and 200ft vertically (Figure 10).

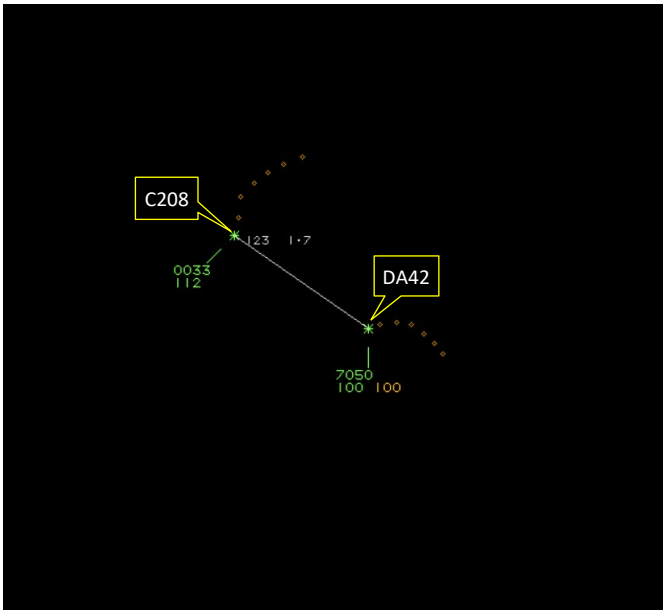

Figure 9 – 1216:03

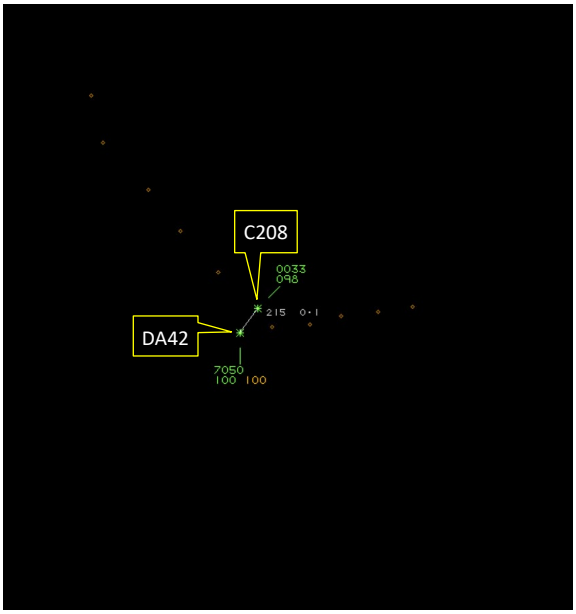

Figure 10 – 1216:19 – CPA

At **1216:45** the controller instructed the DA42 [pilot] to turn right towards the reporting point NATEB, (in the Newcastle overhead), which was readback by the pilot who added "*we had the traffic passing very close*".

Although there was initial confusion surrounding the actual routing of the DA42, the information on the parachuting activity based at Peterlee was passed in good time by the Teesside controller, and an analysis of the track of the DA42 showed that their left turn onto a heading of 340° was taking them clear to the west of the marked area. However, no Traffic Information on the C208 parachute aircraft was passed by the Teesside controller and when the DA42 [pilot] was transferred to Newcastle, the C208 was 5.8NM north of the DA42, descending towards and converging with the track of the DA42. As such, the pilot of the DA42 might not have been aware that the C208 parachuting aircraft was actually airborne as well.

No formal investigation report was received from Teesside but a subsequent telephone call with the unit manager and associated email exchange did take place. The Teesside controller stated that they felt that, due to the nature of the parachute aircraft operations, the movements of the C208 parachuting aircraft could not be anticipated. They believed that they had fully complied with the requirements of a Traffic Service and that the aircraft were still separated by more than 5 miles when they transferred the DA42 to Newcastle. They felt that the Newcastle controller would have still had sufficient time to pass adequate Traffic Information in compliance with those requirements.

