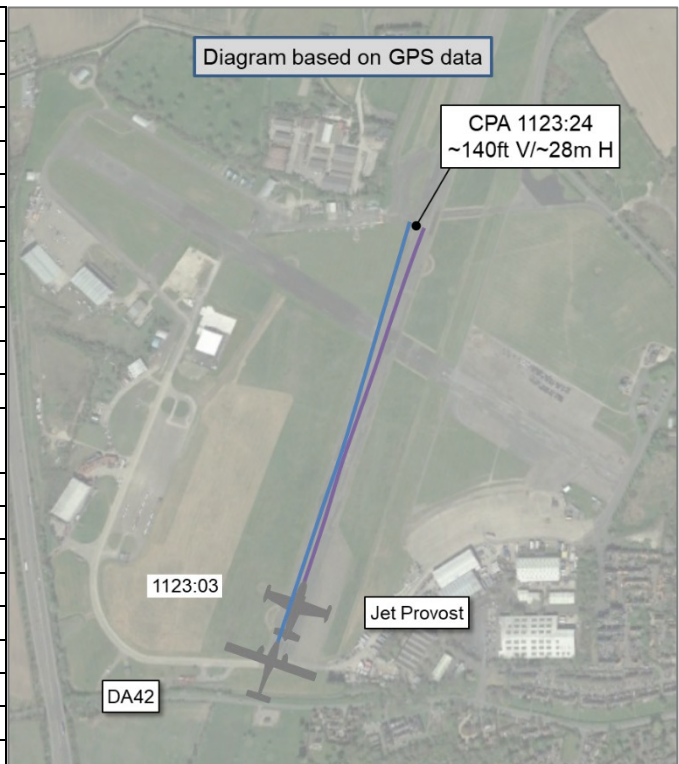


AIRPROX REPORT No 2020126

Date: 18 Sep 2020 Time: 1123Z Position: 5144N 00010E Location: North Weald – elev 321ft

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	DA42	Jet Provost
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	AGCS
Provider	North Weald	North Weald
Altitude/FL	~140ft agl	On the ground
Transponder	A, C, S	A, C, S
Reported		
Colours	White, red	Black
Lighting	Strobes	Strobes, landing, anti-coll
Conditions	VMC	VMC
Visibility	NR	25km
Altitude/FL	200ft	On the ground
Altimeter	QNH (1023hPa)	QNH (NK hPa)
Heading	020°	NR
Speed	80kt	NR
ACAS/TAS	TAS	Not fitted
Alert	TA	N/A
Separation		
Reported	250ft V/0m H	NR
Recorded	~140ft V/~28m H	



THE DA42 PILOT reports being on final approach to land when, at about 800m to the threshold, a Jet Provost (JP) entered the active runway and held at the start of the runway (short of the numbers). The DA42 pilot announced ‘going around’ because they were unsure of the intentions of the JP pilot. There had been no permission from the Tower to enter the active runway and no calls from the JP pilot to suggest that the runway was going to be entered. As they passed over the JP they saw it begin to roll. About halfway down the runway they diverted to the right as the JP became airborne somewhere beneath them. The JP then proceeded to climb, oblivious to all around, eventually becoming visible to the left as it climbed out.

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

THE JET PROVOST PILOT reports that a new group member was being converting to the aircraft. They were holding on the RW02 ORP along with a light aircraft beside them carrying out engine runs. The light aircraft taxied on to RW02 which the JP pilot assumed was to take-off so they moved on to the runway as it rolled. As they moved on to the runway the JP pilot pointed out an aircraft at the end of downwind [the DA42]. Upon lining up they waited for the light aircraft ahead on the runway, which he had assumed was taking off but which actually taxied to an intersection and vacated the active runway, having taken a significant amount of time to do so. The JP crew immediately started rolling but unfortunately, due to the amount of ‘chat’ on the radio, he was unable to make a ‘rolling’ call. On rotation, gear up was selected but the ‘up’ button refused to depress; numerous attempts were made from both stations unsuccessfully so the JP pilot took control and informed ATC they would be remaining in the circuit. The person who filed the Airprox subsequently complained to the JP pilot that the JP had entered the runway when they were at 300ft on finals. The JP pilot stated that they were at 90° to the centreline, having completed the before take-off checks, before they proceeded to line up, at which point the DA42

was visible to them downwind at the 11 o'clock position. The JP pilot stated that tall trees meant that the DA42 could not have been seen from the RW02 ORP if it was at 300ft on finals.

