

**AIRPROX REPORT No 2024175**

Date: 24 Jul 2024 Time: 1533Z Position: 5407N 00320W Location: 3NM W Walney

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	King Air	Bell 505
Operator	Civ Comm	Civ Helo
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	AFIS	Basic
Provider	Walney	Warton
Altitude/FL	600ft	600ft
Transponder	A, C, S+	A, C, S
<b>Reported</b>		
Colours	NK	Grey
Lighting	NK	Anti-col, Nav
Conditions	VMC	VMC
Visibility	NR	5-10km
Altitude/FL	NR	700ft
Altimeter	NK	QNH
Heading	NR	NK
Speed	NR	119kt
ACAS/TAS	TCAS II	Not fitted
Alert	Information	N/A
<b>Separation at CPA</b>		
Reported	NR	100ft V/500m H
Recorded	0ft V/0.3NM H	



**THE KING AIR PILOT** reports that they had an off blocks time of 1510 and delayed CTOT of 1600. The groundcrew informed them that their aircraft had been over-fuelled by 200lb, as a result of a transposed figure with another aircraft. The Captain requested a short local area flight to burn the excess fuel, allowing the existing schedule to depart ahead without delay and for their flight to meet its CTOT. This was approved by management. They tried to call the Tower to advise of the plan but could not get through (as they were dealing with the other departures). They instructed the FO to pass a message through flight booking to relay as they headed to the aircraft. After start and taxi to holding point Alpha (RW23), Walney Info requested that they burn off the fuel on the ground to prevent the existing flight plan being activated by getting airborne. They advised this was not practical and requested an alternative Flight ID, which was given. Previously, the cloudbase had been given at 3500ft. As the FO had just returned from leave, they requested to fly the circuit, which the Captain deemed sensible. At this stage they were not advised of local area traffic or a reduction in cloudbase. Shortly after departing RW23, it became apparent that there was a scattered layer approximately 800-900ft ASL. After completing the climb sequence, the Captain changed the ALT SEL from 1000ft to 700ft and adjusted the heading in a north westerly direction. Their intended circuit would extend outside the ATZ to achieve the required fuel burn, remaining VMC below cloud with good visibility in Class G airspace. As the FO steadily banked the aircraft to the right with the Flight Director, the Captain noticed proximity traffic on TCAS in amber at the same level, heading in a reciprocal direction to the heading they were transitioning on to. They looked up and saw rotary traffic closing towards their position. They called out 'AIRCRAFT 2 o'clock!'. Due to their altitude, there was not a TA or RA. With little time to react, the FO looked out but continued the turn. The Captain called 'I HAVE CONTROL' (immediately relinquished by the FO) and made an evasive (non-standard) turn to the left. Turning right would have involved completing their original right turn first, which was significantly longer. The helicopter also turned left to avoid. They would estimate that the two aircraft came within 0.5 miles of each other. Once clear of conflict, Walney Information stated 'C/S, Warton have advised of rotary traffic to the west'. They responded stating their avoiding action, retained control of the aircraft and landed uneventfully.

On the ground, they contacted the Tower to ask if Warton had been informed of their flight and if the rotary traffic had contacted Walney Information due to their proximity to the ATZ. The answer was no to both. They were advised of a recent change to the MAFIS that prevented Warton being contacted for aircraft remaining in the circuit with a corresponding squawk. On debrief, it was their opinion that, whilst the actions of individuals involved were handled well, the process of not informing Warton of the flight contributed towards an easily preventable event. Had it been a scheduled flight, they would have been advised of the traffic or held on the ground until the traffic had passed.

**THE BELL 505 PILOT** reports that they were taking the helicopter to [destination] for maintenance; they left the private landing site where the weather was clear with good visibility. However, the weather became difficult with sporadic low cloud over the hills around Sanquhar, so they navigated their way around the cloud where it lifted around St Johns of Dalry and they could continue without any problems, but again the cloud became low around the hills at Workington and they made the decision that it would be safer to fly down the coast. At this point, Scottish Information transferred them to Warton Radar; however, they were too far away and too low to make contact with Warton, therefore they made a call to London Information to ask if Danger Area D406A was cold. They completed an orbit whilst waiting on the information confirming D406A was indeed cold. They then carried on heading south avoiding the Sellafeld restricted area at around 700ft, they made contact with Warton Radar around 5NM north of Walney. The pilot did not recall if they gave a squawk but noted that they usually do, the controller told the pilot that they had their details and confirmed the level, a few moments later Warton came on the radio saying an aircraft had taken off from Walney and was routing north at a similar level, and to keep a good lookout. At this point they made visual contact with the aircraft and it was indeed similar level directly ahead around 1500/2000m. It was on a slight north-westerly track so they descended and veered left (easterly), at the same time, the other pilot climbed and veered left (westerly). The Bell 505 pilot continued on their way and landed safely.

