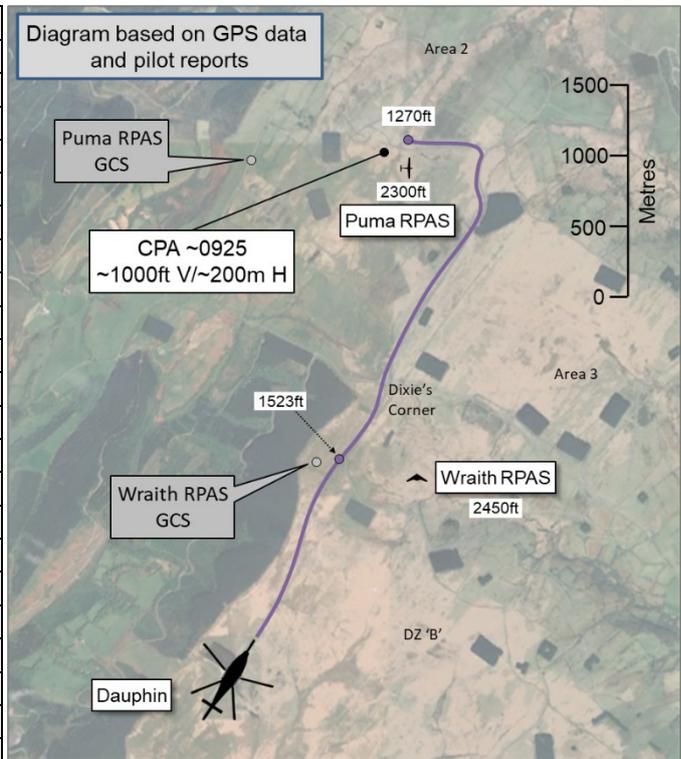


AIRPROX REPORT No 2025131

Date: 03 Jul 2025 Time: ~0925Z Position: 5202N 00338W Location: EGD203

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Puma RPAS	Dauphin
Operator	Mil UAS	HQ JAC
Airspace	EGD203	EGD203
Class	Danger Area	Danger Area
Rules	BVLOS	VFR
Service	None	Unknown
Altitude/FL	~2300ft	~1270ft
Transponder	Not fitted	NK
Reported		
Colours	Grey	Blue, white
Lighting	Nav	NR
Conditions	NR	VMC
Visibility	NR	>10km
Altitude/FL	1500ft	100ft
Altimeter	NR	AGL
Heading	090°	NR
Speed	NR	NR
ACAS/TAS	Not fitted	Unknown
Alert	N/A	Unknown
Separation at CPA		
Reported	NK	NR
Recorded	~1000ft V/~200m H	



THE WRAITH AND PUMA RPAS OPERATOR reports that, at 0730, the Authorising Officer (AO) rang Sennybridge Training Area (SENTA) Range Ops to inform them of their planned activities as per SOPs and as they had been doing every day [for a couple of months] since the start of their activities. All deconfliction and areas had been organised in advance and in line with SENTA Range Ops Standing Orders. [Wraith is a 3m wingspan fixed-wing vertical take-off and landing RPAS, Puma is a 2.7m wingspan fixed-wing hand-launched RPAS, both typically flown BVLOS].

At roughly 0900, the Wraith was launched and it was in a loiter over SENTA Area 3 at around 1300ft AGL. In addition, they had a Puma RPAS crew flying in Area 2. At 0925, [the Dauphin] flew directly over the top of their launch point at 100-200ft AGL before flying east [they recall] where it proceeded to fly, what they believe had been, directly under the [Puma] RPAS.

At 0927, the Authorising Officer rang SENTA Range Ops who noted that no booking or liaison had come through them reference the helicopter entering the danger area. At that point, [the Wraith pilot] and crew were taking evasive action to attempt to avoid the helicopter by sending the RPAS south before setting it into Fly-By-Wire mode and manually dropping its altitude once they were content that they were clear, and then manually recovered the RPAS back to their location. However, they had serious concerns [regarding] the helicopter and what the best course of action had been to avoid it. [The Wraith] had been above and they were not content with the separation due to it being unclear how close the helicopter and RPAS were due to the activity being Beyond Visual Line Of Sight (BVLOS). Meanwhile, [the Puma] RPAS crew had also conducted a recovery too [because they had heard the Dauphin approach and, when they were able to see it, they realised it was turning towards them so they tried to gain separation, conscious that an RPAS should not be operated above crewed aviation].

At 0931, the AO and Authorising Instructor (AI) raised [the Dauphin operations team] over mobile communications. The AO told [the Dauphin operations team] to order the [Dauphin pilot] to leave the airspace immediately.

At 0932, [the Dauphin operations unit] confirmed that their helicopter had left the airspace.

