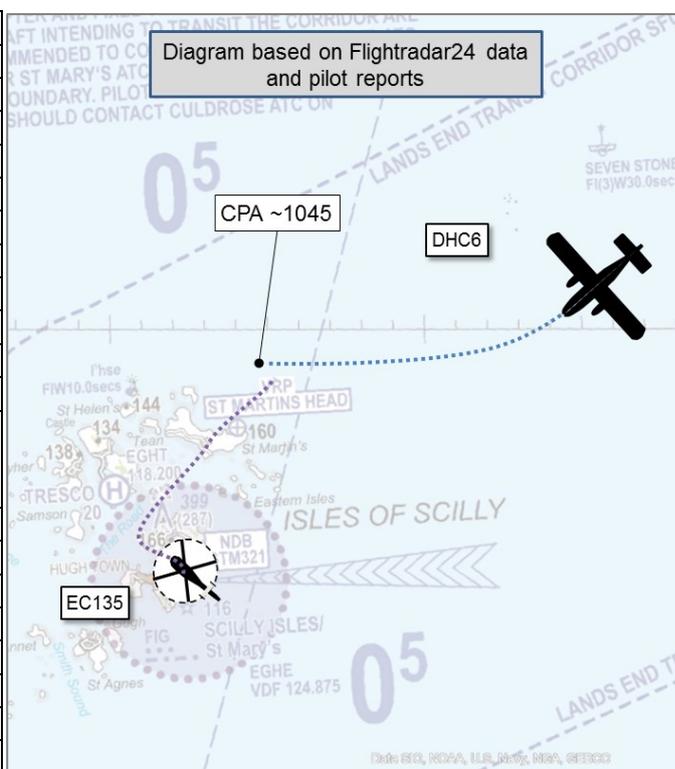


**AIRPROX REPORT No 2019178**

Date: 03 Jul 2019 Time: ~1045Z Position: 4954N 00617W Location: 5nm NE St Mary's

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	DHC6	EC135
Operator	Civ FW	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	Basic	Basic
Provider	Scilly	Scilly
Altitude/FL	NK	NK
Transponder	A, C, S	NK
Reported		
Colours	White, Blue	White
Lighting	Strobe, Nav, Beacon, Landing, Taxi	Anti-Col, HISL, Positioning
Conditions	VMC	VMC
Visibility	>10km	10km
Altitude/FL	2000ft	Not reported
Altimeter	NK (1026hPa)	Not reported
Heading	250°	Not reported
Speed	140kt	Not reported
ACAS/TAS	TAS	TCAS I
Alert	Information	None
Separation		
Reported	0ft V/0.5nm H	Not seen
Recorded	NK	



**THE DHC6 PILOT** reports that he was en-route to his destination at 2000ft with same-direction traffic at 1500ft, about 2nm behind them when he passed the 25DME point. It was busy with traffic inbound and outbound. He was positioning toward left-downwind for RW09. They copied a departing helicopter but, in the radio chatter, missed him climbing to 2000ft. Also, his TAS screen was too cluttered to make the helicopter out. ATC advised of an aircraft going-around from RW32 and advised they turn right to 'Round Island'. Just after he turned away to the NW (due to the go-around traffic in the circuit and not the EC135), he received a TAS warning of "Traffic, same level, less than 1 mile". In the turn, they saw the opposite direction EC135, at about 0.5nm, as it passed down their left-hand side very close. Had they not made the turn he had no doubt at all that the risk of collision was severe. Both crew members were shaken and shocked at ATC allowing a departure in the opposite direction at the same height within the ATZ [he opined].

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

**THE EC135 PILOT** reports that he was unaware of the Airprox. He received no warning from his TCAS and had no visual proximity of the other aircraft. He was speaking to Scilly Tower and was aware of the other traffic but there was no mention of being close to the other aircraft or any potential for avoiding action.

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

**THE SCILLY CONTROLLER** reports that it was a very busy period with scheduled and GA traffic. The surface wind was such that runways 32 and 09 were in use, which is an awkward combination. It was CAVOK. The EC135 was parked north of the RW14 threshold and requested start and departure RW09,

