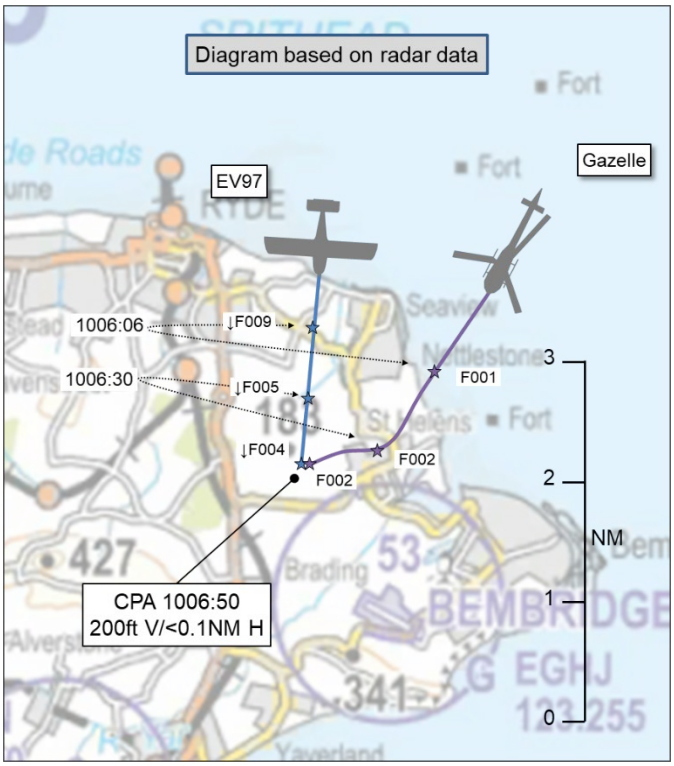
AIRPROX REPORT No 2022074

Date: 08 May 2022 Time: 1006Z Position: 5041N 00107W Location: Bembridge

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	EV97	Gazelle
Operator	Civ FW	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AGCS	Listening Out
Provider	Bembridge	Sandown
Altitude/FL	FL004	FL002
Transponder	A, C, S	A, C, S
Reported		
Colours	Silver, Blue	'Army'
Lighting	Nil	Landing, Taxi, Anti-cols, Strobes, Beacon
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1000ft	600ft
Altimeter	QFE	QNH
Heading	210°	200°
Speed	70kt	120kt
ACAS/TAS	SkyEcho	SkyEcho
Alert	Information	Unknown
Separation at CPA		
Reported	400ft V/0m H	300ft V/200m H
Recorded	200ft V/<0.1NM H	



THE EV97 PILOT reports that they called Bembridge Radio while overhead Portsmouth at 3000ft to request the airfield information. The AGO responded: RW12 left hand, no other traffic in the circuit. They joined the circuit on base-leg at 1000ft AAL and made the call '[C/S] left base RW12'. Their SkyDemon, [coupled to their EC device], then flashed a traffic avoidance warning of a helicopter and they spotted it in their 8 o'clock low, inside the Bembridge circuit, converging with their base-leg descent. They took avoiding action by climbing back to 1000ft AAL on base-leg until it passed beneath them. If they had carried on their base-leg descent without the traffic alert or sighting, there could have been a collision at around 300ft AAL. They reported the Gazelle to Bembridge Radio before turning final on RW12 and landing safely. The Bembridge Air/Ground crew witnessed the Gazelle 'incursion' and contacted Sandown airfield, who confirmed it had landed there and passed on the aircraft's registration.

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

THE GAZELLE PILOT reports that they flew the base-leg of the Bembridge circuit at 600ft. They saw the other aircraft and safely passed under it with a very safe separation.

