

## AIRPROX REPORT No 2012092

Date/Time: 2 Jul 2012 1104Z

Position: 5109N 00011W (O/H RW26L  
Gatwick - elev 203ft)

Airspace: Gatwick ATZ (Class: D)  
Reporting Ac Reported Ac

Type: B737-800 ATR72

Operator: CAT CAT

Alt/FL: 100ft↓ ↑  
(agl) (QNH)

Weather: VMC NR VMC NR

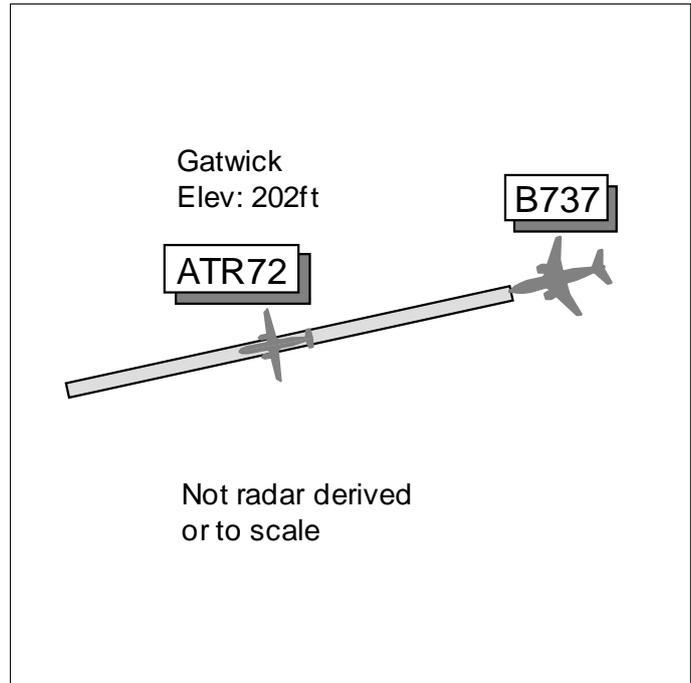
Visibility: NR 10km

Reported Separation:

Nil V/4000ft H Not seen

Recorded Separation:

NR



## PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

**THE B737 PILOT** reports inbound to Gatwick RW26L, IFR and in communication with Gatwick Tower on 124.225Mhz squawking an assigned code with Modes S and C. On final approach they were told to continue approach and they slowed to minimum approach speed as normal with an approach speed of 150kt. They were then told to expect late landing clearance with traffic to depart. They noted 1 ac taking-off ahead with an ATR72 cleared to enter the RW after the previous departing ac; the ATR72 flight was given take-off clearance as they were passing approximately 500ft. They were given landing clearance at approximately height 100ft when minimum horizontal separation from the ATR72 was approximately 4000ft. He assessed the risk as medium. It was a day VMC incident and they were visual with the departing traffic at all times and were satisfied with the distance from the departing traffic. However, should they have elected to go-around there would have been a risk of collision. He opined that ATC should allow more separation between arriving and departing traffic.

**THE ATR72 PILOT** reports, from his point of view, it was an uneventful departure from Gatwick, IFR and in communication with Gatwick Tower on 124.225MHz, squawking an assigned code with Modes S and C. They were cleared to line-up and then depart from RW26L on a SAM 2M SID and they complied with all ATC instructions promptly and efficiently.

**THE GATWICK AIR CONTROLLER** reports he had lined-up an A320 when the B737 was on approach. He asked the ATR72 crew if they could accept an immediate departure behind the A320 and they replied that they could. He told the vacating A319 flight to expedite vacating and then told the ATR72 flight to line-up after the departing A320 and to be ready for an immediate departure and he also told the B737 crew to expect late landing clearance. The A320 departed and the ATR72 flight was given take-off clearance when the B737 was at 2nm. The ATR72 was airborne as the B737 was flying over the start of the RW starter extension.

**ATSI** reports that an Airprox was reported in the Gatwick ATZ (Class D airspace), which comprises a circle radius 2.5nm centred on the longest notified RW (08R/26L) up to 2000ft above aerodrome level, between a landing B737 and a departing ATR72 at 1104:10UTC.

The B737 was operating IFR from Palma de Mallorca to Gatwick and was in receipt of an Aerodrome Control Service from the Gatwick AIR controller on frequency 124.225MHz.

The ATR72 was operating IFR departing from Gatwick to Guernsey and was in receipt of an Aerodrome Control Service from the Gatwick AIR controller on frequency 124.225MHz.

CAA ATSI had access to recordings of RT from Gatwick Tower together with area radar recordings, and recordings from the Gatwick ATM and Air Surface Movement Guidance and Control System (ASMGCS). ATSI also had access to written reports from both pilots and the Gatwick AIR controller.

The Gatwick METARs were: EGKK 021050Z 19011KT 160V220 9999 SCT023 17/11 Q1016= and EGKK 021120Z 19011KT 150V220 9999 SCT021 17/11 Q1016=

RW26L was in use at Gatwick. There were 2 ac on final approach - an A319 followed by the B737 6nm behind. An A320 and the ATR72 were at the holding point for departure.

At 1101:20 UTC the Gatwick AIR controller gave the A320 flight a conditional line-up clearance on RW26L against the landing A319.

At 1101:30 the B737 flight checked in with Gatwick AIR at a range of 7nm from touchdown and was instructed to continue approach. The crew of the ATR72 was then asked if they could accept an immediate departure behind the A320, to which they replied that they could. The departing A320 flight was instructed to be ready immediate, which was acknowledged by the crew.

