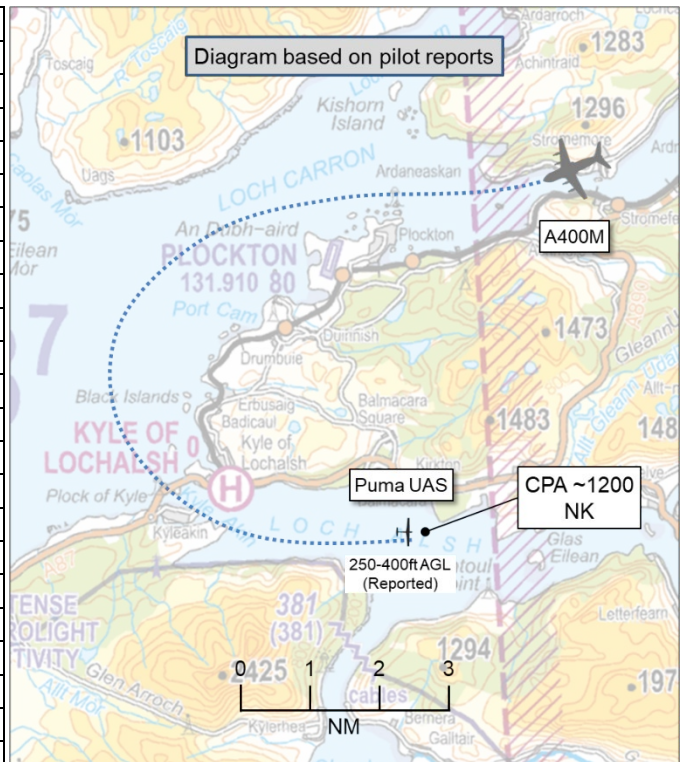


**AIRPROX REPORT No 2025235**

Date: 13 Nov 2025 Time: ~1200Z Position: 5716N 00538W Location: 3.5NM E Kyle of Lochalsh

**PART A: SUMMARY OF INFORMATION REPORTED TO UKAB**

Recorded	Aircraft 1	Aircraft 2
Aircraft	A400M	Puma UAS
Operator	HQ Air (Ops)	Mil UAS
Airspace	Scottish FIR	Scottish FIR
Class	G	G
Rules	VFR	VLOS (Cat: Open A3)
Service	Listening Out	None
Provider	Low Level Common	N/A
Altitude/FL	NK	NK
Transponder	NK	Not fitted
<b>Reported</b>		
Colours	Grey	Grey
Lighting	NR	Nav
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	250ft	400ft
Altimeter	QNH (1011hPa)	NR
Heading	090°	090°
Speed	270kt	NR
ACAS/TAS	TCAS II	Not fitted
Alert	None	N/A
	<b>Separation at CPA</b>	
Reported	0ft V/150m H	150ft V/150m H
Recorded	NK	



**THE A400M PILOT** reports that, approximately 3hr into the sortie, they encountered a UAV. It was tracking east at a similar altitude to their aircraft (250ft AGL). The location was south of Plockton and Balmacara. All three crew members saw the UAV, circa 100-200m off the port side. Estimates of its size were approximately 2-3m wingspan with winglets. Forward airspeed was significant based on the time to overtake the UAV. The closest airfield was Plockton. They continued en-route with nothing significant to report. There were no NOTAMs published for UAV activity. Communication had been attempted with Plockton airfield but with no success.

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

**THE PUMA UAS PILOT** reports that there was a loss of safe separation between the Puma UAS and an A400M Atlas. Their initial understanding suggests that the military Low Flying Booking Cell (LFBC) [UKAB Note: now the MAMC(LF)]<sup>1</sup> had not been informed of the Puma UAS operation, possibly due to a misunderstanding of LFA 14 boundaries.

The loss of safe separation occurred when an A400M approached the Puma's operating area at a lower altitude, resulting in lateral separation of approximately 150m. The Puma was operating at 400ft AMSL, flying west-to-east in the Kyle of Lochalsh. The UAS team was focussed on the Puma throughout the flight under VLOS without distraction.

