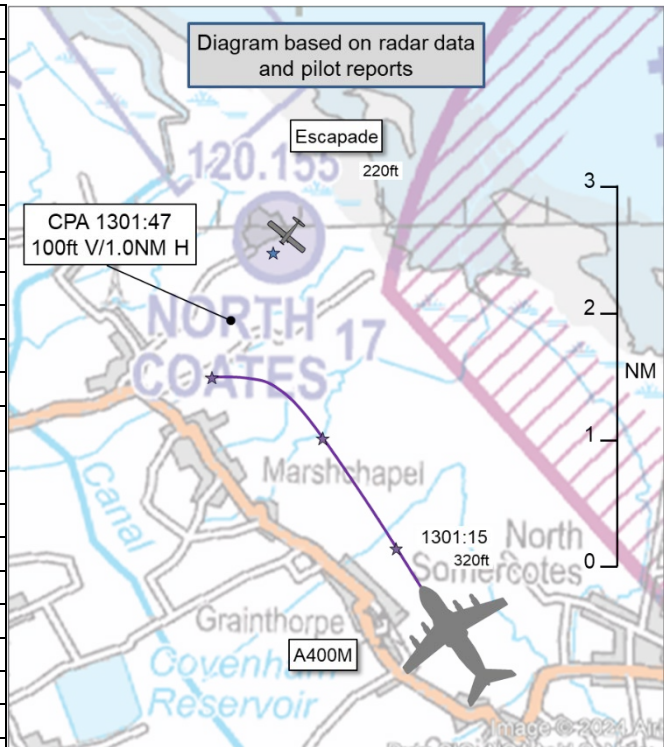


AIRPROX REPORT No 2023254

Date: 20 Nov 2023 Time: 1302Z Position: 5329N 00003E Location: North Coates

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Escapade	A400M
Operator	Civ FW	HQ Air (Ops)
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Listening Out	Listening Out
Provider	Donna Nook	LL Common
Altitude/FL	220ft	320ft
Transponder	A, C, S	A, C, S+
Reported		
Colours	Red/white	Grey
Lighting	Nil	Strobes, navigation, landing
Conditions	VMC	VMC
Visibility	5-10km	>10km
Altitude/FL	300ft	300ft
Altimeter	QFE (1007hPa)	QNH
Heading	230°	Turning
Speed	60kt	270kt
ACAS/TAS	Not fitted	TCAS II
Alert	None	None
Separation at CPA		
Reported	0ft V/300-400m H	Not seen
Recorded	100ft V/1.0NM H	



THE ESCAPADE PILOT reports that they had cleared with Donna Nook that the range had been cold and arranged to talk to them on the radio after take-off. At 300ft, the pilot had seen an A400M passing left-to-right at [the same] height. The Escapade pilot broke hard right and called Donna Nook radio to report an Airprox.

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

THE A400M PILOT reports that at the time and location of the event no threat was observed.

The pilot perceived the severity of the incident as ‘Low’.

THE DONNA NOOK AIR WEAPONS RANGE CONTROLLER reports that they had been the controller on duty at Donna Nook AWR. The Escapade had lifted from North Coates, just outside D307. As per the LOA [the range] has with North Coates, departing traffic calls Donna Nook on the NATO common VHF 122.750MHz for any relevant range information. Donna Nook had been cold at the time and the controller had not been talking to anyone on any frequencies. The first call received from the Escapade pilot stated that they had had an Airprox with a large aircraft tracking northwest over North Coates village. The controller presumed that they had meant on climb-out. The controller had informed the Escapade pilot that the range had been cold and that they had no one on any frequency. At Donna Nook, they have a laptop with 360Radar on it that they can use for situational awareness generally for aircraft operating on the range. At the time it had frozen, as this is what happens if not periodically refreshed. As the range had been cold and the controller had not been talking to anyone, it had not been refreshed. On refreshing, the controller had seen a contact in the Lincolnshire area, which on [reviewing] had flown over North Coates according to its trail. It had been showing on 360Radar as [A400M c/s] and had been squawking low-level according to the information [data] box. The controller informed the Escapade pilot that this had possibly been what they had seen and reiterated that they

had not been in contact with it. The controller took no further action other than logging the details for possible future reference.