this required a backtrack of RW32 to enter RW09, they were instructed to hold position due to a PA32 joining right-base for RW32, this aircraft initially reported 10 miles to run and was spotted almost on right-base much earlier than expected. A BN2, altitude 1500ft, reported 'C', followed closely by the DHC6, altitude 2000ft, both aircraft expected RW09 which is typically a left-hand downwind join. The EC135 again requested departure and was told to hold. The EC135 pilot complained that they would have to pull back to idle to conserve fuel and that they would be happy to depart from their present position in a RW32 direction to route to the north. A PA28 was cleared to land RW09. The EC135 was cleared to depart RW32, from the far threshold, climbing to altitude 1000ft right-hand turn out because a C152 was joining from the SW and the EC135 pilot had requested to head north. The inbound DHC6 and BN2 (the DHC6 had overhauled the BN2) were told 'opposite direction traffic departing RW32 is an EC135 helicopter climbing to altitude 1000ft'. The BN2 pilot acknowledged, the DHC6 pilot did not. The BN2 pilot reported 19DME LND, the DHC6 reported 20DME LND after prompting. The DHC6 pilot then reported 25DME LND. Halfway through giving the DHC6 pilot a joining clearance, a C152 went around from RW32 and was instructed to turn left for RW09. The DHC6 and BN2 pilots were instructed to route for, and report at, Round Island. The EC135 reported climbing to altitude 3000ft, so he asked the DHC6 and BN2 pilots if they had copied the previously mentioned helicopter climbing, both acknowledged. He told the EC135 pilot that the opposite direction traffic is a DHC6 at altitude 2000ft followed by a BN2 at altitude 1500, the EC135 pilot acknowledged. The GA aircraft [C152] repositioned and landed RW09, followed by the DHC6 and the BN2. At no point did either of the inbound aircraft report visual with the helicopter or vice versa. He was unaware of the incident until the Airprox report was filed.

## Factual Background

The weather at Scilly Isles/St Mary's was recorded as follows:

METAR EGHE 031050Z 04016KT CAVOK 17/12 Q1026

## Analysis and Investigation

### CAA ATSI

The DHC6 was a VFR scheduled flight, inbound to St Mary's from Newquay Airport, receiving a Basic Service from St Mary's ATC. The EC135 was a VFR flight, outbound from St Mary's to Lands End Airport, also receiving a Basic Service from St Mary's ATC.

St Mary's ATC operate in a combined Aerodrome and Approach (non-radar) configuration. ATSI had access to reports from the pilots of the DHC6 and the EC135, and St Mary's ATC. St Mary's R/T recordings were reviewed and Newquay Manager ATS very kindly provided a radar recording for use in the investigation. Unfortunately, the radar recording did not display both aircraft at the same time at any point and, as a result, CPA could not be determined. St Mary's R/T was constant throughout the period of the review, with only a few gaps of a few seconds. Screenshots in the report are taken from the Newquay radar.

RW09 and RW32 were both in use. RW09 (523m) was the runway most into wind and the preferred RW for the commercial pilots. RW32 (695m) is the longest runway and the preferred RW for GA pilots. A copy of the Aerodrome layout from the UK AIP is available right. The traffic situation was complex in nature, with inbounds and outbounds, aircraft routeing round the islands against the flow of traffic, and aircraft going around. In the interests of brevity, only aircraft having an impact on the Airprox event are included in this report.

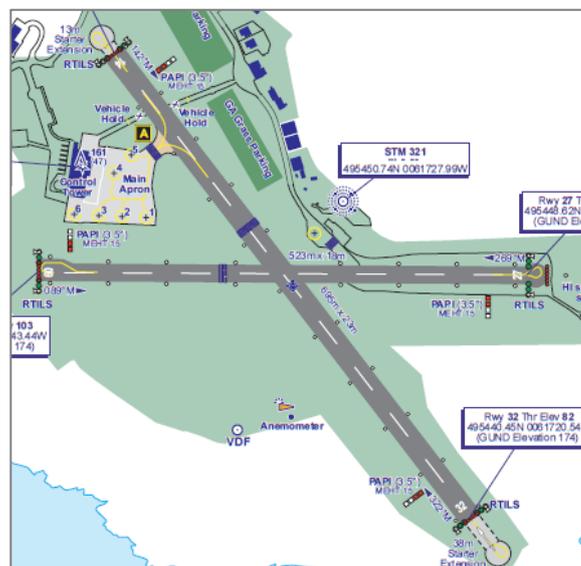


Figure 1: Aerodrome Layout

The Lands End St Mary's Transit corridor is based on DME ranges from the Lands End VOR. A diagram of the corridor from the UK AIP is available in Figure 6. There are three mandatory reporting points:

- Point Charlie - 10DME (18 miles to run to St Mary's)
- Mid-Point - 14DME (14 miles to run to St Mary's)
- 25DME - (3 miles to run to St Mary's)

At 1031.30, the EC135 pilot called for engine start and was instructed to standby. At 1032.30, the EC135 pilot called again for engine start and the controller enquired as to whether their passengers had called in at the tower to pay their landing and parking charges. The pilot responded that their company ops had already paid. The controller asked the pilot to standby. The controller turned their attention to an unrelated inbound aircraft and then asked the EC135 pilot to report their POB and destination. The pilot responded one POB and destination Lands End. The controller issued engine start clearance and advised RW09 in use with RW32 also available, surface wind 040 degrees 16kts, QNH1026. The pilot readback "*copied the wind, QNH1026*". The controller then turned their attention to other inbound aircraft.