The A400M was estimated to have been at 250ft AMSL, and was observed approaching west-to-east over the Skye Bridge. Due to the short time available, and as it was assessed that the A400M was below the Puma, it was decided not to manoeuvre further away from the threat.

<sup>1</sup> Military Airspace Management Cell (Low Flying).

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

## Factual Background

The weather at Oban was recorded as follows:

METAR EGEO 131150Z 06007KT 010V090 9999 FEW030 BKN046 08/01 Q1008

## Analysis and Investigation

### UKAB Secretariat

An analysis of the NATS radar replay was undertaken and neither aircraft was observed. Neither aircraft was observed by reference to ADS-B data sources. The entry in CADS<sup>2</sup> for the flight of the A400M is shown in Figure 1. The diagram at the top of this report was constructed by reference to the reported positions of the aircraft. The track of the A400M has been depicted with a dotted line to indicate a probable track. The separation at CPA could not be determined.

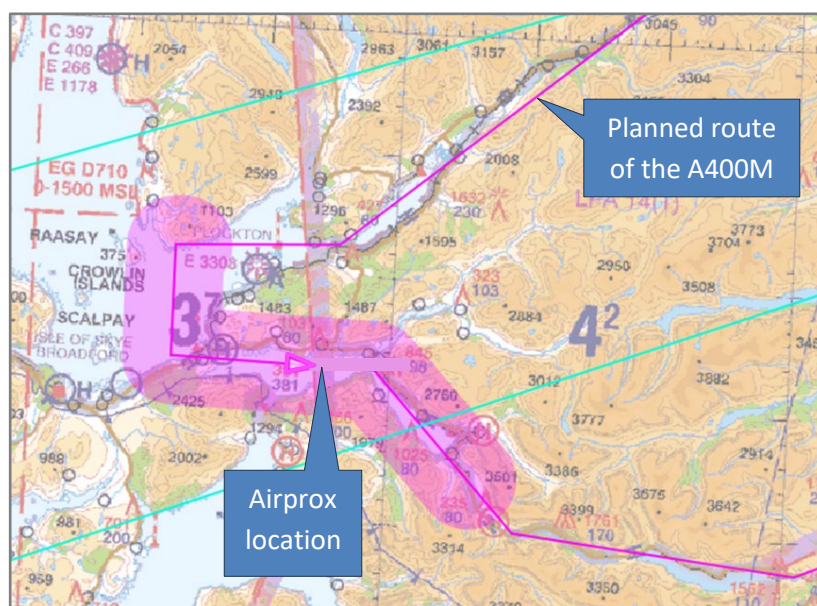


Figure 1 – The entry in CADS for the flight of the A400M. The pink arrowhead marks the planned position of the A400M for 1141 (at 250ft).

The A400M and Puma UAS pilots shared an equal responsibility for collision avoidance and not to operate in such proximity to other aircraft as to create a collision hazard.<sup>3</sup> RPAS shall be operated in a manner that minimizes risks and hazards to other airspace users.<sup>4</sup> When flying in the UK, Remote Pilots should notify the Low Flying Booking Cell in advance of any flying above 50ft AGL, unless in segregated airspace activated for their use.<sup>5</sup> All military low-flying should be conducted in accordance with MAA Regulatory Publication Regulatory Article 2330 (Low Flying).<sup>6</sup> Low Flying crews should monitor a common Low Level frequency.<sup>7</sup> [Pilots] planning to operate in the UKLFS [which includes all UK military registered aircraft] (below 2000ft AGL) should enter their sortie onto CADS and/or pre-book their sortie with the appropriate co-ordinating authority.<sup>8</sup>

<sup>2</sup> CADS (Centralised Aviation Data Service) is a proprietary web-based flight planning service used to manage bookings into the UK Low Flying System.

<sup>3</sup> MAA RA 2307 paragraphs 1 and 2.

<sup>4</sup> MAA RA 1603 (Issue 3) (4).

