

AIRPROX REPORT No 2014185

Date/Time: 9 Sep 2014 1346Z

Position: 5346N 00246W
(4.5nm ENE Warton Airfield)

Airspace: London FIR (Class: G)

Aircraft 1 Aircraft 2

Type: ATR42 Tornado GR4

Operator: CAT Civ Comm

Alt/FL: 2500ft 1300ft
QNH (1020hPa) QFE (1019hPa)

Conditions: IMC VMC

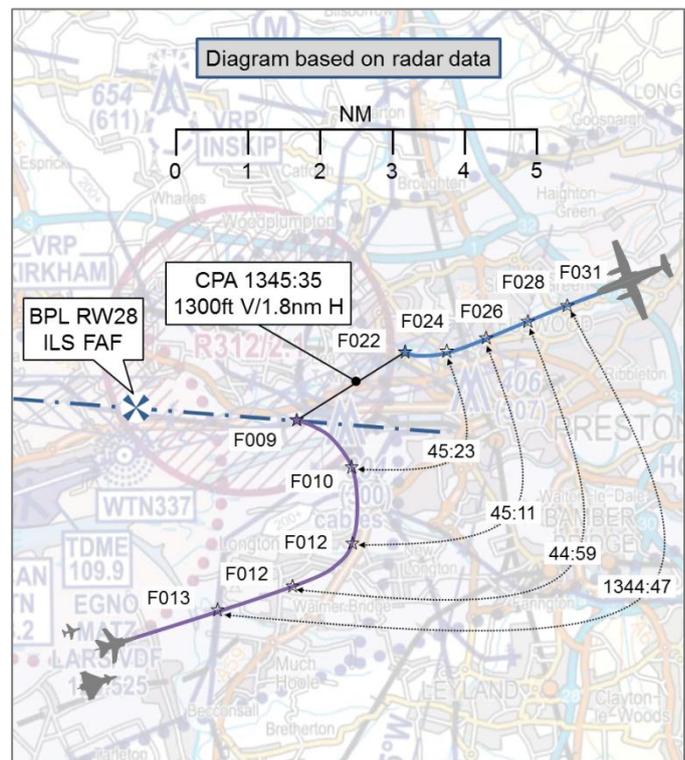
Visibility: NK NK

Reported Separation:

NK NK

Recorded Separation:

1200ft V/1.7nm H



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE ATR42 PILOT reports that the aircraft was in company colours; navigation lights, wing strobes and wing/tail lights were illuminated; SSR Modes C and S were selected; and the aircraft was equipped with TCAS II. He was inbound to Blackpool Airport (BLK) under radar control from BLK Approach. The controller advised him that there was fast-jet traffic departing Warton; he was therefore vectored north of the airport and given a descent to 2000ft. Once abeam the threshold, at 2000ft, the Radar controller requested an immediate turn heading 040° as avoiding action from the fast-jet traffic. He was visual with the surrounding terrain but not with the fast-jet traffic. He was then turned back right and given a climb to 3000ft to keep the aircraft above the Minimum Sector Altitude (MSA). He then received a further right turn and climb to 3500ft. He was turned further right for a base leg but shortly after was turned left again as the fast-jet traffic had turned back toward him. He was then once again turned right toward the airport. He was descended to 1800ft and became visual with the jet traffic which had turned and was tracking out to sea. He was given a closing vector for RW28, continued to the ILS and then visually for a normal landing on RW28. Once on the ground he contacted the BLK ATC Watch Manager for further information. The Watch Manager reported that Warton had contacted BLK to advise that fast-jet traffic would be departing Warton at a similar time as his arrival. He was told that BLK had requested Warton delay the departures until he was on the ground, but Warton had advised they would be departing because they were performing a fly-by at the funeral of a former squadron member. BLK had apparently stated to Warton that the jet traffic should fly no further north than the Warton runway centreline. As far as BLK were concerned, the ATR42 pilot was told that once the fast-jets were airborne, their pilots had disregarded the clearance limit, and turned north toward him, which resulted in his initial left turn for avoiding action. He was informed that BLK had contacted Warton to advise of the breach of clearance, and had been told that "...they were test pilots and Warton ATC had no control over their movements."

