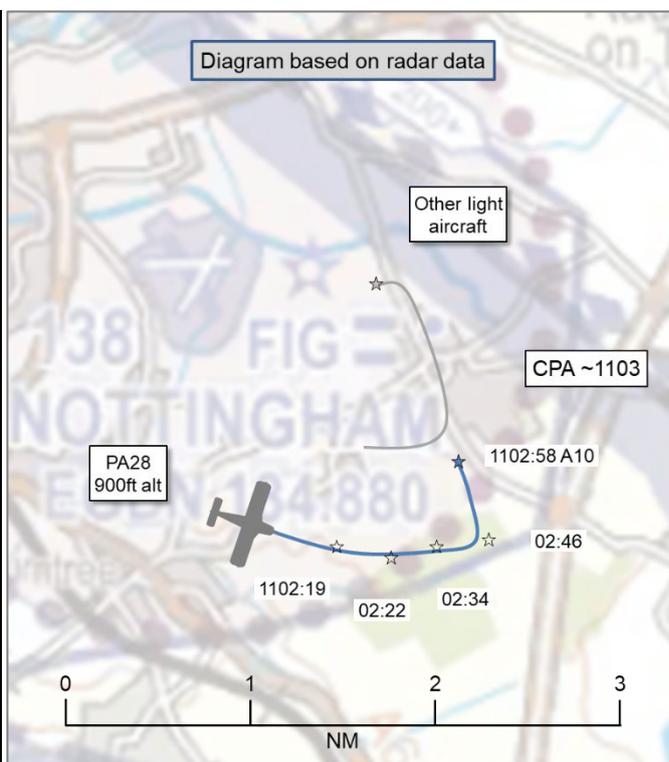


AIRPROX REPORT No 2021056

Date: 06 May 2021 Time: 1103Z Position: 5255N 00103W Location: Nottingham Airport – elev 138ft

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	PA28	Jet Provost
Operator	Civ FW	Civ FW
Airspace	Nottingham ATZ	Nottingham ATZ
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	Nottingham Radio	Nottingham Radio
Altitude/FL	1000ft	NK
Transponder	A, C, S	Not observed ¹
Reported		
Colours	White, blue stripes	Brown, white
Lighting	Nav, strobes, beacon, landing	Landing, beacon
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	700ft	1000ft
Altimeter	QFE (1001hPa)	QFE (NK hPa)
Heading	270°	090°
Speed	70kt	125kt
ACAS/TAS	Not fitted	Not fitted
Separation		
Reported	50ft V/0m H	150ft V/250m H
Recorded	NK V/NK H	



THE PA28 PILOT reports flying visual circuits having completed a short local flight. After an uneventful first circuit they were on left base, about to turn final for RW27 when a Jet Provost passed close beneath. They immediately applied full power and pulled up while making a radio call to say "A plane is flying towards me!". They were expecting it to crash into them as they believed the other pilot was totally unaware that they were there! After the Jet Provost had flown under, they radioed again saying "Someone is flying the wrong circuit". They then re-established on final approach and made a full stop landing.

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

THE JET PROVOST PILOT reports in the visual circuit at Nottingham. At the beginning of the downwind leg they called downwind and were visual with one aircraft ahead, at the end of their downwind leg turning onto base leg. Shortly after completing the pre-landing checks, they saw a low-wing single-engine aircraft a little right of the nose at a range of 250-300m, about 150ft above and crossing from right to left. The aircraft appeared from behind the canopy arch, wings level and slightly nose high and the Jet Provost pilot lowered the nose to increase the separation, passing underneath and astern. The Jet Provost pilot noted that the conflicting aircraft was either flying a very wide circuit or re-joining from the south onto base leg. They were not expecting any aircraft to come from that direction, particularly without radio calls to that effect.