<sup>5</sup> MAA RA 1603 (Issue 3) paragraph 23.

<sup>6</sup> UK Military Low Flying Handbook, Regulatory Compliance, 01.01.01

<sup>7</sup> MAA RA 2330(3) Low Flying - General, paragraph 20.

<sup>8</sup> UK Military Low Flying Handbook, UK Low Flying System Planning, 01.06.02

## Comments

### HQ Air Command

The Atlas crew had carried out comprehensive route study and pre-flight planning and had not identified any NOTAMs to affect their planned route. They had entered their flight details into CADS and were monitoring the Low Level Common frequency at the time of the Airprox. The joint investigation between the Brize Norton Air Safety Cell with the operators of the RPAS has found that a potential misunderstanding on the part of the RPAS operators as to the responsibilities of the Low Flying Booking Cell meant that their exercise was not notified to other airspace users. The investigation also found that the RPAS operators do not routinely monitor the Low Level Common frequency. A change to MAA RA 1600 means that all their operations above 50ft AGL will now be entered on CADS which should aid deconfliction planning for military aircrews, while the contact between the Brize Safety Cell and the RPAS operating agency should improve future communications and reduce the likelihood of unnotified RPAS activity.

### JAC

The Puma UAS was operated under the Open A3 sub-category in accordance with RA 1603 (Issue 3) and applicable local Unit SOPs. The Remote Pilot (RP) was positioned on a maritime vessel and maintained VLOS at all times, supported by one other crew member and [another] acting as an observer. The activity was conducted outside segregated airspace as part of a training serial.

At the time of the Airprox, MAA Regulatory Publications (MRPs) did not require a UAS flight plan to be submitted to CADS, nor was there a requirement to monitor for potential airspace conflicts via CADS. Although RA 1603 directed that RPs should contact LFBC when operating above 50ft, this did not occur due to an oversight by the Commander, likely due to negative transfer from operating in segregated airspace where there was no requirement to inform LFBC (under MRP RA 1600-series at the time).

Subsequent updates to the MRPs (RA 1600-series) now mandate that UAS operations are logged in CADS and accompanied by a NOTAM, ensuring that Military Low Flying crews and other airspace users are appropriately informed.<sup>9</sup>

## Summary

An Airprox was reported when an A400M and a Puma UAS flew into proximity 3.5NM east of Kyle of Lochalsh at approximately 1200Z on Thursday 13<sup>th</sup> November 2025. The A400M pilot was operating under VFR in VMC, and the Puma UAS pilot was operating under VLOS in VMC. Neither pilot was in contact with an ATSU.

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

Information available consisted of reports from both pilots and radar photographs/video recordings. 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 considered the actions of the pilot of the A400M, and members noted that details of their flight had been entered into CADS and that they had not been aware of the flight of the Puma UAS during their pre-flight preparations. Members agreed that the TCAS equipment fitted to the A400M would not have been expected to have detected the Puma UAS (**CF5**) and, consequently, that they had not had situational awareness of it until it had been visually acquired (**CF4**). It was noted that the Puma UAS was subsequently sighted to their left with an estimated separation of 100-200m, and members agreed that to have first sighted the Puma UAS at such distance constituted a late sighting (**CF6**). The A400M pilot had assessed that the Puma UAS had significant airspeed and, therefore, the time for them to have overtaken it had been marked. Whilst members agreed that the A400M pilot had been

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<sup>9</sup> MAA RA 1603 (Issue 4) paragraph 40(h).

concerned by its proximity (**CF7**), it was noted that avoiding action had not been necessary and that they had been content to have continued the overtake manoeuvre without a change of course or altitude.

Turning to the actions of the pilot of the Puma UAS, a member with particular knowledge of military UAS operations explained that their flight had been conducted under the requirements of MAA RA 1603 which pertained to ‘flights far from people’, the Open A3 category. It was further explained that the Puma UAS had been previously operated in segregated airspace where that, in itself, had been an acceptable mitigation of a mid-air collision and that they had not been required to have informed MAMC(LF) of their flight. However, as the flight in question had been conducted outside segregated airspace, and above 50ft, there had been such a requirement. Consequently, members agreed that the pilot of the Puma UAS had not complied with the applicable regulations (**CF1**). It was further agreed that their omission had not been detected before they had conducted their flight and, therefore, insufficient pre-flight preparation had been undertaken (**CF3**).