The pilot assessed the risk of collision as 'None'.

THE NORTH WEALD AIR/GROUND OPERATOR reports working solo in the Tower, starting at 07:30UTC. At the time of the incident there were several aircraft in the circuit; a PA28 conducting touch and goes; a Tecnam P2002 returning from a local flight and the Airprox DA42 arrived in the circuit. A Cessna 152 and the Jet Provost were on the RW02 ORP. The Tecnam landed and vacated the runway. The DA42 was the next traffic in the circuit and called final. The JP pilot called ready for departure and was informed of traffic on final. The JP entered the runway and took-off at 11:20UTC with landing traffic on final. The DA42 pilot performed a go-around to avoid the departing traffic. The North Weald Air/Ground Operator informed the JP pilot that they had go-around traffic above them as they climbed away.

Factual Background

The weather at Stansted was recorded as follows:

METAR EGSS 181120Z AUTO 08013KT 9999 NCD 19/08 Q1024=

Analysis and Investigation

UKAB Secretariat

The DA42 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 hazard¹. An aircraft in flight, or operating on the ground or water, shall give way to aircraft landing or in the final stages of an approach to land².

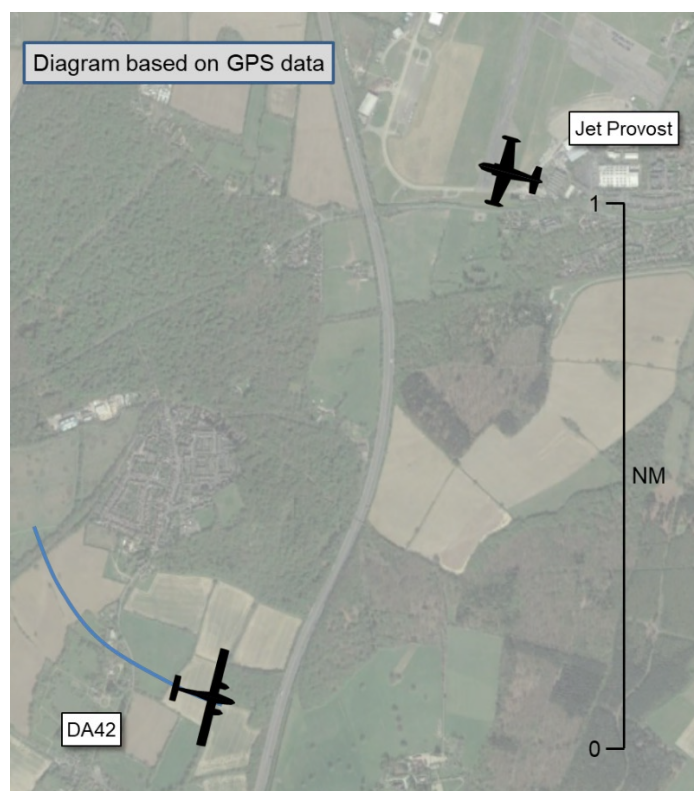


Figure 1: 1122Z – JP enters runway to line-up

¹ SERA.3205 Proximity.

² SERA.3210 Right-of-way.

Summary

An Airprox was reported when a DA42 and a Jet Provost flew into proximity at North Weald aerodrome at 1123Z on Friday 18th September 2020. Both pilots were operating under VFR in VMC, both in receipt of an AGCS from North Weald 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.