At 0935, all RPAS assets were grounded and, by 1004, the [RPAS operations Supervisor] had been informed of the incident. The aircrew of the helicopter had made contact with the AO and [,reportedly,] confirmed that no liaison had been conducted with SENTA Range Ops and that, during the [Dauphin crew's] internal deconfliction [activities], they had asked for confirmation of any UAV operations during the sortie. [Reportedly, Dauphin Air Ops] had misunderstood that and confirmed that there were no UAV operations being conducted (thinking that the [Dauphin] aircrew had asked about [a different training area], and not SENTA).



Figure 1 – A photograph of the Dauphin as it passed the Puma RPAS GCS (after CPA)

The pilot perceived the severity of the incident as 'High'.

THE DAUPHIN PILOT reports that, whilst carrying out a [task at low-level] at Sennybridge Training Area, they were contacted by [their Operations team] to tell them that there was an RPAS unit operating on the site as well. They immediately departed the area. On landing, they contacted an individual from the RPAS unit who told them they were going to submit an [incident report] as they believed that an Airprox had occurred.

The pilot perceived the severity of the incident as 'Low'.

THE SENTA RANGE OPERATIONS reports that, at approximately 0930, a team using an RPAS on an authorised and booked activity within EGD203 reported a near-miss with a Dauphin helicopter. The helicopter was [reportedly] seen to fly directly underneath, and in close proximity to, the RPAS which was flying BVLOS at approximately 1000ft in Area 1 of the Training Area [they believe]. The RPAS team called the SENTA Ops room and [the Dauphin Operations team] was contacted immediately but they had already ceased the activity.

There was no approved helicopter activity due to take place at that time and date and, therefore, no deconfliction of the activity had been arranged in accordance with SENTA Range Standing Orders.

The Range Operator perceived the severity of the incident as 'Low'.

Factual Background

The entry for EGD203 Sennybridge in the UK AIP provides the following information:

Vertical Limit 23,000 FT ALT Mon-Fri 0800-1800 (0700-1700).
 Activity: Ordnance, Munitions and Explosives / Para Dropping / Unmanned Aircraft System (VLOS/BVLOS).
 Service: SUA AIS: London Information on 124.750MHz.
 Contact: Pre-flight information / Booking: Range Control, Tel: 01874-635599.
 SUA Authority: DAATM (DIO).
 Hours: H24

The weather at Cardiff Airport was recorded as follows:

METAR EGFF 031020Z AUTO 23008KT 200V260 9999 NCD 19/12 Q1030

Analysis and Investigation

Dauphin Operator Local Investigation

Detail has been extracted from input provided by the Remote Piloted Air System (RPAS) crews and Dauphin crew, along with position detail from the RPAS Ground Control Station (GCS) and Dauphin GPS data. Two RPAS operations were taking place on Sennybridge Training Area (SENTA) concurrently. Areas 2 and 3 were being utilised for two different RPAS systems, Area 3 for Wraith and Area 2 for Puma. At 0925, a Dauphin entered SENTA routeing north on a [task at low-level]. The [pilot of the Dauphin] did not book on to the training area due to an oversight in their planning procedure. The sortie was being conducted between 100-200ft AGL for the duration it was operating on SENTA. As the [pilot of the Dauphin] was approaching Dixie's Corner, they noted various vehicles. They continued northbound remaining 100-200ft AGL. As they passed abeam the vehicles, the Dauphin was at 1520ft AMSL. The personnel on the ground were operating a Wraith RPAS in the overhead at circa 2450ft AMSL (1300ft AGL). The crew of the RPAS notified SENTA Range Operations of the presence of the Dauphin helicopter. The crew of the RPAS took action to deconflict from the helicopter by routeing the Wraith south and then reducing altitude to recover the RPAS to their location. The lateral separation is estimated to have been 400m when the Dauphin passed their position, calculated by mapping from the Dauphin and the RPAS Ground Control Station (GCS). Total separation is estimated to be 930ft vertically and 400m laterally from the Wraith.

The Dauphin crew continued their northerly track before heading westerly into Area 2 of SENTA. Unknown to the crew, there was a Puma RPAS operating in the area above their position at 2300ft AMSL. At that point, the Dauphin was recorded as having been at 1270ft AMSL, giving an estimated total separation of 1030ft vertically and 100-200m laterally. The Puma crew moved their RPAS to the northwest to deconflict from the Dauphin. The [pilot of the Dauphin] then headed south, unknowingly overflying the operators of the Puma RPAS before heading easterly via Dixie's Corner. The Dauphin crew continued past Dixie's Corner heading easterly before turning south. Once in the vicinity of DZ 'B', the crew received a call notifying them of the RPAS operations within SENTA. The crew then departed the area to the east to avoid further training area conflicts.

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. Neither aircraft could be positively identified from the replay. Neither aircraft was observed by reference to ADS-B data sources.

The Wraith and Puma RPAS operator supplied a diagram showing the position of the Wraith and Puma overlaid with the track of the Dauphin derived from GPS data. The exact moment of CPA and the precise separation between the aircraft could not be verified.