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

THE BEMBRIDGE AGO reports that at around 1006Z (Bembridge does not document circuit calls) the [EV97 pilot] reported base. While the EV97 was on base-leg, and about to turn final, the pilot reported that a helicopter had just flown underneath them. Upon looking in their direction, the AGO saw a helicopter flying lower than the top of the village of Brading, and flying in a north/south direction. The helicopter was very low. At this point a colleague in the control room checked the office computer, which was running Flight Radar 24 and the NATS Airspace Explorer apps, from which they found the aircraft type and registration. They looked up the callsign on G-INFO to confirm the type as a Gazelle. Their

colleague also confirmed the reported height to be 200ft QNH (they believed). After [EV97 C/S] had landed they rang Sandown Airport to establish if the helicopter had landed there. They spoke to the owner/operator at Sandown and they asked the AGO to hold whilst they asked an aircraft to "follow the helicopter on final". They then informed the Sandown operator about the incident and to confirm the aircraft type and the registration. They said they would inform the pilot. At Bembridge the pilot of [EV97 C/S] came into the control cabin. They were a bit shaken and said they wanted to file an Airprox report, and the AGO told them how to report it.

THE BEMBRIDGE A/G ASSISTANT reports they were in the control room acting as an assistant, they had NATS Airspace Explorer (NATSAE) running on an iPad. During the morning they had noticed several aircraft passing to the west of Bembridge airfield in an approximately southwesterly direction. This is quite usual for aircraft routing to Sandown. A little after 1000 they noted both [EV97 C/S] and a helicopter [Gazelle C/S] showing in the general area of base-leg for Bembridge RW12. [Gazelle C/S] was showing a steady height of 200ft on NATSAE and was not in radio communication with Bembridge. [EV97 C/S] was in radio contact with Bembridge and called base-leg. With the iPad screen resolution in use, the relative positions of both aircraft as showing on NATSAE was not sufficient to cause concern about the two aircraft being in close proximity. They did not accurately recall the exact sequence of events but [EV97 C/S] called turning finals and advised that a helicopter had conflicted with their continuing descent causing them to have to climb. The EV97 landed normally at Bembridge without further issue at 1010. They continued to monitor [Gazelle C/S] and NATSAE ceased updating when the aircraft was nearing Sandown Airport. The AGO phoned Air Traffic at Sandown and was advised that [Gazelle C/S] had just landed. When the EV97 pilot came into the Bembridge Control cabin, they told them what they had observed.

AN OFF-DUTY AGO reports that they were in the Air Ground Radio room at Bembridge Airport when they overheard an aircraft [EV97 C/S] which had been in the circuit, call final for RW12. Shortly after the pilot called to say they had a rotary on a converging course and were climbing to avoid it. They looked at the computer screen [which displays aircraft EC data] and noticed a Gazelle crossing from north to south overlaying at approximately 90° to the Eurostar. The indicated height of the Gazelle was 200ft, they did not see the height of the Eurostar as they were noting the registration of the Gazelle and again checked to confirm that the height was 200ft. At no time were they aware of the Gazelle pilot calling Bembridge on the radio for airfield or Traffic Information. They later found that the Gazelle had landed at Sandown Airport.

THE SANDOWN AGO reports that Sandown only operates an AGCS and has no ATZ. They provided Sandown airfield information to the Gazelle pilot. They subsequently received a telephone call from Bembridge Airport informing them of a possible incident and so they offered to chat to the pilot. They spoke to the pilot and informed them about the call. The pilot told them that they did not believe they had done anything wrong and did not believe they had put anyone in danger. The AGO noted that they had no visibility of Bembridge Airport from the Tower at Sandown and so unfortunately could not provide any further information.

Factual Background

The weather at Southampton was recorded as follows:

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METAR EGHI 080950Z 04003KT 360V120 9999 FEW024 16/09 Q1029=
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Analysis and Investigation

UKAB Secretariat

Analysis of the NATS radar replay was undertaken. Both aircraft could be seen on the radar, both squawking 7000. The EV97 was indicating FL021, whilst the Gazelle remained at low-level. Note: the radar indicated altitudes for both aircraft are in flight level. At Figure 1, the two aircraft had closed to a range of 2.6NM. The EV97 then commenced a descent to join the circuit at Bembridge. At Figure 2, the EV97 was indicating FL007 and appeared to be on a base-leg, whilst the Gazelle had

dropped from radar coverage. The Gazelle reappeared on radar indicating FL002 and the two aircraft continued to close (Figure 3). Radar CPA was at 1006:50.