The ATSU advised that the controller initially judged that the 6nm gap between the landing A319 and the B737 was sufficient to allow the departure of both the A320 and the ATR72. The controller's plan was based on the expectation that the landing A319 would vacate at the Rapid Exit Taxiway at Echo. When the A319 landed it went past the turn off for Echo and although the controller instructed the crew of the A319 to expedite vacating, the gap that the controller had anticipated having was eroded by approximately 15sec as the A319 continued down the RW.

At 1102:30 the ATR72 crew was instructed to line up after the departing A320.

At 1102:50 the A320 flight was cleared for take-off. The B737 was at 4nm from touchdown and was instructed to expect a late landing clearance.

At 1103:30 the ATR72 flight was cleared for take-off. The B737 flight, which was at 2nm from touchdown descending through altitude 600ft, was instructed to continue approach and given a wind check.

CAP493, the Manual of Air Traffic Services Part 1, Section 2, Chapter 1, Paragraph 15.2.2 states:

'Unless specific procedures have been approved by the CAA, a landing aircraft shall not be permitted to cross the beginning of the runway on its final approach until a preceding aircraft, departing from the same runway, is airborne.'

The B737 crossed the beginning of the RW before the ATR72 became airborne at 1104:10. The B737 crew was given landing clearance just after it crossed the beginning of the RW, and landed safely.

[UKAB Note (1): The Unit report states that when the ATR72 became airborne separation was eroded to 1148m and this reduced to 940m when the B737 touched down, distances taken from the ASMGCS.]

The written report from the pilot of the B737 stated that it was day VMC and that the crew were visual with the departing ATR72 and satisfied with the distance from the departing traffic. The pilot of the B737 expressed concern that there was a risk of collision in the event of a go-around.

The written report from the pilot of the ATR72 indicated that from their point of view it was an uneventful departure from London Gatwick.

The controller made the decision to depart the A320 and the ATR72 ahead of the B737. The controller was aware that the gap was always going to be quite tight to depart both the A320 and the ATR72 – both departing flights were told to be ready immediate and the landing B737 was instructed to expect a late landing clearance. Having formulated a plan the controller did not adjust the assessment of the gap when the A319 took longer than expected to vacate the RW.

Once the ATR72 had commenced its take-off roll the controller's options became limited to either:

- a) continuing with the plan in the hope that the ATR72 became airborne in sufficient time to issue landing clearance to the B737, or
- b) issuing go-around instructions to the B737 that would ensure a conflict as the B737 carried out a go-around on top of the ATR72.

The controller chose to continue with the initial plan and gave late landing clearance to the B737 after it crossed the beginning of the runway.

The pilot of a B737 that was landing at Gatwick became concerned about the potential for conflict with the departing ATR72 ahead had it become necessary for the B737 to conduct a go-around.

The controller did not reassess the gap available to depart the A320 and the ATR72 when the landing A319 took longer than expected to vacate the RW.

The remaining gap available to the AIR controller was insufficient to allow the A320 and the ATR72 to depart with appropriate spacing from the landing B737. As a result the B737 was given late landing clearance, after it had crossed the beginning of the RW.

## **PART B: SUMMARY OF THE BOARD'S DISCUSSIONS**

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar video recordings, reports from the air traffic controllers involved and reports from the appropriate ATC authorities.

A CAT pilot Member remarked that owing to the high-intensity single-RW operations in use at Gatwick, there was very little margin available when a situation doesn't go according to a plan. The option to go-around was always available to ATC and aircrew if they were not happy with the scenario - a not uncommon occurrence. The difficult part was to identify early in a dynamic scenario the situations where the margin would be likely to be eroded to the point that a go-around was necessary. The AIR controller had safety/separation criteria to meet, to ensure the landing B737 would be afforded adequate separation against the departing ATR72. Controller Members agreed that the AIR controller had persevered with his plan when he should have taken positive steps at an early stage to alter it when the landing A320 did not vacate the RW as anticipated and this had caused the Airprox. As soon as the A320 had passed the RET, AIR should have reassessed the plan to take into account the reduced gap available. His options were to have cancelled the line-up of the ATR72 to allow the B737 to land or to have sent the B737 around early with the RW occupied. For their part, the B737 crew was advised to expect a late landing clearance and a CAT pilot Member briefed the Board that this warning would prompt the crew to be prepared for a go-around. Since a late landing clearance is not an uncommon event, the B737 crew would not routinely have gone around on receipt of that warning. However, by continuing the approach any subsequent go-around would occur when the ac was closer to the RW and the departing ATR72, and the crew retained the responsibility to assess continually the unfolding situation and make their own decision to go-around if they judged it appropriate. In this occurrence the crew was clearly aware of the potential hazards

associated with a very late go-around and the Board judged that by the time the B737 was over the beginning of the RW at 100ft the controller was correct to issue a landing clearance, assessing that the safest course of action with the ATR72 just airborne was for the B737 to land. If the B737 crew had elected to go-around at a very late stage the AIR controller would have given the affected flights early diverging turns whilst applying reduced separation in the vicinity of the aerodrome.

Looking at risk, some Members thought that this had been a benign encounter where normal safety standards and parameters pertained (Risk E). This view was not shared by the majority. The AIR controller had not complied with the normal procedures, passing landing clearance after the B737 crossed the beginning of the RW. However, since the RW was clear by the time the B737 was issued its landing clearance, and the B737 crew were able to accept the late clearance, the Board was content that any risk of collision had been removed, a Risk C.

### **PART C: ASSESSMENT OF CAUSE AND RISK**

Cause: The AIR controller did not adjust his plan when a landing ac did not vacate the RW as anticipated.

Degree of Risk: C.

Contributory Factors: The B737 crew continued their approach, retaining their option to go-around at any stage.