At 10:36.50, the EC135 pilot called ready for taxi outbound for RW09 and was instructed to hold position. Another unrelated aircraft called abeam St Martins at 2000ft and requested an anticlockwise route around the islands, this was approved not below altitude 2000ft and the pilot was instructed to report at St Agnes. Note: this routeing would take the aircraft east to west through the RW32 climb out lane.

Between 10:37.00 and 10:39.00, the R/T was continuous, with the controller dealing with calls from landing aircraft, inbound aircraft, aircraft going around and aircraft holding. The runways were in constant use and there were no opportunities to enable the EC135 pilot to depart safely.

At 10:39.00, the EC135 pilot called "*still holding*". The controller responded "*roger, I'll get you out as soon as I can*". A BN2 pilot reported final RW32 and was cleared to land. The aircraft in trail was instructed to report final RW32, No2 to the BN2. The pilot of an aircraft holding for RW09 reported orbit complete and was instructed to make one more left- hand orbit.

Between 10:39.00 and 10:43.30, the R/T was continuous again with the controller still dealing with taxiing, landing and holding aircraft.

At 10:43.30 the pilot of the aircraft routeing round the islands reported at St Agnes at 2200ft. Note: this meant that the aircraft had cleared the RW32 climb out lane to the west but was now approaching the left base area for RW09. The controller asked the pilot if they were visual with traffic on final RW09. The pilot confirmed that they were visual and were instructed to join behind the Cherokee RW09. The pilot requested an approach to RW32 for a go around to reposition to land RW09. The pilot was instructed to join, and report left base RW32, and the pilot advised that they might attempt a landing RW32 but that they were expecting a missed approach. The R/T was again continuous until 10:44.30.

At 10:44.30, the EC135 pilot advised that they would be happy to depart from their current location (on the grass abeam the RW14 threshold) out to the north. Before the controller could respond, an inbound BN2 pilot called at point Charlie (18nm to run) at 1500ft. A Basic Service was agreed, and the pilot was advised that it was for RW09, given the surface wind and the QNH1026. The controller then apologised to the EC135 pilot for the delay and advised that it was going to be another couple of minutes before they could depart. The pilot said, "*that's OK, we're going to have to go to ground idle due to fuel use*". The R/T was again continuous until 10:45.30.

At 10:45.30 the DHC6 pilot reported at point Charlie and advised that they were inbound for RW09 with QNH 1026, descending to altitude 2500ft and visual with a BN2 ahead of them. A Basic Service was agreed. The controller then asked the EC135 pilot if they were happy to depart RW32 from the RW14 threshold and the pilot responded that they were happy. The pilot was cleared to lift, air taxi

and line up RW32 and was advised that there was landing traffic on RW09. The pilot readback the instructions and advised that they had copied the landing traffic. The traffic positioning for RW32 to land RW09 reported left base RW32 and was instructed to report before turning final RW32.

At 10:46.40 (Figure 2), the EC135 pilot was cleared for take-off, “[EC135 c/s], RW32, climbing initially to Altitude 1000ft, with a right turn out, cleared for take-off, surface wind 040/16 knots”. The pilot readback “32 climbing to 1000ft initially before right-hand turn out, copied the wind c/s”.