He assessed the risk of collision as 'Low'.

THE FORMATION LEAD PILOT reports that the sortie was flown as a 3-ship 'Vic' close-formation of Tornado GR4, Typhoon FGR2 and Hawk T2, with the Tornado leading. They were flying a race-track pattern, at 1500ft, based on the Warton RW25 centre line, normally turning at 5nm downwind. At 1344:20 Warton Radar informed them of ATR traffic inbound to BLK and requested they flew no higher than 1500ft on 1019hPa. They were 'good VMC' and he descended the formation to 1300ft. At 1345:07 the formation was at 1300ft in a left-hand turn, 4.8nm downwind for RW25; Warton Radar

asked him if he was visual with the ATR42. He replied 'negative'. Assuming the ATR42 was close he descended the formation to 1100ft and continued their race-track pattern. At no point did he see the ATR or feel that there was any kind of confliction.

He assessed the risk of collision as 'Low'.

THE WARTON SPECIAL TASKS CONTROLLER reports the following details were his best recollection of the incident which had taken place over two months before; the requirement for reporting action had only recently been brought to his attention. At the time of the incident he was the 'Special Tasks' Radar controller at Warton and was responsible for providing the 3-ship mixed formation with an Air Traffic Service. Throughout the period, a simultaneous flight trial was being conducted separately which required the Warton Approach radar to be switched off. Radar service provision was therefore only available using the NATS radar situated at Great Dun Fell, which had limited coverage below 3500ft in the vicinity of Warton. HOPPY formation had booked out as a 3-ship (Hawk T2, Tornado GR4 and Typhoon FGR2) to carry out flight test activities and General Handling (GH) in the Irish Sea. Prior to the GH element, the formation were to conduct a pre-arranged overflight of St. Cuthbert's Church in Lytham, which would require the formation to hold in the vicinity of the Warton VFR/instrument circuit for RW25 at 2000ft QFE and await a 2-minute call via a third party in order to accurately position for overflight. At some point between the formation calling for start and taxiing for departure, he had observed an aircraft on Airway L70 (identified as the ATR42 inbound to BLK) which he considered might be a factor later on. He notified BLK ATC in order to advise of Hoppy Flight's intentions and to allow them plenty of time to plan their arrival. In addition, they were subsequently advised that the Warton Radar was unavailable. Once airborne, HOPPY formation held, as briefed, in a left-hand circuit between Warton and Preston, no further north than the extended centreline of RW25, VFR not above 2000ft. As this was beneath radar cover, the formation was placed under a Basic Service. It should be noted that there were several occasions when the formation lead was visible SSR-only but this was not a consistent track and, in any case, Warton did not have CAA approval to operate SSR only. He had observed the ATR42 pass north of the BPL at FL50 then turn onto an easterly track. BLK then confirmed that the ATR42 pilot was descending to 2000ft. Somewhat surprised by this decision to descend to the same level as the formation without having requested coordination, particularly as these IFR flights invariably requested a Deconfliction Service, he reiterated that his traffic was under a Basic Service and not above 2000ft, manoeuvring in that vicinity and that he would pass Traffic Information. The ATR42 was then seen to turn away and climb, which he assumed was due to avoiding action by the BLK Radar controller. He called the ATR42 traffic to HOPPY formation, which was acknowledged, and the formation offered to descend, which they subsequently did. The BLK controller then requested coordination, and he offered to restrict the HOPPY formation to not above 1500ft. He then observed the ATR42 reposition on a closing heading to the ILS RW28 but, because the aircraft was still indicating above 2500ft, there was no issue as far as he was concerned. As soon as the Formation Lead stated that he was shortening the pattern early and was 'turning in' he telephoned BLK to advise them. He could see that HOPPY Flight would turn ahead of the ATR42, which had now descended through 2500ft but, with more than 1000ft vertical separation, he did not see any need to issue avoiding action (taking into account the service being provided, speed differential and vertical separation from the ATR42, the formation's proximity to the Warton ATZ and the agreed height restriction in place). The ATR42 was observed turning away from the final approach before turning towards final approach to RW28.

