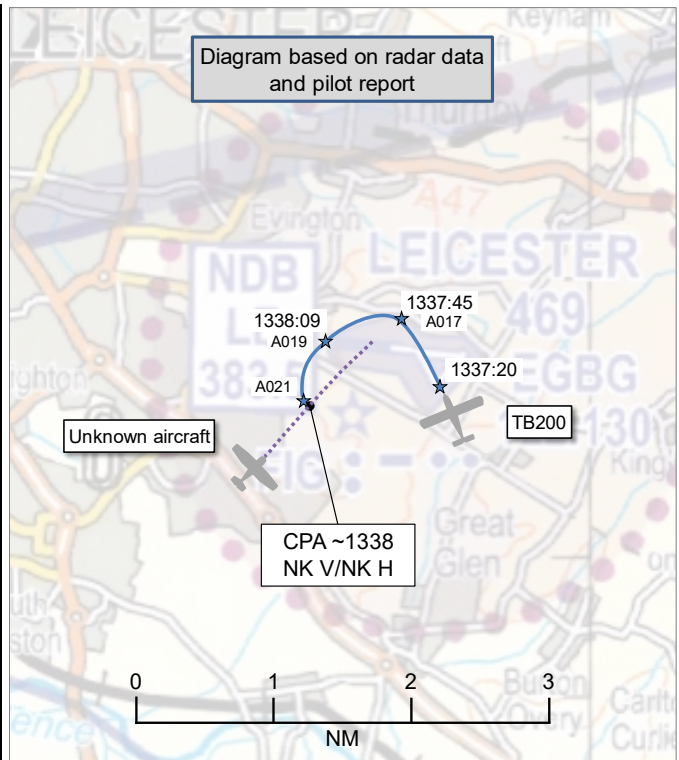


AIRPROX REPORT No 2023255

Date: 10 Nov 2023 Time: ~1338Z Position: 5236N 00102W Location: Leicester Airport

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|--------------------------|-----------------|---------------------|
| Aircraft | TB200 | Light aircraft |
| Operator | Civ FW | Unknown |
| Airspace | Leicester ATZ | Leicester ATZ |
| Class | G | G |
| Rules | VFR | NK |
| Service | AGCS | Unknown |
| Provider | Leicester Radio | NK |
| Altitude/FL | 2100ft | NK |
| Transponder | A, C, S | None |
| Reported | | Not reported |
| Colours | Red on white | |
| Lighting | Strobes | |
| Conditions | VMC | |
| Visibility | >10km | |
| Altitude/FL | 1000ft QFE | |
| Altimeter | QFE (978hPa) | |
| Heading | 240° | |
| Speed | 85kt | |
| ACAS/TAS | Not fitted | |
| Separation at CPA | | |
| Reported | 100ft V/ONM H | NK V/NK H |
| Recorded | NK V/NK H | |



THE TB200 PILOT reports that they arrived overhead Leicester on frequency, joined overhead and descended on the deadside and advised Leicester Radio (they had already made contact and received RW33, QFE 978hPa). The approach was too high so they called for a ‘go-around’ and climbed on runway heading, turned crosswind 240° still climbing to a circuit height of 1000ft (fixed-wing) on a left-hand circuit. During the turn from crosswind to downwind, to 150°, they looked left to confirm their position relative to the runway (they were in the right seat, instructing a licensed pilot in the left seat), [they assessed] their position was good and then saw a C152 come out from underneath them and started a fast climb. They opined that maybe the C152 pilot saw them and dived down and then up again. They [state that they] clearly saw the colour. They then called on the radio and asked if they were talking to a northbound Cessna. Just before this call, someone called ‘in the overhead’ but they were unsure of the aircraft registration and had only guessed it was that C152 pilot, but as they were on a crosswind just turning downwind the other aircraft was in totally the wrong position and why below circuit height? As they walked out to leave, they saw the aircraft (or same coloured one) parked on the ground at Leicester. They opined that they should have returned to the flying club to ask who owned it and had it flown earlier.

The pilot assessed the risk of collision as ‘High’.