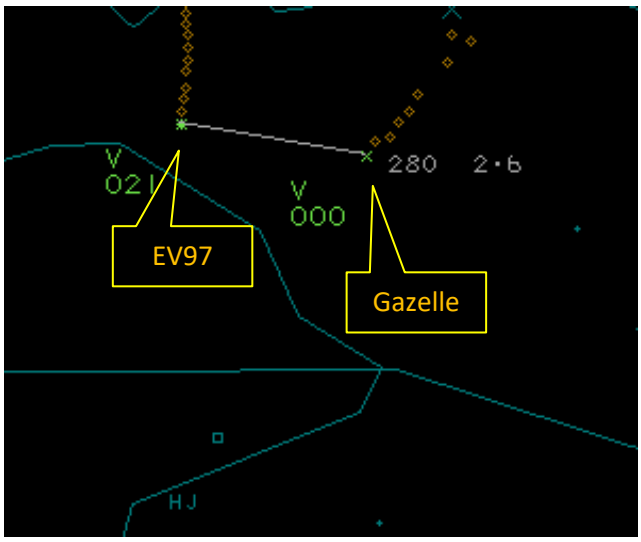


Figure 1 - 1004:51

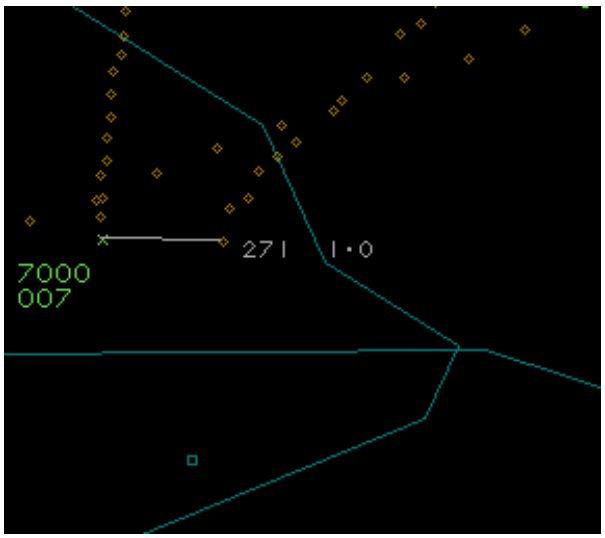


Figure 2 - 1006:16

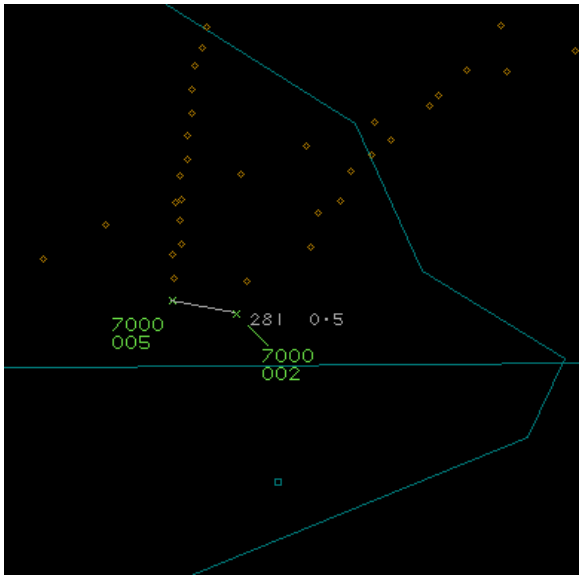


Figure 3 - 1006:37

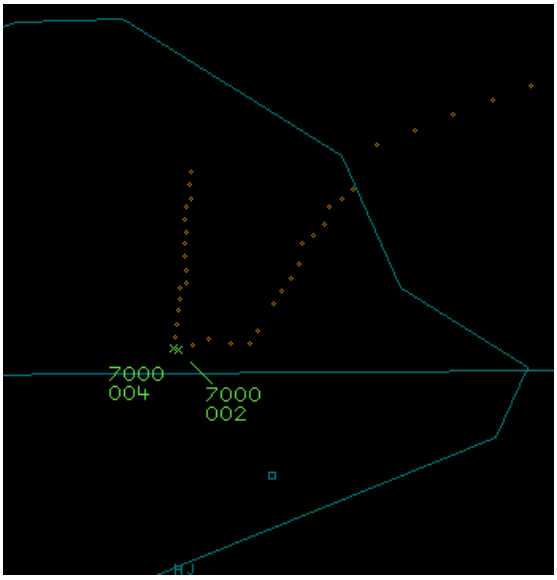


Figure 4 -1006:50 CPA

The EV97 and Gazelle 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] 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.[2]

Summary

An Airprox was reported when an EV97 and a Gazelle flew into proximity at Bembridge at 1006Z on Sunday 8th May 2022. Both pilots were operating under VFR in VMC, the EV97 pilot in receipt of an AGCS from Bembridge and the Gazelle pilot was in contact with the Sandown AGO.

[1] (UK) SERA.3205 Proximity.
[2] (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, and reports from the AGOs involved. 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 discussed the actions of the EV97 pilot. They had joined the visual circuit at Bembridge and had been descending on base-leg when they received an alert from their CWS (**CF5**). This alert cued the pilot to initiate a climb and look for the helicopter. They subsequently became visual with it, and watched as it passed beneath them. Members commended the pilot for reporting the incident on the frequency, which then enabled the AGOs to immediately search for further details on the Gazelle.

Turning to the Gazelle pilot, they reported that they had been visual with the EV97 and had been content with the separation between the two aircraft. Members noted that the Gazelle pilot acknowledged that they routed through the Bembridge base-leg of the circuit. Given that the pilot clearly knew that Bembridge was there, they wondered why the pilot had not either planned to give the airfield a wider berth (**CF4**), or called on the Bembridge frequency to inform the AGO, and any circuit traffic, of their intended routing (**CF1**). Once visual with the EV97, members were unsure why the Gazelle pilot had not manoeuvred to provide more separation. They thought that it should have been obvious to the Gazelle pilot that the EV97 had been positioning on a base-leg and descending into Bembridge. They thought that the Gazelle pilot would have been better served avoiding the EV97 by a greater margin, rather than flying beneath a descending aircraft without knowing the other pilot's intentions (**CF2**). Members commented that this event underlined the value of a defensive approach to flying; the Gazelle pilot could have made a small deviation to track at range, thereby avoiding a potential confliction. In choosing to fly beneath the EV97, members agreed that the Gazelle pilot had not conformed with the pattern of traffic at Bembridge (**CF3**) and had flown close enough to the EV97 to cause the other pilot concern (**CF6**).