THE BLACKPOOL RADAR CONTROLLER. The Blackpool Radar Controller did not file a report.

Factual Background

The Warton and Blackpool weather was recorded as follows:

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METAR EGNO 091350Z 25005KT 180V330 9999 FEW027 SCT033 18/10 Q1021
METAR EGNH 091350Z 29008KT 250V330 9999 SCT034 17/10 Q1022
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Analysis and Investigation

CAA ATSI

ATSI had access to reports from the ATR42 pilot and the Tornado pilot who was leading the formation, the Warton Radar controller, area radar recordings and transcription of the BLK Tower and Warton Radar frequencies. Warton also provided a copy of their unit report. BLK ATSU were asked for a report from the controller concerned; however, the unit closed a week after notification of the Airprox and no report was received.

The ATR42 pilot was operating under IFR on a flight into BLK and was in receipt of a Deconfliction Service from BLK Radar. The Formation were operating IFR on flight test activities and GH in the North Sea but, prior to this, were to conduct an over-flight of St Cuthbert's Church in Lytham and were in receipt of a Basic Service from Warton Radar.

BLK were using RW25. At 1326 Warton initiated a telephone call to BLK Radar to advise them that the Formation would be departing at 1335 to do a fly-through. The Warton Radar controller was aware that the ATR42 was inbound to BLK, and the BLK Radar controller and the Warton Radar controller discussed the flights for some minutes with potential courses of action, including BLK routeing the ATR42 downwind right-hand and the possibility of agreeing an operating line for the formation. However, no co-ordination was agreed. During the course of the conversation it was mentioned that the Formation would be operating up to FL190 but that the formation would be "*flying through*" at 1000-2000ft.

At 1332:45, the ART42 pilot contacted BLK Radar, passing FL94 descending to FL50 routeing towards the BPL NDB. Warton telephoned BLK to advise that they had no radar and requested that BLK "*Check South*" as the Formation was airborne. (When Check South is requested, all southbound departures from BLK, regardless of the departure runway, within the arc 100° clockwise to 250° from BLK Aerodrome Reference Point (ARP), must be coordinated prior to departure. Additionally, circuits to the south of RW13 and RW31, and helicopters operating from 'H' South, shall be subject to coordination¹). The BLK Radar controller also advised Warton that Lytham was fine but no further north than a line east-west through St. Cuthbert's church. Warton replied "OK". Specific co-ordination phraseology was not used.

At 1334:20, the formation contacted Warton Radar and were placed on a Basic Service (due to the Warton Radar being out of service) not above 2000ft.

At 1334:35, the BLK Radar controller requested the ATR42 pilot's heading. He responded that they were heading 070° and the BLK Radar controller turned them left onto 060°. The BLK Radar controller then advised the ATR42 pilot that Warton test pilots would be carrying out some unusual activity on the coast just south of BLK and advised caution as the ATR42 passed 6nm left abeam Warton and then caution for the rest of the approach due to fast-jet activity, zoom climbs and high speed manoeuvres just to the south of BLK. The ATR42 pilot acknowledged the information.

At 1336:34, the BLK Radar controller informed the ATR42 pilot that he was in receipt of a Deconfliction Service. At 1337:01, the BLK Radar controller instructed the ATR42 pilot to turn right heading 090° downwind. The heading was subsequently changed to 080°.

At 1337:46, the BLK Radar controller instructed the AT42 pilot to descend to 2000ft on the QNH 1022hPa (Figure 1) . The BLK Radar controller telephoned Warton to inform them that the ATR42 was downwind right-hand descending to 2000ft for the ILS and that he had warned the crew of the activity remaining south of the coast, or south of St. Cuthbert's church at Lytham (approximate position of St. Cuthbert's church circled in red on Figure 1). The Warton controller replied that the

¹ Warton MATS part 2

information was copied, and that the Formation would be positioning in that general vicinity not above 2000ft.