THE UNKNOWN AIRCRAFT PILOT could not be traced.

THE LEICESTER AIR GROUND OPERATOR reports that RW33 was the active runway for fixed-wing traffic on the left-hand side and rotary traffic on the right-hand side. At approximately 1330 [they remembered] they heard the pilot of [the TB200] communicating on the radio with an unknown aircraft, notifying them that they were flying low and in the wrong direction. After hearing the call, they checked out of their window and the [web-based flight tracking application], but they could not see any low-flying or wrongly directed aircraft. No aircraft pilot responded to [the TB200 pilot’s] call. [They remembered

that] before the call [a C152] reported that they were in the overhead. However, they did not notice them flying low or in the wrong direction.

Due to their restricted view, they could not spot the unknown aircraft that [the TB200 pilot] reported. The only two fixed-wing aircraft reported in the ATZ [they thought] were [the TB200] and [the C152] and no unfamiliar aircraft were showing up on [the web-based flight tracking application]. They did not recall hearing from any other pilot that would align with [the TB200 pilot's] report.

When [the TB200] pilot arrived at the reception to sign in they informed them that they were unaware of any low-flying or aircraft flying in the wrong direction and that they could not see any unusual circuit movements. They advised them to file an Airprox report if they wanted to take it further, as they may be able to track a route and aircraft that they (the AGO) could not see.

When [the C152] pilot landed, they talked with them and confirmed that they had not seen any unusual circuit traffic either. [The C152 pilot] informed them that they were not flying low or in the wrong direction, as they were very familiar with the circuit height and directions.

THE AIRFIELD MANAGER reports that following the report they personally conducted interviews with both [the Air Ground Operator] and the [pilot of the C152]. They [believed] that the AGO's report was a true and representative report of the Airprox. The [C152 pilot] stated that at the time of the incident they were outside the ATZ, and at no time did they see [the TB200].

They had no means to confirm this, but as both the pilot and passenger of [the C152] were very current and experienced in local joining procedures, they were unable to provide additional information as to the report of low flying on the overhead join, which would seem unusual as the deadside join at Leicester is mandated at 1200ft QFE due to the rotary wing traffic operating at 700ft in the opposite circuit direction. Due to not knowing the exact flightpath of [the TB200] they were unable to provide any more balanced and concise causal factors for this Airprox report.

Factual Background

The weather at East Midlands was recorded as follows:

METAR EGNX 101320Z 30012KT 9999 SCT024 09/04 Q0997

Analysis and Investigation

UKAB Secretariat

An analysis of the radar replay and ADSB tracks showed the TB200 joining the airfield from the northeast into the overhead at 1333. It performed one tight circuit and go-around, followed by a second circuit to land. A diagram of the reported Airprox position was provided by the TB200 pilot's own GPS tracking device (Figure 1).

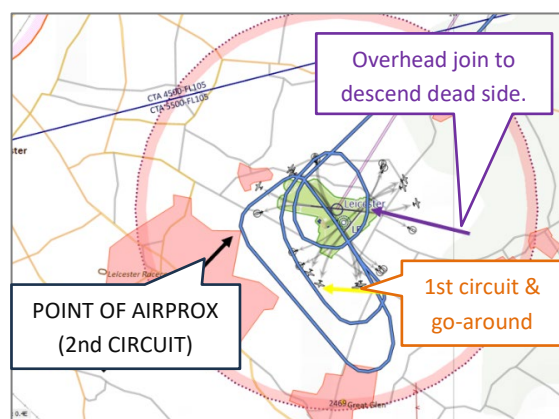


Figure 1 – TB200 track and reported Airprox position.

There had been one aircraft that matched the TB200 pilot's description that had later been seen parked at the airfield. That aircraft's radar returns showed that it had flown 2 circuits prior to departing the area (before to the TB200's arrival) and was operating 7NM to the southeast of the airfield during the time that the TB200 arrived and was in the circuit (Figure 2). A C172 had also arrived on a long final approach from the south and had landed prior to the TB200's arrival without entering the circuit pattern.