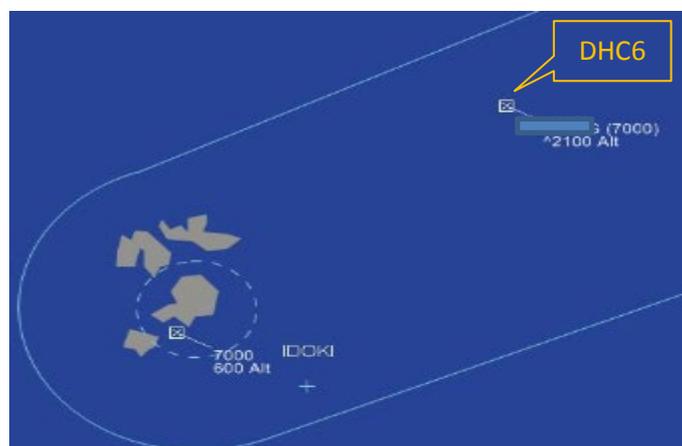


Figure 2 - 10:46.40

At 10:47.00, the controller passed traffic information to the BN2 and the DHC6 pilots, “[BN2 c/s] and [DHC6 c/s] opposite direction traffic just departed RW32 is an EC135 helicopter climbing to altitude 1000ft”. The BN2 pilot responded, “copied [BN2 c/s]”. The DHC6 pilot did not respond. The pilot of the traffic positioning for RW32 to land RW09 then reported that they were ready to turn final in 10sec. The controller instructed the pilot to continue onto final RW32 and then turned their attention to other aircraft.

At 10:48.00, the inbound BN2 pilot reported 19 DME (9nm to run) and advised that they were visual with the DHC6 that had just overhauled them. The controller instructed them to report 25DME (3nm to run). The controller asked the DHC6 pilot if they had copied the position of the BN2, and the DHC6 pilot advised that they were at 20 DME (8nm to run). The traffic positioning RW32 for landing RW09 reported final for a possible go around.

At 10:49.00 (Figure 3), the EC135 pilot reported “outbound in the climb 3000ft, QNH1026”. The controller passed traffic information, “opposite direction traffic is an Islander followed by a twin otter, at altitude 1500ft and 2000ft respectively”. The pilot responded that they had copied the traffic. The controller then addressed the BN2 and DHC6 pilots and asked, “[BN2 c/s] and [DHC6 c/s] did you copy the previously mentioned helicopter climbing?”. The DHC6 pilot responded with “roger” and the BN2 pilot responded with their callsign.



Figure 3 – 10:49.00 (DHC6 has faded from radar)

At 10:49.30 (Figure 4), the DHC6 and BN2 pilots were instructed to route initially toward Round Island and advised that there was traffic going-around from RW32. Both pilots acknowledged the instruction to route toward Round Island. Note: this would reduce the risk of the DHC6 and BN2 coming into conflict with the potential go-around aircraft from RW32 (that would subsequently be re-positioning for landing RW09) and would also route the DHC6 and BN2 further north of the EC135.



Figure 4 - 10:49.30 BN2 displayed, EC135 and DHC6 faded.  
DHC6 known to be ahead of the BN2

At 10:49.40, the pilot on final for RW32 reported on the go-around and requested to reposition for RW09. This was approved with a left turn to reposition. Taxi instructions were then issued to a departing BN2 pilot.

At 10:50.20 the EC135 pilot was instructed to report 10 miles to run to Lands End and a Basic Service was agreed.

At 10:52.40 (Figure 5), the BN2 pilot reported at Round Island and still visual with the DHC6. The controller acknowledged the call from the BN2 pilot and then asked the DHC6 pilot to report their position. The DHC6 replied that they were also at Round Island and ready for base. The DHC6 pilot was instructed to report final No2.

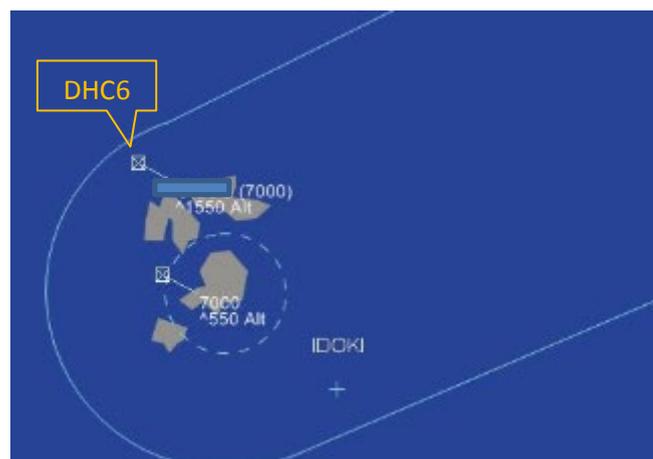


Figure 5 - 10:52.40

The time of CPA could not be determined, and the distance could not be measured. However, the DHC6 pilot reported sighting the EC135 on their left-hand side as they commenced the right turn toward Round Island. The instruction to turn toward Round Island was issued at 10:49.30. The pilot reported the CPA as 0.5nm with both aircraft believed to be at 2000ft.

The R/T loading was constant throughout the period of review by ATSI with only a few gaps of a few seconds. Some pilots did not wait for completion of other pilot/controller R/T exchanges before transmitting their positions and/or intentions.