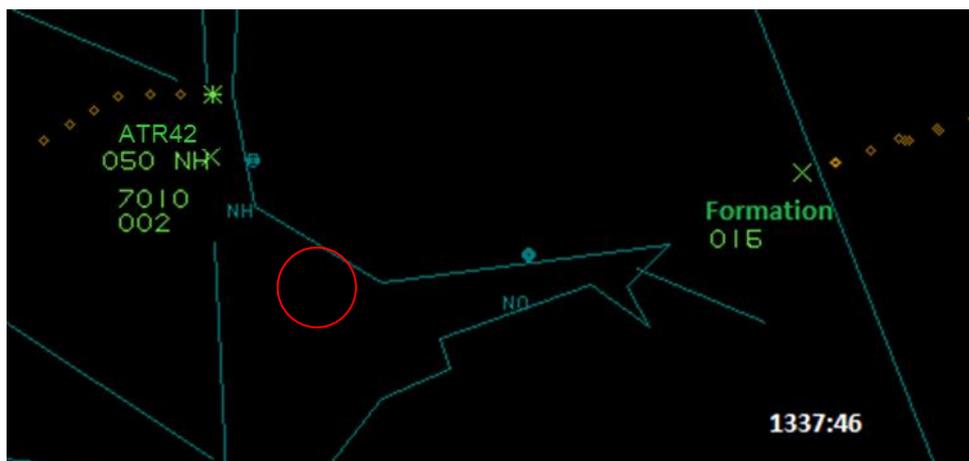


Figure 1

At 1339:14 (Figure 2) the BLK Radar controller instructed the ATR42 pilot to turn right heading 100° and then advised the AT42 pilot of pop-up traffic in their two o'clock range of 4nm southbound (no involvement in the Airprox).

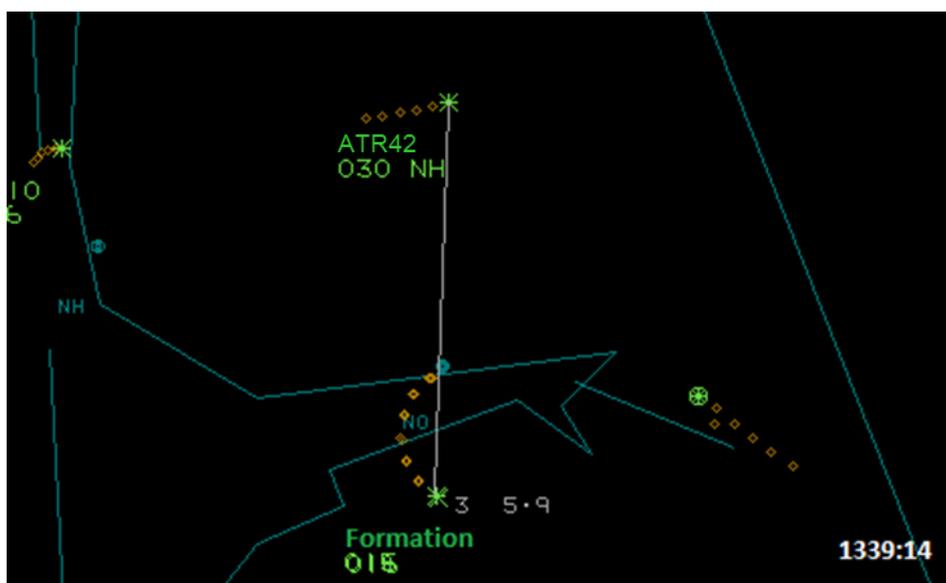


Figure 2

The BLK Radar controller telephoned Warton to discuss the Formation and, during the conversation, at 1340:24, the BLK Radar controller instructed the ATR42 pilot *“avoiding action turn left heading zero four zero that fast jet traffic is in your right two o'clock range of four miles crossing from right to left, you have further pop up traffic to the northwest of you range of four miles zero four zero is the best avoiding”* (Figure 3 at the end of this transmission). Warton Radar also passed Traffic Information to the Formation on the ATR42 at 2000ft. The Formation stated that they would descend to 1500ft. The BLK Radar controller stated that the Formation needed to stay out of the way for 5 minutes so that he could ‘bring the ATR42 in’ but the Warton controller stated that he could not see the Formation. BLK requested that the Formation be put to his frequency but this was refused.