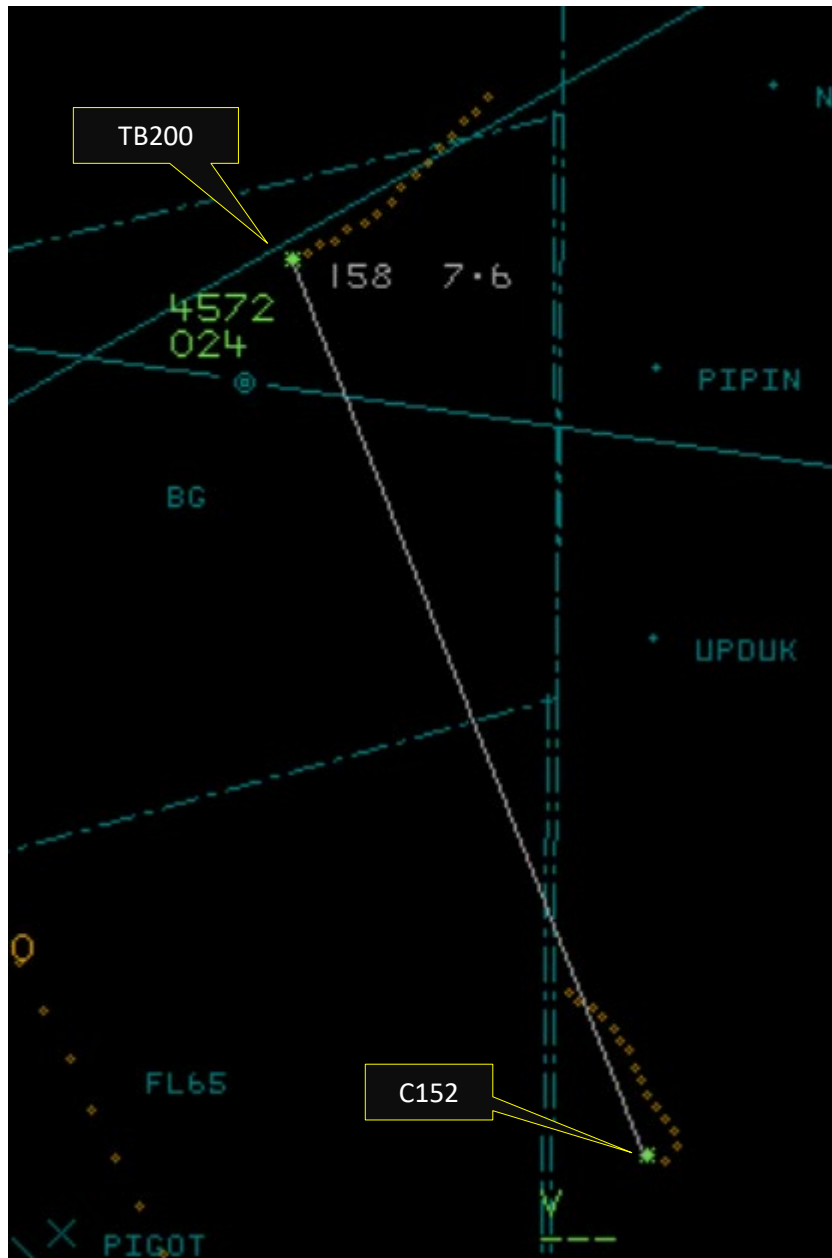


Figure 2 – Time 1333:10 TB200 joins from the northeast, C152 operates to the southeast.

There was a helicopter arriving from the south which manoeuvred towards the rotary circuit area situated beneath the deadside of the fixed-wing circuit pattern at the time of the reported Airprox (Figure 3).