ATSI notes that the requirement to pass Traffic Information is before the conflicting aircraft are within 5 miles:

CAP774 UK Flight Information Services, Chapter 3 Traffic Service, Para 3.5 Traffic Information:

> *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 3 NM and, where level information is available, 3,000 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 5 NM, in order to give the pilot sufficient time to meet his 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.*

The report from the Newcastle controller stated that the turns issued to the pilot were given with the intention of taking them into controlled airspace to their west, as a right turn would have taken them closer to the drop zone. An internal investigation had been completed by the unit but not forwarded externally. In a subsequent review of the incident by Newcastle after contact by ATSI, it was highlighted that a Traffic Service had been agreed with the DA42 pilot, but the review acknowledged that the controller was instructing the pilot to fly headings as if they were receiving a Deconfliction Service. Not stated in the unit review but stated verbally by unit management was that the Newcastle controller was not expecting the DA42 [pilot] to contact them as early as they did. Normally they would expect to see the Teesside squawk change to the one issued by Newcastle first, before then receiving the initial call from that aircraft. This would have given Newcastle some warning that the aircraft was being transferred.

When the initial heading of 330° was issued it was, according to the Newcastle controller's own words, done with the intention of keeping the DA42 clear of the parachute site; "*fly heading of 330 degrees - that will er take you clear of the Peterlee parachuting centre*". The second turn of 270° was issued to try and deconflict the DA42 and the C208.

The Newcastle trainee controller was in the latter stages of their training, with the traffic situation being subsequently assessed as "complex". They were also handling other aircraft inbound, outbound and transiting the area. There was no support available from a second radar controller who might have manned the Radar 2 position. The unit has advised that the OJTI discussed the incident with the trainee afterwards and affirmed their knowledge of their responsibilities when providing either a Traffic or a Deconfliction Service.

CAP774 UK Flight Information Services, Chapter 3 Traffic Service, Para 3.6 Deconfliction:

> *Deconfliction is not provided under a Traffic Service. If a pilot requires deconfliction advice outside controlled airspace, Deconfliction Service shall be requested. The controller shall make all reasonable endeavours to accommodate this request as soon as practicable.*
>
> *When providing headings/levels for the purpose of positioning and/or sequencing or as navigational assistance, the controller should take into account traffic in the immediate vicinity based on the aircraft's relative speeds and closure rates, so that a risk of collision is not knowingly introduced by the instructions passed. However, the controller is not required to achieve defined deconfliction minima and pilots remain responsible for collision avoidance even when being provided with headings/levels by ATC.*

Ultimately it is not clear what ATS the DA42 [pilot] was receiving - it appears to be a partly Traffic and partly Deconfliction Service. Under a Traffic Service good Traffic Information was passed by the Newcastle controller. Under a Deconfliction Service the heading(s) issued were insufficient to achieve the standard deconfliction minima, and it was noted that the phrase "*avoiding action turn (left/right) immediately*" was never used.

CAP774 UK Flight Information Services, Chapter 4 Deconfliction Service, Para 4.7 Deconfliction:

> *The deconfliction minima against unco-ordinated traffic are:*
>
> - *5 NM laterally (subject to surveillance capability and regulatory approval); or*
> - *3,000 ft vertically and, unless the SSR code indicates that the Mode C data has been verified, the surveillance returns, however presented, should not merge. (Note: Mode C can be assumed to have been verified if it is associated with a deemed validated Mode A code.*

Not stated in the unit review at Newcastle but communicated by unit management, was that the controller at Newcastle felt under a duty of care to continue to try and deconflict the two aircraft.