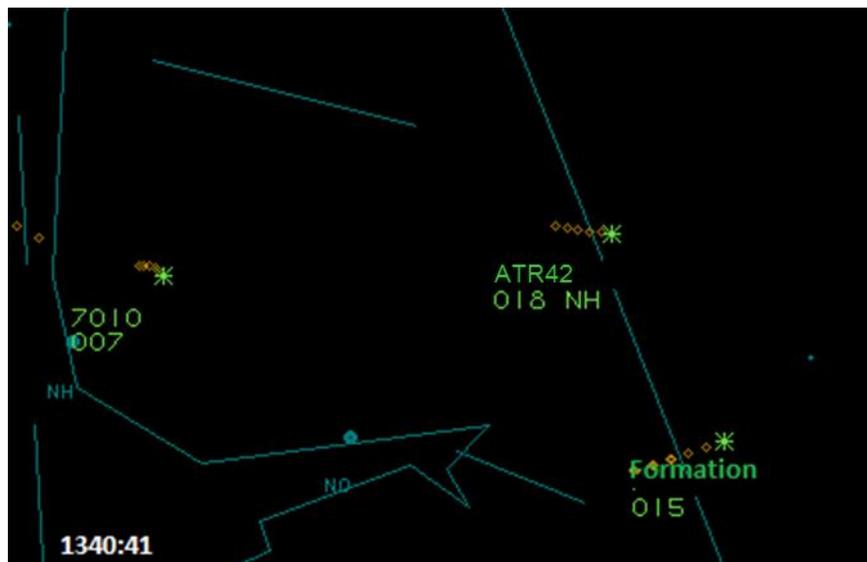


Figure 3 – the ATR42 and Formation were 4.6nm apart

At 1341:20, the BLK Radar controller instructed the ATR42 pilot to climb to 3000ft. At 1341:47, the aircraft were 3.3nm and 1000ft apart. (Figure 4)



Figure 4

At 1342:00 (Figure 5), the BLK Radar controller instructed the ATR42 pilot to turn right heading 180° and to climb to 3500ft. The BLK Radar controller telephoned Warton again and informed them that the ATR42 was right base at 17nm, that he was bringing the ATR42 in, and that he would give avoiding action if the Formation was in the way again. The Warton controller started to say “*if I can get them to stay at 1500 feet*” but the BLK controller stated that he wanted the formation “*out of my final approach please, somewhere to the south*”. The Warton controller replied that he could not do that because he could not see them. BLK then asked for the Formation to hold at Marshside VRP approx 5nm south-southeast of BLK but was told by Warton that the Formation would not do that. The BLK controller then requested coordination on the Formation. Warton replied that they were unable to coordinate and then corrected that to state that the Formation could be not above 1500ft QFE which the Blackpool Radar controller read back as not above 1600ft QNH.



Figure 5

The BLK Radar controller subsequently instructed the ATR42 pilot to turn right heading 250° and, at 1344:20, to descend to altitude 2500ft. (Figure 6) The Warton Radar controller instructed the Formation to fly not above 1500ft QFE for co-ordination with BLK Radar. The height restriction was acknowledged by the Formation and Traffic Information was passed on the ATR42.