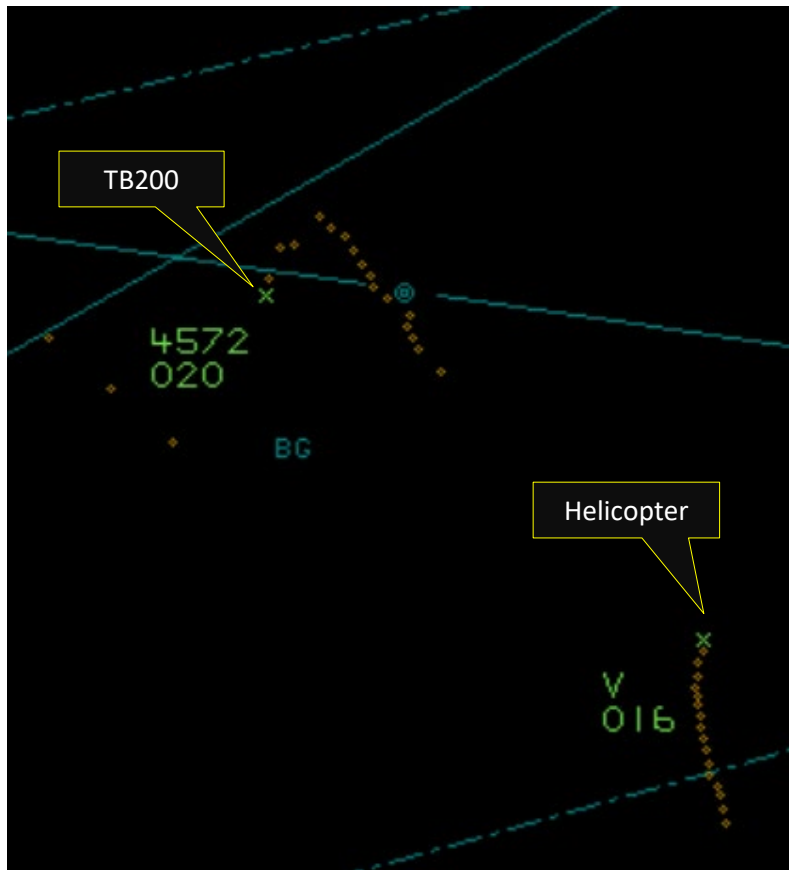


Figure 3 - Time 1338:24 TB200 at reported point of CPA

As the TB200 was on its final approach there had been one primary track to the east of the reported Airprox position which appeared briefly but could not be traced (Figure 4).

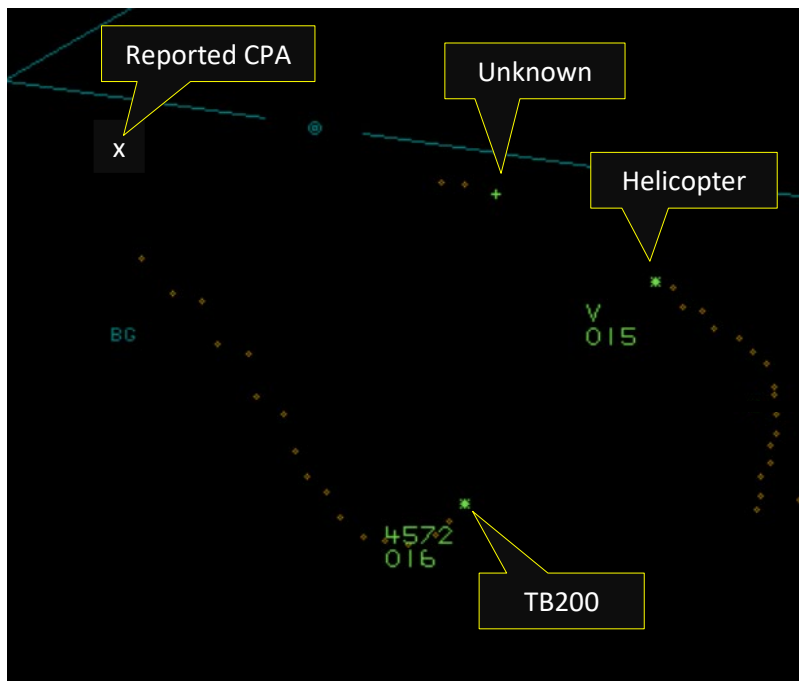


Figure 4 – Time 1339:39 TB200 on final approach post CPA

There were no other radar returns or ADS-B tracks which matched the description of the Airprox report.