CAP774 UK Flight Information Services Chapter 1 – ATS Principles – Duty of Care:

> *The nature of the ATS task in providing the UK FIS means that it is not possible to be totally prescriptive about all actions to be taken, particularly with regard to unknown traffic and the passing of advice and warnings on high risk conflictions to pilots who have requested Basic Service and Traffic Service. Consequently, there is a need for controllers/ FISOs to remain free to use their professional judgement to determine the best course of action for them to take for any specific situation.*

It was noted that the Newcastle controller did attempt to contact the pilot of the C208 (twice) who was on their frequency. It was only determined later that the pilot of the C208 had experienced radio problems and so did not hear those calls.

No mention in the Teesside Manual of Air Traffic Services Pt 2 exists as to the Teesside controller's responsibilities regarding the transfer of northbound traffic to Newcastle when the parachute site is active.

The Letter of Agreement between Newcastle and Teesside allows for a silent handover of aircraft if they are clear of confliction and not subject to coordination with a third party. A controller at either unit can still request a handover.

According to Newcastle's MATS Pt 2, procedures regarding notified activity at Peterlee are covered by a Letter of Agreement.

The Letter of Agreement is between Newcastle and Peterlee only, and does not include Teesside.

At Peterlee:

> *Whenever practicable the parachuting aircraft will maintain a listening watch on NCL approach frequency.*
>
> *Pilots must appreciate that they will only receive an ATC service during those periods when they are maintaining a listening watch on the appropriate frequency.*

At Newcastle:

> *Standard separation shall be applied between NCL inbound/outbound traffic and the unvalidated and unverified 0033 squawk.*
>
> *At no time should aircraft be vectored beneath a 0033 squawk, unless two-way communications are established with the pilot and they can confirm that they are not dropping at the time.*
>
> *Whenever possible, ATCO's should use horizontal separation from the parachute aircraft, particularly as descending parachutists may still be in the air even though the drop aircraft has descended and squawk 0033 is no longer visible.*

Also:

> *ATCOs should not assume that the parachuting aircraft will always be contactable and should adjust the ATC service provided accordingly.*

"*Standard separation shall be applied between NCL inbound/outbound traffic and the unvalidated and unverified 0033 squawk*" because Newcastle ATC by default, provide a Deconfliction Service to their (IFR) inbound and outbound aircraft.

Whilst seeking to avoid the published drop zone, the controllers at both airfields do have to take into account the movement of the parachute aircraft itself. The aircraft does not remain within the published area to try and reduce the noise impact on the local community, whilst fully loaded and in a slow climb to levels as high as FL160.

The report from the pilot of the DA42 indicated that they believed themselves to be receiving a Traffic Service and did not query the turns issued by the Newcastle controller. They stated that having been passed updated Traffic Information on the C208 after being turned onto the 270° heading, they became visual with the C208. The pilot reported that "*after assessment I judged that the traffic would pass below and behind me so I maintained my heading and altitude ready to proceed for an evasive manoeuvre if the traffic was to alter its flight path*."

The pilot of the C208 reported being unaware of the incident and did not see the DA42.

Conclusion

The DA42 pilot might have benefited from specific Traffic Information on the C208 from the Teesside controller prior to transfer to Newcastle to aid the DA42 pilot's situational awareness. Also, had the squawk been changed to the Newcastle squawk by the Teesside controller, or a handover been requested or provided with the parachute site being active, and the parachute aircraft airborne, then the Newcastle controller might have had more time to assess the situation.

Had the radio in the C208 been fully functional, greater situational awareness might have been available to the pilot having been called twice by Newcastle prior to CPA.

When the DA42 [pilot] was transferred to Newcastle, if it was the intention of the Newcastle controller to deconflict the two aircraft, then ATSI agrees with the Newcastle unit analysis that due to the position of the parachute site itself, a right turn was not available with the pilot having elected earlier to pass to the west of the site. Had the Newcastle controller issued the turn onto 270° earlier, or possibly included the phrase "*avoiding action*", then they might have achieved a greater separation. However, the DA42 [pilot] did become visual with the C208 just over 15sec before CPA after having received updated Traffic Information from the Newcastle controller.