The EC135 pilot did not state what altitude they required for their transit to Lands End prior to departure. The take-off clearance issued to the pilot included an instruction to climb initially to an altitude of 1000ft, with a right turn out. The readback from the pilot would indicate that the pilot interpreted this as an instruction to climb to altitude 1000ft before commencing the right turn and then continue the climb to their planned cruising altitude.

Traffic Information was first passed to the DHC6 pilot as the EC135 was getting airborne and this Traffic Information would indicate that the controller expected the EC135 to be at 1000ft. This Traffic Information was not acknowledged by the DHC6 pilot. There were then several calls from other aircraft with no gaps in the R/T to allow the lack of acknowledgement to be challenged by the controller. The DHC6 pilot stated in their report that they did not hear the level of the EC135 in the first set of Traffic Information.

Two minutes after getting airborne, the EC135 pilot advised the controller that they were in the climb to altitude 3000ft. In response to this call the controller passed Traffic Information to the EC135 pilot on the inbound DHC6 and the BN2 aircraft. The pilot responded that they had copied the traffic. The controller then passed reciprocal traffic information to the DHC6 pilot and advised that the EC135 was climbing to altitude 3000ft. The DHC6 pilot acknowledged the Traffic Information with "roger".

The Airprox occurred in Class G Airspace with both pilots in receipt of a Basic Service from St Mary's ATC. Under the terms of a Basic Service the controller is not required to monitor the flight and St Mary's ATC has no Surveillance equipment to enable monitoring to take place. There is no requirement for Traffic Information to be passed and pilots remain responsible for their own collision avoidance.

The controller passed Traffic Information to the pilot of the EC135 on the DHC6, and the pilot acknowledged that they had copied the traffic but did not at any point report visual with the aircraft.

The controller passed two sets of Traffic Information to the DHC6 pilot. The pilot acknowledged the second set but not the first. However, the pilot stated in their report that they did not hear the level of the helicopter in the first set, indicating that they were aware of the presence of the EC135 at this point but were not aware of the initial level reported.

### **Scilly Isles/St Mary's ATC Unit Investigation**

Due to the nature of the operation at St. Mary's Airport, ATC provide an enhanced Basic Service to ensure sufficient situational awareness for all Public Transport and other aircraft operators operating within the Lands End Transit Corridor.

Causal Factors:

1. No readback was obtained for pertinent traffic information.
2. Orderly flow of air traffic was not assured.
3. Integration between aircraft leaving and joining the circuit was not assured.

Taking the Causal Factors each in turn:

1. In this instance the ATCO allowed themselves to be pressurised by the EC135 requesting departure following a period of delay after start-up due to other multiple arrivals. Once cleared for departure, the clearance as given and read back were both somewhat ambiguous as it appears the EC135 pilot is climbing to 1000ft before initiating a right-hand turn-out. Traffic Information to the BN2 and DHC6 was given on the departing EC135 at a position between

CHARLIE (10 DME W LND DVOR) & MID-POINT (17 DME W LND DVOR), however no acknowledgement was obtained from the DHC6.

2. The ATCO allowed themselves to be pressured into granting a departure clearance to the EC135 without passing Traffic Information on the inbound BN2 & DHC6 prior to issuing the Take-Off Clearance. Furthermore, facilitating the training flight for a crosswind approach which was expecting a missed approach compounded the situation, allowing the ATCO to become more distracted than was necessary.
3. After departure the EC135 reported “outbound climbing to 3000ft” upon which Traffic Information was passed on the BN2 & DHC6, their approximate positions now being 19 DME & 20 DME respectively. Traffic was updated on the EC135 and acknowledged by both the BN2 & DHC6.