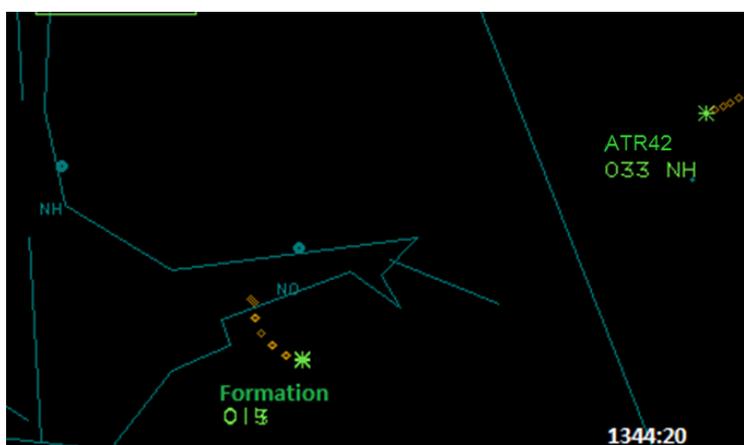


Figure 6

At 1345:10 (Figure 7), the BLK Radar controller again gave avoiding action to the AT42 pilot, with a right turn heading 350° and advised that the previously reported jet aircraft were closing from the left range of 2nm, crossing left to right. The ATR42 pilot reported that they were visual with the traffic and turning onto 350°. The BLK Radar controller asked the ATR42 pilot whether, as they had the traffic in sight, they wanted to continue on the heading for the localiser and the pilot stated that they could. The ATR42 pilot was instructed to close the localiser from heading 250° and to maintain their own separation from the jet traffic.

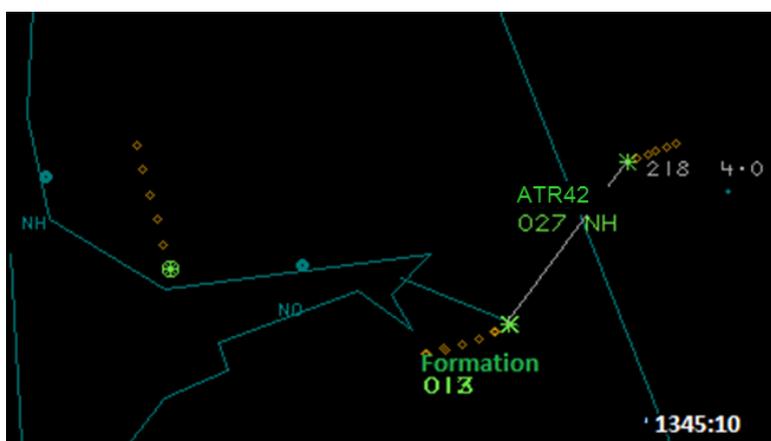


Figure 7

Although the BLK Radar controller and the Warton controller spoke extensively about the ATR42 and the Formation the conversation was informal, imprecise and a specific request for coordination by BLK was not made until 1343:13. However, it is likely that, despite the specific phraseology not being used, the BLK Radar controller initially believed that the Formation would remain south of St. Cuthbert's church, Lytham. Although the Warton controller acknowledged the BLK controller's assertion that the aircraft would remain south of St. Cuthbert's church this was not passed on to, or agreed with, the Formation. The fact that the Formation were operating not above 2000ft was also discussed but, again, no actual co-ordination was requested by BLK, nor was the option of coordinating given by Warton. A lack of a cohesive plan between the two controllers led to the BLK Radar controller giving avoiding action to the ATR42 pilot when the Formation tracked further north than the BLK controller was expecting.

The Warton Radar controller was providing a Basic Service only to the Formation (due to lack of low level radar cover), which had not been identified. The BLK Radar controller was providing a Deconfliction Service to the AT42 pilot (as was standard practice at the unit) and was, therefore, required to provide deconfliction minima against the Formation of 5nm or 3000ft vertically (with returns not allowed to merge).

UKAB Secretariat

All pilots concerned shared an equal responsibility to avoid collision and not to fly into such proximity as to create a danger of collision².

CAP 774 (UK Flight Information Services), Chapter 2 describes a Basic Service as follows:

Pilots should not expect any form of traffic information from a controller, as there is no such obligation placed on the controller under a *Basic Service*, and the pilot remains responsible for collision avoidance at all times. However, if a controller considers that a definite risk of collision exists, a warning may be issued to the pilot.

Chapter 4 describes a Deconfliction Service as follows:

A Deconfliction Service is a surveillance based ATS where, in addition to the provisions of a Basic Service, the controller provides specific surveillance-derived traffic information and issues headings and/or levels aimed at achieving planned deconfliction minima, or for positioning and/or sequencing. However, the avoidance of other traffic is ultimately the pilot's responsibility.

and deconfliction minima against uncoordinated traffic as:

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.