The controller perceived the severity of the incident as 'negligible'.

THE DONNA NOOK SUPERVISOR reports that the Escapade pilot reported the Airprox on initial contact with Donna Nook. As Donna Nook had no aircraft on frequency prior to that call, there had been no requirement for the 360Radar SA tool to be monitored. [It was] requested that the Donna Nook controller submit this DASOR for evidence capture and with no requirement for an investigation. RT recordings were quarantined in the event that they may be required during subsequent Airprox investigation.

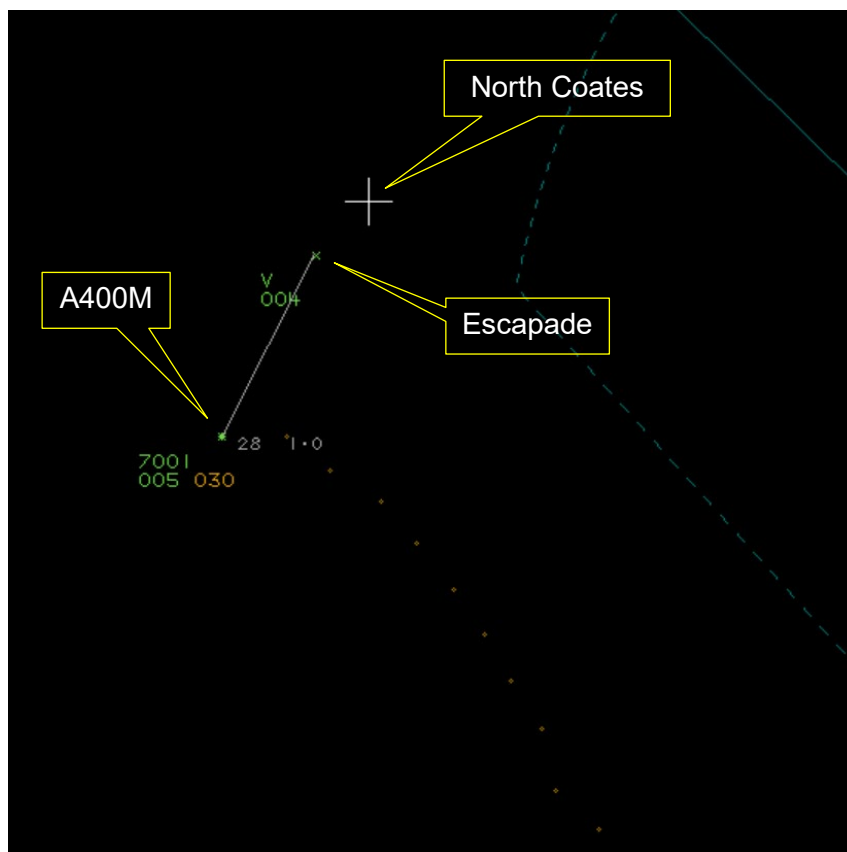
Factual Background

The weather at Humberside was recorded as follows:

METAR EGNJ 201250Z 27008KT 9999 FEW012 BKN020 12/09 Q1006=

Analysis and Investigation

UKAB Secretariat



CPA 1301:47 100ftV/1.0NM H

Both aircraft were identified on radar. Elevation data was displayed in Flight Levels so an appropriate QNH conversion factor was applied to determine altitudes AMSL.

The Escapade and A400M 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 If the incident geometry is considered as converging then the A400M pilot was required to give way to the Escapade.² An

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

² (UK) SERA.3210 Right-of-way (c)(2) Converging. MAA RA 2307 paragraph 12.