The Puma and Dauphin 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

Comments

JAC

On 3 Jul 2025, [the pilot of the Dauphin] entered SENTA EGD203 for [a task at low-level] where an Airprox was reported by UAS operators who were conducting authorised activity. Two UAS operations were underway within Area 2 and Area 3 of EGD203. The [pilot of the Dauphin] operated between 100-200ft AGL (1270-1523ft ASML), unaware of the UAS activity. On entering Area 3, the Dauphin passed near one of the UAS, which was operating at 2450ft AMSL, resulting in an

¹ MAA RA 2307 paragraphs 1 and 2.

estimated CPA separation of 930ft vertically and 400m laterally. The UAS crews notified SENTA Range Operations and manoeuvred south to deconflict. Continuing north, the Dauphin pilot entered Area 2, unknowingly beneath the second UAS at 2300ft AMSL, with an approximate CPA of 1030ft vertically and with 100–200m lateral separation. The UAS crew also repositioned to avoid conflict as regulation dictates; they should not be operating above crewed platforms. The [pilot of the Dauphin] later received a radio call advising of UAS activity and they exited the area without further incident.

An extensive Local Investigation was conducted by the [Dauphin] operator. The Dauphin crews conducted a sortie brief the evening prior (2nd July) where the appropriate booking in EGD203 was not made nor confirmed. In addition, this was not challenged on the morning of the occurrence. The crews did not have the appropriate approval to enter EGD203 and, therefore, were unaware of the UAS activity taking place. A Human Factors error (not following process) led to the crews entering an active Danger Area with concurrent activity taking place. Recommendations have been made to improve the process of Danger Area booking and activity notification which should mitigate future occurrence across the Defence estate.

Summary

An Airprox was reported when a Puma RPAS and a Dauphin flew into proximity in EGD203, Sennybridge Training Area, at approximately 0925 on Thursday 3rd July 2025. The Puma RPAS pilot was operating under BVLOS in VMC, not in receipt of a FIS. The Dauphin pilot was operating under VFR in VMC. It could not be determined if the pilot of the Dauphin had been in receipt of a FIS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, the Danger Area Operator involved, radar photographs/video recordings 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 considered the actions of the pilot of the Puma, and members noted that they had attended to the booking of their flight into EGD203 appropriately. It was noted that the pilot of the Puma had heard the sound of an approaching helicopter and members agreed that they had therefore gleaned generic situational awareness of the presence of the Dauphin (**CF3**), sufficient to have prompted a visual scan of the area. Members noted that, although the Puma pilot may not have been able to have assessed the exact relative positions of the Puma and Dauphin (as the Puma had been operated beyond their visual line of sight), it was agreed that they had subsequently sighted the Dauphin and had taken appropriate and effective avoiding action. Although the Dauphin had been approximately 1000ft below the level of the Puma at CPA, members appreciated that to have sighted the Dauphin as it transited through their operating area had caused concern (**CF5**).

Turning to the actions of the pilot of the Dauphin, members agreed that they had not complied with the procedure to have booked their flight into EGD203 (**CF1**). Additionally, it was agreed that, on the morning of the flight in question, the status of their booking had not been checked, and the omission had not been realised, during their pre-flight preparations (**CF2**). Consequently, members agreed that the pilot of the Dauphin had not had situational awareness of the presence of the Puma, nor indeed the Wraith (**CF3**). It was further agreed that the pilot of the Dauphin had not sighted either the Puma or Wraith at any point during the encounter (**CF4**). It was appreciated by members that they had vacated the relevant areas of EGD203 as soon as they had been notified of the RPAS activity by their operations team.

Focussing on the actions of the SENTA Range Operator, members agreed that they had not had situational awareness of the presence of the Dauphin until they had been contacted by the Puma operator. Members noted that the Range Operator had subsequently contacted the Dauphin operations team in order to relay a message to the Dauphin pilot. Some members noted that there had not been

the facility for direct communication between the pilots and the Range Operator and wondered whether direct Air/Ground communication may have enabled a more expeditious resolution to the situation.

Members concluded their discussion and agreed that, once the pilot of the Puma had been aware of the presence of the Dauphin, they had taken effective, positive action to have increased the separation. Members were satisfied that there had not been a risk of collision, however, it was agreed that there had been a reduction of safety margins. Members were heartened that recommendations have been made by the operating authority to improve the process of Danger Area booking and the notification of activities. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

2025131				
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	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
• Situational Awareness of the Conflicting Aircraft and Action				
3	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
• See and Avoid				
4	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
5	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.

Safety Barrier Assessment²

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 **ineffective** because the pilot of the Dauphin had not complied with the procedure for the booking of their flight into EGD203.

Tactical Planning and Execution was assessed as **ineffective** because the pilot of the Dauphin had not booked their flight into EGD203, nor had they confirmed such a booking before entering EGD203.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the Dauphin had not had situational awareness of RPAS activity in EGD203.

² 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: 2025131		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 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	●	●					
Key:		<u>Full</u>	<u>Partial</u>	<u>None</u>	<u>Not Present/Not Assessable</u>	<u>Not Used</u>		
Provision	●	●	✘	○				
Application	●	●	✘	○				
Effectiveness	■	■	■	■	□			