Partly as a result of this incident, Newcastle ATC has advised that they are engaging with Teesside with the aim of reviewing procedures between the two units.

Both Teesside and Newcastle are reminded of their obligations under Regulation (EU) 376/2014 as retained (and amended in UK domestic law) under the European Union (Withdrawal) Act 2018, Article 4, paragraphs 6(d) and 7, to submit a mandatory occurrence report, within 72 hours of when they are first made aware of an occurrence, and to conduct an analysis of the occurrence, in order to identify any safety hazards, followed by submission of follow up reports, in accordance with the 30 day and 3 month timescales contained in Article 11 of the regulation.

UKAB Secretariat

The DA42 and C208 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 C208.[3]

Summary

An Airprox was reported when a DA42 and a C208 Caravan flew into proximity 4NM SE of Durham at 1216Z on Sunday 8th August 2021. The DA42 pilot was operating under IFR in IMC and was in receipt of a Traffic Service from Newcastle Radar. The C208 pilot was operating under VFR in VMC and was in receipt of a Basic Service from Newcastle Radar.

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.

The Board first considered the actions of the DA42 pilot and discussed their response to the information regarding Peterlee parachuting site first passed by the Teesside controller. Members agreed that a change of heading had been the correct action to take at the time, but that there had been no information forthcoming regarding the position of the C208 until the DA42 pilot had been transferred to the Newcastle controller. After the transfer had taken place, the Newcastle controller had instructed the DA42 pilot to turn further left to remain clear of the parachuting site, which the DA42 pilot had followed, and Traffic Information on the C208 had been passed to the DA42 pilot for the first time. However, the Board considered that this Traffic Information had not been as informative as it could have been, in that it did not include any information regarding the track evolution of the C208 (**CF1**). This had meant that the DA42 pilot, under the terms of a Traffic Service, had not had all the information necessary for them to develop a plan to avoid the C208. This then led to the Newcastle controller issuing a further left turn, without updated Traffic Information, which the DA42 pilot had followed, not knowing whether it was to avoid traffic or the parachuting site. Members considered that the DA42 pilot could have asked the

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

controller for more information on the C208 (**CF6**), and this lack of track evolution information had meant that the DA42 pilot had only had generic situational awareness on the relative position, and threat, of the C208 (**CF7**). Furthermore, some members felt that the vectors issued by the Newcastle controller had probably led to the DA42 pilot believing that deconfliction from the C208 was being managed by the Newcastle controller (even though the DA42 pilot had been under a Traffic Service and responsible for their own collision avoidance). The Board agreed that the DA42 pilot, on sighting the C208, had been somewhat surprised to see the aircraft in the position that it was and had been concerned by its proximity (**CF10**).

Turning to the actions of the C208 pilot, the Board heard from a GA pilot member familiar with paradropping operations that it is advisable to ensure 2-way contact with the ATSU on each and every lift. According to the Newcastle controller, the C208 pilot had conducted a radio check on their first flight of the day but had not made contact with Newcastle on any of the subsequent flights, including the Airprox sortie. When the Newcastle controller had tried to contact the C208 pilot to establish the status of the parachute drop and the pilot's intentions, they had not received any response. The Board agreed, therefore, that the lack of response from the C208 pilot had been contributory to the Airprox (**CF5**). In addition to the effects on the controller's actions with respect to the DA42, the Board judged that this lack of established 2-way communication had denied the C208 pilot the opportunity to be passed Traffic Information on the DA42 by the Newcastle controller. This, coupled with the lack of any alert from the C208 pilot's on-board traffic awareness system (**CF8**), had led to the C208 pilot having no situational awareness of the presence of the DA42 (**CF7**). Members agreed with the C208 pilot's observation that their aircraft having been in a maximum rate descent most likely obscured the DA42 from their view (**CF11**) and that the C208 pilot never saw the DA42 as they descended through the DA42's level (**CF9**).