A member with knowledge of the regulations for low flying military fast-jets, commented that those regulations are applicable to all military registered aircraft, including UAS. Countering, another member pointed out that the use of the word ‘aircrew’ within those regulations, might, and perhaps understandably, have led the remote pilots of UAS to have believed that those regulations had not been applicable to their operation. Members felt that the matter warranted further investigation and resolved to make a Recommendation:

The MAA reviews the MRP GEN 1600 series: uncrewed air systems (UAS) to highlight to their regulated community the existence of the 2000 series (FLY) and its applicability to UAS operations within the UKMLFS (specifically RA 2330). Concurrently, the MAA reviews the content of the UKMLFHB to ensure that military UAS operations within the UKMLFS are considered.

Notwithstanding, members were heartened that, subsequent to this Airprox encounter, the MAA RA 1600 series documents had already been updated to include a requirement for remote pilots to record details of their UAS operation in CADS and via a NOTAM.

Returning to the matter in hand, it was noted that the pilot of the Puma UAS had not monitored the Low Level Common frequency (which had been mandated under MAA RA 2330(3) Low Flying) and members suggested that it may have been advantageous (particularly to the situational awareness of the A400M crew) if they had communicated their intentions on that frequency (**CF2**). It was explained to members that the Puma UAS pilot may not have had the equipment to hand to have received transmissions, nor, possibly, had possessed the applicable privileges to have transmitted their intentions. Members agreed that the pilot of the Puma UAS had not had situational awareness of the presence of the A400M until it had been sighted (**CF4**) and noted that they had considered that it had been safe to have continued their flight without the need to have taken avoiding action.

Members concluded their discussion and summarised their thoughts. It was noted that several safety barriers had either not been engaged, had not been fully effective, or had only been partially effective in this encounter. It was agreed that safety margins had been eroded but members were satisfied that there had not been a risk of collision. The Board assigned Risk Category C to this event.

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

**Contributory Factors:**

2025235				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Flight Elements</b>				
<b>• Regulations, Processes, Procedures and Compliance</b>				
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
<b>• Tactical Planning and Execution</b>				

2	Human Factors	• Accuracy of Communication	Events involving flight crew using inaccurate communication - wrong or incomplete information provided	Ineffective communication of intentions
3	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
4	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
<b>• Electronic Warning System Operation and Compliance</b>				
5	Technical	• ACAS/TCAS System Failure	An event involving the system which provides information to determine aircraft position and is primarily independent of ground installations	Incompatible CWS equipment
<b>• See and Avoid</b>				
6	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
7	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: C.

Recommendation: The MAA reviews the MRP GEN 1600 series: uncrewed air systems (UAS) to highlight to their regulated community the existence of the 2000 series (FLY) and its applicability to UAS operations within the UKMLFS (specifically RA 2330). Concurrently, the MAA reviews the content of the UKMLFHB to ensure that military UAS operations within the UKMLFS are considered.

#### Safety Barrier Assessment<sup>10</sup>

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 pilot of the Puma had not complied with the regulation to have notified MAMC(LF) in advance of their flight above 50ft AGL in the UKMLFS.

**Tactical Planning and Execution** was assessed as **partially effective** because it may have been prudent for the pilot of the Puma UAS to have communicated their intentions on the Low Level Common frequency.

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

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the TCAS fitted to the A400M would not have been expected to have detected the Puma UAS.

<sup>10</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

<b>Airprox Barrier Assessment: 2025235</b>		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 Confliction & 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	✓	✓					
<b>Key:</b>		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	✓	⚠	✗	○				
Application	✓	⚠	✗	○				
Effectiveness	■	■	■	■	□			