The TB200 and unknown aircraft 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 An aircraft operated on or in the vicinity of an aerodrome shall conform with or avoid the pattern of traffic formed by other aircraft in operation.²

Summary

An Airprox was reported when a TB200 and an unknown aircraft flew into proximity at Leicester Airport at approximately 1338Z on Friday 10th November 2023. The TB200 pilot was operating under VFR in VMC in receipt of an AGCS from Leicester Radio. The unknown aircraft pilot could not be traced.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of a report from the TB200 pilot, radar photographs/video recordings, a report from the Air Ground Operator involved and a report from the appropriate operating authority. Relevant contributory factors mentioned during the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

The Board first discussed the actions of the TB200 pilot and noted that they had attempted to contact the pilot of the unknown aircraft and also ask the AGO for information about it. Members noted the TB200 pilot's assumption that the pilot of an unknown aircraft had possibly taken avoiding action, while they themselves had been unable to react to the late sighting of that aircraft going beneath them.

The members considered the actions of the AGO, who had been unable to ascertain whether another aircraft had been incorrectly positioned in the circuit, had given advice to submit an Airprox report and participated in the reporting process. The Board agreed that there had been little else that they could have done to assist the TB200 pilot in this instance.

Turning their attention to the pilot of the unknown aircraft, members were disappointed that, despite best efforts, the aircraft and pilot could not be traced. Other aircraft pilots in the vicinity at or around the time that the TB200 pilot joined the circuit pattern provided information to help with the investigation, and all were excluded from possible involvement in the Airprox. As there had only been an intermittent primary radar trace which could not be correlated with an aircraft, members were left with limited information available to them and only an assessment of height and distance from the TB200. They agreed that the encounter had caused concern to the TB200 pilot, however, given the limited information available they were unable to make a sound assessment of risk and so assigned a Risk Category D to this event. The Board also agreed that the following factor had been contributory to the Airprox:

CF1. The pilot of the TB200 had no situational awareness of the unknown aircraft.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

| 2023255 | | | | |
|---|------------|--|---|---|
| CF | Factor | Description | ECCAIRS Amplification | UKAB Amplification |
| Flight Elements | | | | |
| • Situational Awareness of the Conflicting Aircraft and Action | | | | |
| 1 | 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 |

Degree of Risk: D.

¹ (UK) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

² (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome. MAA RA 2307 paragraph 17.

Safety Barrier Assessment³

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

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the TB200 pilot had no information regarding the unknown aircraft.

| Airprox Barrier Assessment: 2023255 | | Outside Controlled Airspace | | Effectiveness | | | | |
|-------------------------------------|--|-----------------------------|-------------|-------------------|----------------------------|----------|-----|-----|
| Barrier | | Provision | Application | Barrier Weighting | | | | |
| | | | | 0% | 5% | 10% | 15% | 20% |
| Ground Element | Regulations, Processes, Procedures and Compliance | ✓ | ✓ | | | | | |
| | Manning & Equipment | ✓ | ✓ | | | | | |
| | Situational Awareness of the Conflicting Aircraft & Action | ✗ | ○ | | | | | |
| | Electronic Warning System Operation and Compliance | ○ | ○ | | | | | |
| Flight Element | Regulations, Processes, Procedures and Compliance | ○ | ○ | | | | | |
| | Tactical Planning and Execution | ○ | ○ | | | | | |
| | Situational Awareness of the Conflicting Aircraft & Action | ✗ | ✓ | | | | | |
| | Electronic Warning System Operation and Compliance | ○ | ○ | | | | | |
| | See & Avoid | ○ | ○ | | | | | |
| Key: | | Full | Partial | None | Not Present/Not Assessable | Not Used | | |
| Provision | ✓ | ○ | ✗ | ○ | | | | |
| Application | ✓ | ○ | ✗ | ○ | | | | |
| Effectiveness | ■ | ■ | ■ | ■ | ○ | | | |

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