Summary

The Airprox occurred in Class G airspace between an ATR42 inbound to BLK in receipt of a Deconfliction Service from BLK, and a formation of three fast-jet aircraft on a local flight from Warton, in receipt of a Basic Service from Warton. Co-ordination was not initially effected between the BLK Radar controller and the Warton controller. The BLK Radar controller gave avoiding action turns to the ATR42 pilot against the Formation. The ATR42 pilot observed the traffic as he turned; the formation did not see the ATR42. Deconfliction minima was not achieved, with a CPA of 1.7nm horizontally and 1200ft vertically.

² Rules of the Air 2007 (as amended), Rule 8 (Avoiding aerial collisions).

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the ATR42 and Tornado pilots, the Warton controller, area radar and RTF recordings and reports from the appropriate ATC and operating authorities.

The Board first discussed the ATC management aspects of the Airprox. The Board observed that, despite the Blackpool and Warton controllers holding lengthy discussions about the ATR42's arrival and the Formation's intentions, no formal coordination was agreed to control the situation. They also noted that the Warton airfield radar had been switched off because of a 'flight trial' and whilst accepting that this trial might have had a high priority, opined that this was unfortunate bearing in mind the nature of the local flight by the Formation. The Board also noted that Warton ATC had agreed that the Formation would operate no further north than a line east-west through St. Cuthbert's church at Lytham but that this restriction was not issued to the Formation.

The Board considered the actions of the Blackpool controller. The Board noted that he had been informed by the Warton controller that, because he could not see the Formation on his radar display, he could not vector the aircraft away from the Blackpool approach to RW28. Given that the ATR42 was in receipt of a Deconfliction Service, apart from holding off the ATR42, the Blackpool controller would have therefore inevitably found it difficult to achieve the required minima against such manoeuvring traffic in Class G airspace. Members noted that the Blackpool controller had indeed issued avoiding action turns prior to the Airprox, and again as the Airprox occurred, but on neither occasion did the controller achieve the required deconfliction minima. Civil ATC members commented that he might have been better served in changing the Air Traffic Service provided to the ATR42 pilot to a Traffic Service; this would have legitimately permitted the aircraft to be closer to each other than deconfliction minima required, provided the ATR42 pilot was prepared to accept the requirement to maintain his own visual separation. Members therefore agreed that the only way that deconfliction minima could have been ensured was by holding off the ATR42 until the Formation had completed its fly-through.

The Board then discussed the cause of the Airprox. A Civil Airline pilot opined that the ATR42 pilot had filed the Airprox because he was concerned that he had been vectored too close to the Formation. Other members thought that this incident was simply a conflict in Class G airspace where aircraft operators needed to understand that, if they chose to fly in such airspace, there was no standard separation applicable and that aircraft captains ultimately had responsibility for their own collision avoidance. However, after further deliberation, the Board concluded that the cause of the incident was best described as a lack of effective coordination between the two controllers, which had allowed the flights to approach closer to each other than ideal. Rather than being the cause in itself, the Board agreed that the Blackpool controller's vectoring of the ATR42 close enough to the Formation to cause its pilot concern was simply a contributory factor.

The Board then turned its attention to the risk. The Board noted that the two aircraft were separated vertically by 1300ft and 1.8nm at the time of the Airprox and they therefore quickly decided that there had been no risk of a collision. The Board then discussed whether the risk should be categorised as C (effective and timely actions had been taken) or E (normal safety standards and procedures pertained). Taking into account the avoiding action issued to the ATR42 pilot, members considered that what had occurred was not normal operating procedure and, consequently, the Airprox should not be categorised as risk Category E. Nevertheless, because effective action had been taken to prevent any risk of collision, the Airprox was categorised as risk Category C.

PART C: ASSESSMENT OF CAUSE AND RISK

<u>Cause:</u>	Lack of effective co-ordination between the air traffic controllers.
<u>Contributory Factor:</u>	The Blackpool Radar Controller vectored the ATR42 pilot close enough to the Formation to cause its pilot concern.
<u>Degree of Risk:</u>	C.
ERC Score ³ :	50.

³ Although the Event Risk Classification (ERC) trial had been formally terminated for future development at the time of the Board, for data continuity and consistency purposes, Director UKAB and the UKAB Secretariat provided a shadow assessment of ERC.