The Board briefly looked at the actions of the AGO. They had not been aware of the Gazelle in the vicinity of the airfield and so could not have provided any Traffic Information to the EV97 pilot. Once told about the Gazelle, the staff in the control room had swung into action, identified the other aircraft, and ensured a message was passed to the pilot on landing, and the Board commended them for their actions.

In determining the risk, members considered the reports from both pilots, together with the NATS radar replay. They agreed that, because the Gazelle pilot had been visual throughout and the EV97 pilot had taken avoiding action, there had been no risk of collision. However, they thought that the routing of the Gazelle so close to the Bembridge visual circuit, together with the final separation between the two aircraft, with the Gazelle flying beneath the descending EV97, meant that safety had been degraded; Risk Category C.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2022074			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Flight Elements			
	• Tactical Planning and Execution			
1	Human Factors	• Communications by Flight Crew with ANS	An event related to the communications between the flight crew and the air navigation service.	Pilot did not request appropriate ATS service or communicate with appropriate provider
2	Human Factors	• Insufficient Decision/Plan	Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation	Inadequate plan adaption

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
4	Human Factors	• Pre-flight briefing and flight preparation	An event involving incorrect, poor or insufficient pre-flight briefing	
	• Electronic Warning System Operation and Compliance			
5	Contextual	• Other warning system operation	An event involving a genuine warning from an airborne system other than TCAS.	
	• See and Avoid			
6	Human Factors	• Lack of Individual Risk Perception	Events involving flight crew not fully appreciating the risk of a particular course of action	Pilot flew close enough to cause concern

Degree of Risk: C.