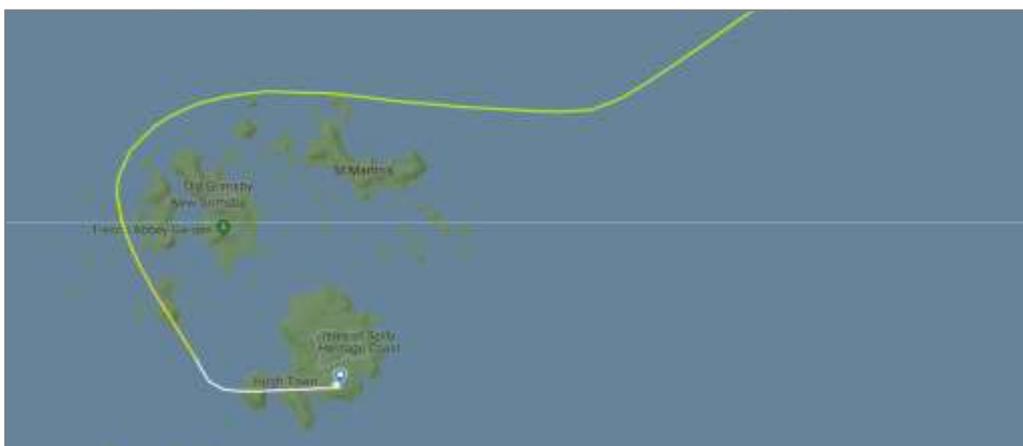


Figure 6: DHC6 Flight Track from Flightradar24

Whilst Flightradar24 data is unverified it shows the track of the DHC6 when they commenced the turn following the delaying action instruction after the Go-Around of the training flight on RW32, which is well outside of the ATZ. No data was available on the EC135 Helicopter.

### UKAB Secretariat

The DHC6 and EC135 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>1</sup>. If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right<sup>2</sup>.

The DHC6 fades from radar shortly after coasting out from Lands End. The EC135 does not appear on radar. It is not possible to positively determine the CPA between the DHC6 and the EC135 because the EC135 pilot does not report seeing the DHC6 and neither pilot reports a TAS/TCAS alert.

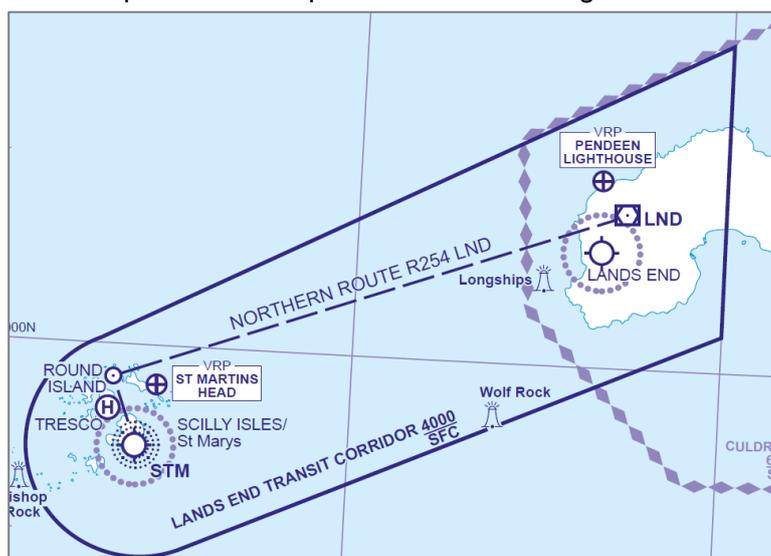


Figure 7: Scilly Isles/St Mary's Transit Corridor

<sup>1</sup> SERA.3205 Proximity.

<sup>2</sup> SERA.3210 Right-of-way (c)(1) Approaching head-on.

## Summary

An Airprox was reported when a DHC6 and an EC135 flew into proximity near St Mary's at about 1045hrs on Wednesday 3<sup>rd</sup> July 2019. Both pilots were operating under VFR in VMC and in receipt of a Basic Service from Scilly Isles/St Mary's.

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

Information available consisted of reports from both pilots, radar photographs/video recordings and reports from the air traffic controller 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 began by looking at the actions of the EC135 pilot. A civil helicopter member with further background information commented that a number of Human Factors had contributed to the Airprox. The EC135 pilot was operating close to his crew duty hours limit and there had been a miscommunication with his operating authority about changed procedures regarding available fuel. Both of these factors had conspired to mean that the pilot was under pressure to depart as soon as possible and only had sufficient fuel to reach his destination without deviation. As a result, he was preoccupied with his departure from St Mary's (**CF8**) and had not fully assimilated the inbound traffic that might affect his route (**CF3**). As a result, when the Scilly controller had requested the EC135 pilot climb to 1000ft, the EC135 pilot had not fully understood that the intention was to maintain this altitude and had misconstrued the call as allowing him to continue his climb after exiting the Scilly ATZ. This had resulted in him climbing to the same level as the DHC6 despite Traffic Information (**CF4**). Members noted that the EC135 pilot did not report a TCAS alert even though the DHC6 pilot had reported a TAS alert (**CF9**); members thought it likely that the TCAS would have been indicating the DHC6 and wondered whether this was also indicative of the EC135 pilot's preoccupation with his fuel state and transit time. Other members noted that the EC135 pilot reported not seeing the DHC6 (**CF10**) even though he had sufficient information and the weather was CAVOK (**CF7**); they wondered whether this was also perhaps due to his being engaged in associated in-cockpit calculations at the expense of a robust lookout.