The Board then considered the actions of the Newcastle Radar controller and a lengthy discussion took place regarding the competing requirements of the provisions of a Traffic Service and the application of the Letter of Agreement (LoA) between Newcastle ATC and Peterlee Parachuting Centre. Members were unanimous in their view that the Newcastle controller had been doing their best to maintain a degree of separation between the 2 aircraft without permitting the DA42 to pass below or behind the C208 (as per the LoA). However, some members opined that the issuing of vectors to a pilot under a Traffic Service did not leave the pilot with any options to choose their own course of action for traffic avoidance, whilst other members felt that simply avoiding the C208 did not take account of the unknown position of the parachutists and so vectoring the DA42 had been the best option for the controller. Members noted that the controller had been hindered in their ability to achieve suitable deconfliction between the DA42 and the C208 by not being able to contact the C208 pilot – the Board considered that it had been vital to the successful application of the Letter of Agreement between Newcastle ATC and Peterlee that 2-way communication with the C208 pilot be achieved. In the event, the Board agreed that, despite their best efforts, the controller's instructions had contributed to the Airprox and that, in applying the provisions of the LoA, they had not been able to resolve the confliction between the 2 aircraft (**CF2**, **CF3**). The Board also noted that the controller had been devoting all the necessary attention to the conflict between the DA42 and the C208 and therefore any utilisation of the conflict alert system had been redundant in this case (**CF4**).

Finally, the Board considered the risk involved in this Airprox. Members were appreciative that the entire event had been captured by the NATS radars, as this had greatly enhanced their understanding of the geometry of the Airprox and had enabled a CPA to be measured. The Board also noted that the DA42 pilot became visual with the C208 at an initial range of approximately 0.5NM and when it was approximately 500-1000ft above them. Members considered that this timely sighting of the C208 by the DA42 pilot had effectively removed any risk of collision but, nonetheless, safety had been degraded because the 2 aircraft passed within 0.1NM and 200ft of each other. Accordingly, the Board assigned a Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2021142			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Human Factors	• ANS Traffic Information Provision	Provision of ANS traffic information	TI not provided, inaccurate, inadequate, or late
2	Human Factors	• Conflict Resolution-Inadequate	An event involving the inadequate provision of conflict resolution	
3	Human Factors	• Traffic Management Information Provision	An event involving traffic management information provision	The ANS instructions contributed to the Airprox
	• 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			
	• Tactical Planning and Execution			
5	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			
6	Human Factors	• Lack of Communication	Events involving flight crew that did not communicate enough - not enough communication	Pilot did not request additional information
7	Contextual	• Situational Awareness and Sensory Events	Events involving a flight crew's awareness and perception of situations	Pilot had no, late or only generic, Situational Awareness
	• Electronic Warning System Operation and Compliance			
8	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			
9	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
10	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
11	Contextual	• Visual Impairment	Events involving impairment due to an inability to see properly	One or both aircraft were obscured from the other

Degree of Risk: C

Safety Barrier Assessment[4]

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 **ineffective** because the Newcastle controller, in trying to execute the LoA provisions, continued to issue turns to the DA42 pilot to prevent that aircraft passing below or behind the C208, which placed the DA42 into conflict with the C208.

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

Electronic Warning System Operation and Compliance were assessed as **not used** because the STCA at Newcastle would not alert to a conflict between an aircraft squawking 0033 (the C208) and an aircraft squawking a Teesside Mode A code (the DA42).

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because the C208 pilot did not respond to radio calls from the Newcastle controller, thus denying an opportunity for the controller and the DA42 pilot to understand the intentions of the C208 pilot.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the C208 pilot did not have any situational awareness of the presence of the DA42, and the DA42 pilot only had generic situational awareness regarding the C208 as the Traffic Information passed by the Newcastle controller was limited to range, bearing and altitude and gave no indication of the C208's flightpath evolution.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the C208's on-board traffic awareness equipment did not detect the transponder signals from the DA42.