Safety Barrier Assessment[3]

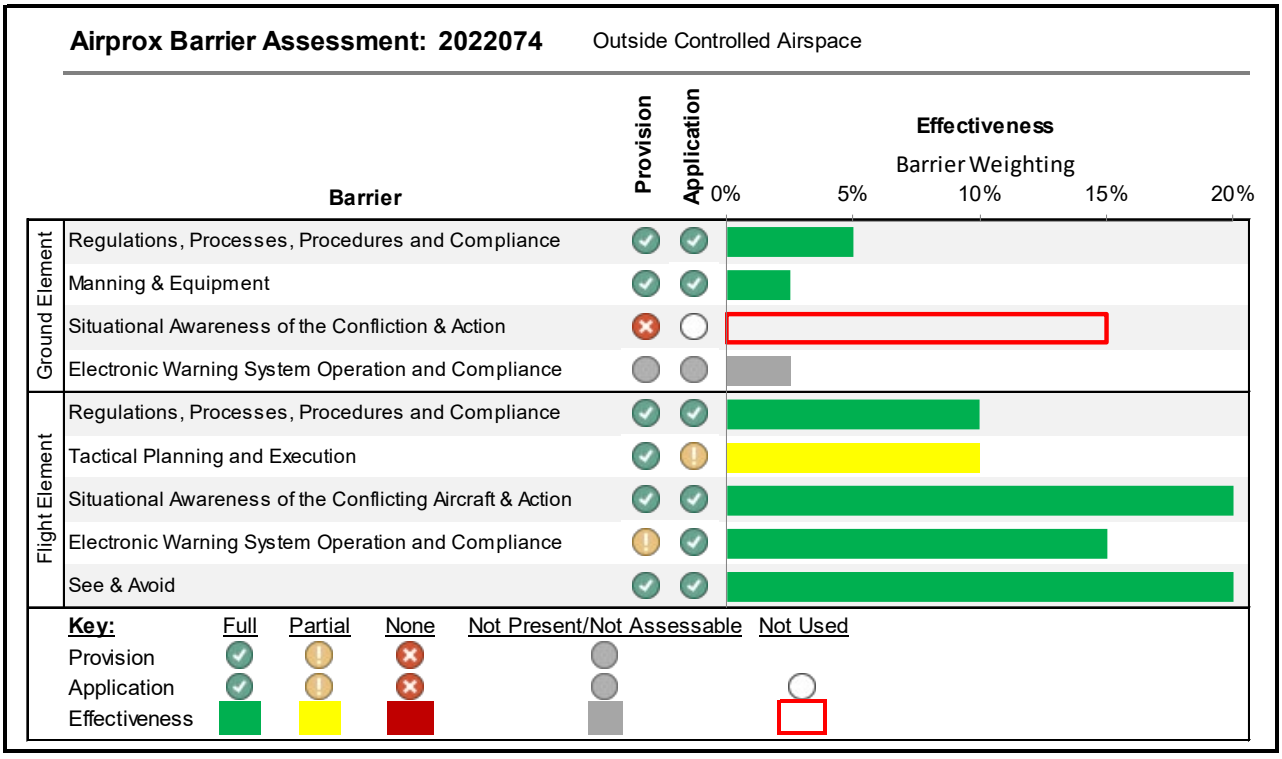
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

Ground Elements:

Situational Awareness of the Confliction and Action were assessed as **not used** because the AGO was not required to sequence the aircraft.

Flight Elements:

Tactical Planning and Execution was assessed as **ineffective** because the Gazelle pilot had not planned to avoid Bembridge by a greater margin and had not avoided the pattern of traffic formed by the EV97.



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