The Board first discussed the environment at North Weald and commented that it is a busy airfield with traffic constrained to operate below the Stansted CTA, 1179ft above the airfield reference point, and that an ATS is provided in the form of Air/Ground Radio (an AGCS). On this occasion, the joining DA42 and departing Jet Provost (JP) flew into proximity overhead RW02 while the DA42 pilot was conducting a go-around and the JP was on the take-off roll. When the JP pilot lined-up, the DA42 was on base leg (Figure 1 above) and the light aircraft was taxiing down the runway prior to clearing at an intersection. Members felt that in order to give way to the approaching DA42, the JP pilot would have had to commence their take-off immediately on lining-up, to allow the DA42 pilot, by then on final approach, to be able to land. Analysis of the JP GPS data indicated its take-off roll was about 30sec, a figure that the Board presumed the JP pilot had taken in to account when deciding to line-up. In the event the JP pilot could not take off immediately because the light aircraft was taxiing along the runway to vacate at an intersection. Members surmised that the JP pilot had not assimilated the radio calls that would have informed him of the light aircraft pilot's intentions. Members felt that even had the light aircraft taken-off, the JP pilot had had very little time within which to complete his departure and thereby give way to the landing DA42. In sum, the Board felt that the JP pilot would perhaps have been better served by waiting on the ORP for a further one minute while the approaching DA42 pilot completed the landing. In the event, the DA42 pilot did not hear the JP pilot call to enter the runway (**CF4**) but could, no-doubt, see the JP move forwards and onto RW02. The DA42 pilot continued the approach and members wondered at what point it had become apparent that a landing could not be made and that a go-around would be required. Members felt that it was clear that a go-around was required and that it could have been commenced earlier (**CF2**). It appeared from the GPS data that the DA42 pilot commenced the go-around near the RW02 threshold and did not climb at a rate that could be expected of this aircraft (**CF3**). The go-around was also conducted overhead the runway, denying the DA42 pilot the opportunity to maintain visual contact with the now rolling JP below him (**CF1**). The DA42 overtook the JP at the start of the go-around and the JP then passed the DA42 as it accelerated on the take-off roll, with CPA estimated to be at or shortly after rotation, presumably at or about the time the DA42 TAS generated a warning (**CF5**). The Board was aware that North Weald has historically discouraged operation on the deadside, east of the main runway, due to the number and extent of non-airfield related activities in that area, but members commented that the DA42 pilot's low overshoot, directly overhead RW02, was an ill-advised manoeuvre that resulted in increased risk. Board members were particularly concerned by the DA42 pilot's comment that 'About halfway down the runway they diverted to the right as the JP became airborne somewhere beneath them', indicating that the DA42 pilot crossed above the JP's track without being aware of its exact position or altitude, other than perhaps assimilating the A/G Operator's call to the JP pilot that 'they had go-around traffic above them as they climbed away'. Members also commented that the JP pilot may have observed the DA42 as it passed above and slightly to the left and that it would have been reasonable to abort the take-off, rather than continue into proximity with the DA42 as the JP accelerated [UKAB Note: The JP pilot confirmed after the Board meeting that he had been focused on the engine parameters and the other pilot's performance and had not seen the DA42 pass overhead]. After further discussion, the Board agreed that the DA42 pilot had had the opportunity to avoid flying in to close proximity but their lack of appropriate action (**CF7**) had resulted in

an event where safety had been significantly reduced (**CF6**). With regard to the DA42 pilot's statement (concerning the JP) that 'there had been no permission from the Tower to enter the active runway', members commented that permission to enter a runway is not required under an AGCS and noted that in such an ATS environment it is even more important that all those in the visual circuit and on the ground not only observe the appropriate regulations but operate cooperatively and considerately. Finally the Board commented that frustration with others' inconsiderate actions was not grounds for further inconsiderate action.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2020126		
CF	Factor	Description	Amplification
	Flight Elements		
	• Regulations, Processes, Procedures and Compliance		
1	Human Factors	• Flight Operations Documentation and Publications	Regulations and/or procedures not complied with
	• Tactical Planning and Execution		
2	Human Factors	• Insufficient Decision/Plan	Inadequate plan adaption
3	Human Factors	• Action Performed Incorrectly	Incorrect or ineffective execution
	• Situational Awareness of the Conflicting Aircraft and Action		
4	Human Factors	• Understanding/Comprehension	Pilot did not assimilate conflict information
	• Electronic Warning System Operation and Compliance		
5	Contextual	• ACAS/TCAS TA	
	• See and Avoid		
6	Contextual	• Near Airborne Collision with Aircraft, Balloon, Dirigible or Other Piloted Air Vehicle	Piloted air vehicle
7	Human Factors	• Lack of Action	Pilot flew into conflict

Degree of Risk: B.

Recommendation: Nil.

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:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the DA42 pilot's go-around was conducted overhead the runway at a low altitude as the JP commenced its take-off roll.

Tactical Planning and Execution was assessed as **partially effective** because the JP pilot lined-up when take-off could not be commenced immediately and the DA42 pilot did not commence the go-around until at a late stage.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **partially effective** because the available SA was only partially acted upon.

³ 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 **partially effective** because the DA42 TAS alerted but did not prompt appropriate action.

See and Avoid were assessed as **ineffective** because the JP pilot did not see the DA42 before CPA and the DA42 pilot became unsighted to the JP and did not take effective action to increase separation.