Turning to the actions of the Scilly controller, members noted that they were operating with a very busy and evolving traffic situation with multiple runways in use and constant uninterrupted radio transmissions (**CF1**). The Board noted that the controller had passed initial Traffic Information to the DHC6 pilot on the departing EC135 but that this was not acknowledged, and the controller had had no opportunity to ask the DHC6 pilot if they had received the Traffic Information due to there being no gaps in transmissions to allow the controller to talk to the DHC6 pilot (**CF2**). Although the Scilly Islands ATC report was critical of the controller in this respect, controller members stressed the high-workload circumstances that the controller was operating within with 2 runways in use and multiple different-type traffic. The controller did pass reciprocal Traffic Information to the EC135 pilot at the time, which they acknowledged (**CF5**). Subsequently, when the EC135 pilot announced they were climbing to 3000ft as they departed, the controller passed Traffic Information to the EC135 pilot on the DHC6 and BN2, and reciprocal information to the DHC6 and BN2 pilots, all of whom acknowledged. The Board therefore considered that the controller had satisfied the requirement to pass appropriate Traffic Information to all those involved in a timely manner and had received appropriate readbacks that the latter had been received; that the information was not fully assimilated by the EC135 pilot was not the controller's fault. In this respect, members felt that the Scilly Isles ATC report was somewhat overly critical of the controller who was operating in a high-workload situation and, in providing only a Basic Service without radar, and should not be expected to ensure deconfliction outside the ATZ. That being said, controller members agreed that the departure clearance to the EC135 pilot stating "*[EC135 c/s], RW32, climbing initially to Altitude 1000ft, with a right turn out, cleared for take-off, surface wind 040/16 knots*" was somewhat ambiguous in that it could have been interpreted by the EC135 pilot as a clearance to initially climb to 1000ft and then turn right, cleared to climb afterwards, rather than the intention to stop the climb at 1000ft.

The Board then turned to the actions of the DHC6 pilot. He had received a TAS alert at 1nm, same level, and then reported that he saw the EC135 at about 0.5nm at it went past him. Although he was already in a right turn as suggested by the ATCO due to an aircraft going-around in the visual circuit, he reacted to seeing the EC135 by increasing this right turn to increase separation. Noting that he had been critical in his report of the controller allowing another aircraft to depart at the same altitude as his arrival, it was clear to the Board that the controller had provided both pilots with sufficient information about each other and that it was for the DHC6 pilot to ensure his own separation and sequencing whilst outside the ATZ. In this respect, the DHC6 pilot had either missed or did not assimilate the initial Traffic Information from the controller (**CF5**), and had seemingly missed the height that the EC135 was climbing to in the subsequent call; members felt that, given his concerns, the DHC6 pilot could have asked for more information about the EC135 (although arguably he probably had more information from his TAS than the controller did) albeit they acknowledged that the frequency was busy at the time (**CF6**).

Turning to the risk, members agreed that the EC135 pilot had not seen the DHC6 or assimilated any TCAS alert had there been one. In contrast, the DHC6 pilot received a TAS alert (albeit initially garbled on the display it seems but then more specific as they closed) and had seen the EC135 at about 0.5nm at CPA as they passed. Members noted that the turn the controller had given to the DHC6 pilot, albeit because of another aircraft, had fortuitously served to increase the separation between the aircraft. Although neither aircraft was visible on the radar replay at CPA, members agreed that although safety had been degraded it appeared that there had probably been no risk of collision as a result of the turn and so they assessed the risk as Category C.

## **PART C: ASSESSMENT OF CONTRIBUTORY FACTOR(S) AND RISK**

### Contributory Factor(s):

2019178			
CF	Factor	Description	Amplification
<b>Ground Elements</b>			
<b>• Situational Awareness and Action</b>			
1	Human Factors	• Distraction - Job Related	
2	Human Factors	• ATM Personnel Hear back	Incorrect readback not detected/corrected
<b>Flight Elements</b>			
<b>• Tactical Planning and Execution</b>			
3	Human Factors	• Insufficient Decision/Plan	Inadequate plan adaption
4	Human Factors	• Action Performed Incorrectly	Did not follow instructions
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>			
5	Human Factors	• Understanding/Comprehension	Pilot did not assimilate conflict information
6	Human Factors	• Lack of Communication	Pilot did not request additional information
7	Human Factors	• Lack of Action	Pilot flew close enough to cause concern despite Situational Awareness
8	Human Factors	• Distraction - Job Related	Pilot was engaged in other tasks
<b>• Electronic Warning System Operation and Compliance</b>			
9	Human Factors	• Interpretation of Automation or Flight Deck Information	CWS alert expected but none reported
<b>• See and Avoid</b>			
10	Human Factors	• Monitoring of Other Aircraft	Non-sighting or effectively a non-sighting by one or both pilots

Degree of Risk: C.