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

Comments

HQ Air Command

This airprox is a timely reminder of the importance of risk mitigation should a route be planned near a minor airfield. Visual lookout and extra vigilance for departing and arriving traffic in the vicinity of small airfields will be the final barrier to loss of safe separation, but situational awareness could be increased by monitoring or blind calling on Safety Common or the airfield's ICF, if allocated. However, given sortie profiles, speeds etc, this may not always be practical. The VHF Low-Level Common frequency provides an alternative air-to-air option in lieu of an ATS or LARS, but crews should be aware that GA utilising small airfields will not be on this frequency. Electronic conspicuity equipment can aid situational awareness but may not always alert when expected.

Summary

An Airprox was reported when an Escapade and an A400M flew into proximity at North Coates at 1302Z on Monday 20th November 2023. Both pilots were operating under VFR in VMC, the Escapade pilot was listening out on the Donna Nook frequency and the A400M pilot was listening out on the Low-Level Common frequency.

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 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.

Members firstly considered the actions of the Escapade pilot, recognising their adherence to the LoA between their departure airfield and Donna Nook Air Weapons Range. The Board noted that, having confirmed before take-off that the Range had been cold, the Escapade pilot had agreed to call on RT when airborne for further Traffic Information; unfortunately, the Airprox event had occurred before that call had been made. Members recognised that, although the CPA had been recorded at 1NM horizontal separation, the size and aspect of the A400M and the stage of flight that the Escapade pilot had been at, meant that initiation of avoidance action had not been unreasonable and praised the pilot for having registered the Airprox on RT at the time.

In reviewing the actions of the A400M pilot, members noted the nature of the flight and the conditions it had been flown under, accepting that military low-flying can occur at any time and in most parts of the UK and, although operating with the support of an Air Traffic Service is deemed helpful for situational awareness, this is not always appropriate or possible. They noted that the A400M had been equipped with both transponder and TCAS, giving the crew a higher chance of detecting and being detected by others although, in this case, the transponder carried by the Escapade had not been picked-up by the A400M's systems. Members opined that this may have been because the encounter had been potentially outside TCAS design thresholds.

Members briefly discussed the role played by the Donna Nook Air Weapons Range controller, accepting that they had equally followed the conditions within the LoA and, although unable to pre-warn the Escapade pilot of the passing A400M, had enabled timely tracing of it for further understanding of the event.

Concluding their discussion, it was agreed that, although neither pilot had had any situational awareness of the presence of the other aircraft, the Escapade pilot had visually acquired the A400M and taken avoidance action. Members noted that there had been significant horizontal separation

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome. MAA RA 2307 paragraph 17.

between the aircraft and agreed that no risk of collision had existed. As such, the Board assigned Risk Category E to this event and agreed on the following contributory factors:

- CF1.** Neither the A400M pilot nor the Escapade pilot had any situational awareness of the other aircraft.
- CF2.** The TCAS carried by the A400M should have been alerted by the transponder carried by the Escapade.
- CF3.** The A400M pilot had not gained visual contact with the Escapade at any stage.
- CF4.** The Escapade pilot had been concerned by the proximity of the A400M.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2023254			
Factor	Description	ECCAIRS Amplification	UKAB Amplification
Flight Elements			
• Situational Awareness of the Conflicting Aircraft and Action			
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
• Electronic Warning System Operation and Compliance			
Human Factors	• Response to Warning System	An event involving the incorrect response of flight crew following the operation of an aircraft warning system	CWS misinterpreted, not optimally actioned or CWS alert expected but none reported
• See and Avoid			
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
Human Factors	• Perception of Visual Information	Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement	Pilot was concerned by the proximity of the other aircraft

Degree of Risk: E.

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:

Flight Elements:

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any situational awareness of the other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TCAS carried by the A400M would have been expected to detect the presence of the Escapade but no alert was reported.

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

Airprox Barrier Assessment: 2023254		Outside Controlled Airspace						
		Provision	Application	Effectiveness				
Barrier				Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	○	○					
	Manning & Equipment	○	○					
	Situational Awareness of the Conflicion & 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:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	✔	⚠	✘	○				
Application	✔	⚠	✘	○				
Effectiveness								