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

THE NOTTINGHAM A/G OPERATOR reports RW27 left hand in use, wind 270° at 8-10kt with clear conditions and visibility greater than 10km with QNH 1005hPa. The pilot of a PA28 reported an Airprox at 11:01, after turning onto the left base leg of RW27 overhead Cotgrave Village. The following aircraft,

¹ The Jet Provost pilot reported having Modes A and C selected but no secondary returns were observed.

a Jet Provost, closed quickly on the PA28 and appeared to pass slightly below and to the rear. The spacing of the aircraft involved was difficult to assess due to the distance from the control tower, however, two local residents witnessed the event, called immediately and were quite emotive.

Factual Background

The weather at East Midlands was recorded as follows:

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METAR EGNX 061120Z 29012KT 9999 SCT043 09/M01 Q1005=
METAR EGNX 061050Z 30011KT 260V340 9999 FEW018 SCT039 10/M01 Q1005=
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Analysis and Investigation

UKAB Secretariat

The PA28 and Jet Provost 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 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.³ The radar replay displayed the circuit traffic as secondary surveillance (SSR transponder) returns only. No secondary returns were observed from the Jet Provost.

Summary

An Airprox was reported when a PA28 and a Jet Provost flew into proximity in the visual circuit at Nottingham airport at about 1103Z on Thursday 6th May 2021. Both pilots were operating under VFR in VMC, both in receipt of an AGCS from Nottingham Radio.

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.

Members first discussed the issue of circuit integration and agreed it was axiomatic that Airprox such as this with risk other than E (and possibly D) had a contributory factor that at least one of the aircraft in question had not integrated effectively (**CF1**). The Board discussed how the situation may have come about in this Airprox and agreed that although the Jet Provost pilot was behind the PA28, and therefore expected to integrate with it, it was noted that the PA28 pilot had also flown a very wide circuit and had arguably not integrated with the pattern of traffic formed by the aircraft ahead ('other light aircraft' in the diagram) (**CF2**, **CF3**). Members agreed that traffic integration was far more complex than simply following the aircraft ahead, in fact this could be positively detrimental to safety for sequential aircraft with significantly different approach speeds, and that effective lookout and 'listen-out' were essential. Neither of the pilots had SA on the position of the other aircraft (**CF4**) and they were only aware of their mutual proximity when close to CPA. The Board felt that the PA28 pilot's narrative indicated that they had seen the Jet Provost at such a late stage that it was effectively a non-sighting (**CF6**) and that the Jet Provost pilot, although also seeing the PA28 at a late stage (**CF5**) due in part to it being obscured by the canopy arch (**CF7**), had seen the PA28 in time to at least increase separation at CPA. The Board members discussed the issue of risk for some time and ultimately decided that without position and altitude data with which to assess separation at CPA, the risk could not be determined.

² (UK) SERA.3205 Proximity.

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK**Contributory Factors:**

	2021056			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements				
• Regulations, Processes, Procedures and Compliance				
1	Human Factors	• Use of policy/Procedures	Events involving the use of the relevant policy or procedures by flight crew	Regulations and/or procedures not complied with
• Tactical Planning and Execution				
2	Human Factors	• Action Performed Incorrectly	Events involving flight crew performing the selected action incorrectly	Incorrect or ineffective execution
3	Human Factors	• Monitoring of Environment	Events involving flight crew not to appropriately monitoring the environment	Did not avoid/conform with the pattern of traffic already formed
• Situational Awareness of the Conflicting Aircraft and Action				
4	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
• See and Avoid				
5	Human Factors	• Identification/Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
6	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
7	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: D.

Recommendation: Nil.

Safety Barrier Assessment⁴

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 **not used** because an AGCS does not require SA.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the Jet Provost pilot did not integrate with the PA28 ahead.

Tactical Planning and Execution was assessed as **partially effective** because the Jet Provost pilot was unaware of the PA28 which was wide downwind.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot was aware of the presence of the other until close to CPA.

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

See and Avoid were assessed as **partially effective** because although the Jet Provost pilot saw the PA28 at a late stage they were able to take avoiding action.