## Safety Barrier Assessment<sup>3</sup>

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

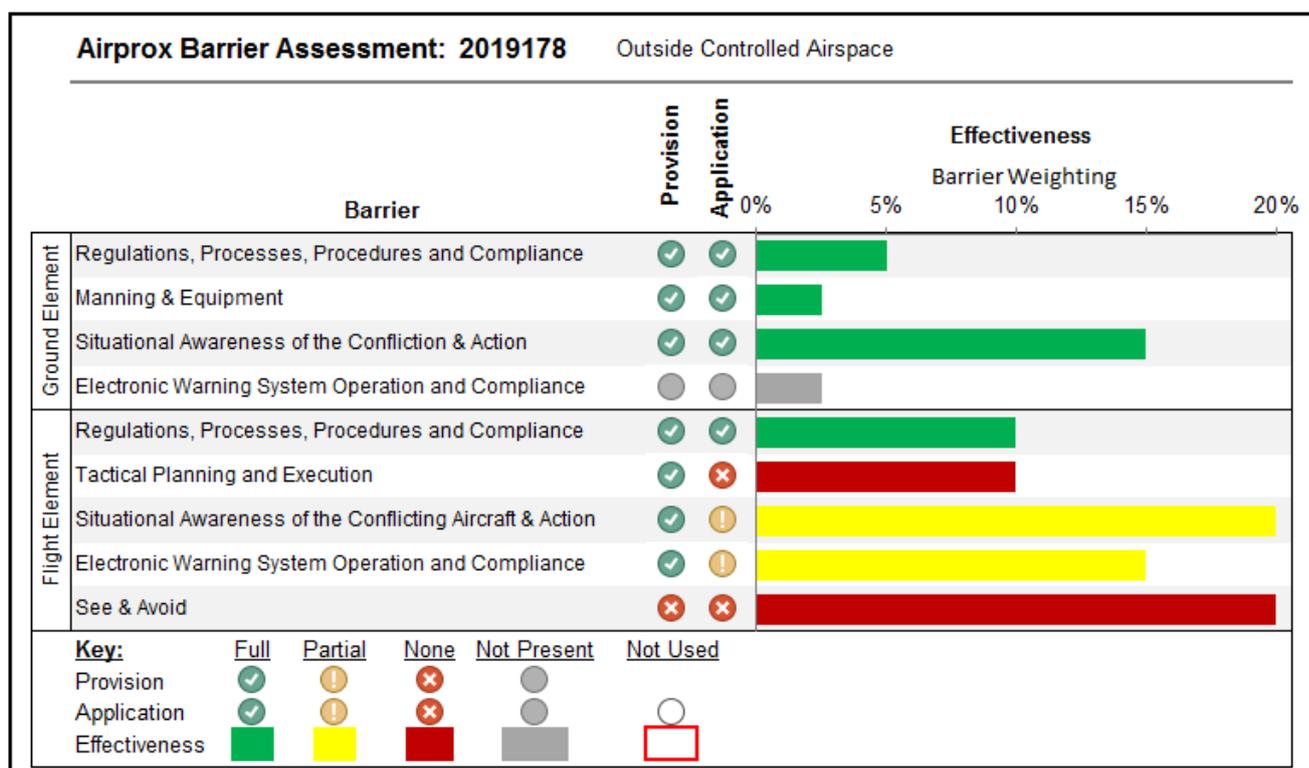
### Flight Elements:

**Tactical Planning and Execution** was assessed as **ineffective** because the EC135 pilot did not sufficiently adapt his plan to deconflict with the inbound DHC6 that he had received traffic information about.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **partially effective** because the DHC6 pilot did not fully assimilate the Traffic Information about the outbound EC135.

**Electronic Warning System Operation and Compliance** were assessed as **partially effective** because the EC135 pilot's TCAS did not appear to have alerted as expected.

**See and Avoid** were assessed as **ineffective** because the EC135 pilot did not see the opposite direction DHC6 and the DHC6 pilot only saw the EC135 at CPA.



<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).