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

**THE WALNEY AFISO** reports that at around 1520 they were advised from Flight Operations that [the King Air] had been over-fuelled. They were then told that the crew had decided that they were going to conduct a circuit to burn off excess fuel. No contact was made with the Tower as the main telephone line was down, however, the crew had been given an updated number which was displayed on the whiteboard in the crew room on which they could have contacted the AFISO, in order to be given updated weather before they conducted their circuit.

Once at Holding Point A the AFISO asked the crew to contact them on the Ops frequency as they wanted to depart on a [redacted] callsign and, due to them having a slot of 1600, the AFISO advised them to change their callsign and a new callsign was agreed, mainly due to the fact that if they were to get airborne on [the original callsign] Scottish would have wondered why they had departed 30min early. They also spoke to the crew to say that a flight would now have to be put into LEON so they could upload the tech log and asked if Flight Operations could do this, which they did immediately.

As the procedure in the MAFIS states and as per the LOA with Warton, there is no requirement to contact Warton for an aircraft remaining in the visual circuit, the crew should set their transponder code to 7010, however, on this occasion [the AFISO] did not advise the crew to implement this to their transponder, although they noted that in future they will ensure that they do. They believed that no matter which transponder code the aircraft had set it would not have made a difference on this occasion as there was still no requirement to contact Warton and they would still have been aware it was a Walney aircraft because the callsign would have been displayed on their radar screen.

After [King Air C/S] had departed, they received a phone call from Warton to ask what their intentions were. The FISO advised Warton that they were remaining in the visual circuit to burn off excess fuel and the Warton controller advised that [the King Air C/S] was outside the ATZ and had a helicopter straight ahead 100ft above, which the AFISO passed to the crew in due course, and they reported that they had taken avoiding action.

**THE WARTON CONTROLLER** reports that they were the radar controller during a steady period with multiple LARS tracks and two departures from Walney. The two Walney departures were released from RW17 for their normal route to join CAS at WAL. Sometime later a helicopter, that had been pre-noted by Scottish Information, called but due to their range and altitude the pilot did not receive the reply. When 2-way contact was eventually made, the helicopter was to the northwest of Walney airfield, below 1000ft, stating they were outside the Walney ATZ; the pilot was provided with a Basic Service. As there were no pending departures from Walney, and the track of the helicopter indicated it would remain outside the Walney ATZ, the focus of attention returned to the Warton area where coordination with a fellow radar controller was required. On looking back towards Walney, a return was seen to depart from RW23. They asked other controllers in the ACR if they had taken details of a Walney departure to which the response was negative. After interrogating the SSR code of the Walney departure and obtaining the callsign (from Mode S), the aircraft was seen to turn right towards the helicopter at which point they passed Traffic Information whilst simultaneously calling Walney. The AFISO said that the aircraft was departing into the visual circuit, yet its track was taking it outside the ATZ and towards the southbound helicopter. They advised Walney to pass Traffic Information on the helicopter (whose relative position they passed) and continued to observe the two aircraft come within ½NM at the same level. In immediate follow up with Walney, it would seem that the King Air pilot queried the position of the helicopter inside the ATZ; the Walney AFISO was advised it was not and that the King Air was outside the ATZ.

## Factual Background

The weather at Warton was recorded as follows:

METAR EGNO 241420Z 25010KT 9999 -RA BKN035 17/13 Q1017=  
 METAR EGNO 241450Z 26009KT 9999 -RA FEW007 BKN034 16/15 Q1017=  
 METAR EGNO 241520Z 23006KT 190V260 9999 FEW008 BKN042 17/15 Q1016=

The AIP lists the dimensions of the Walney ATZ as follows:

### EGNL AD 2.17 AIR TRAFFIC SERVICES AIRSPACE

Designation and lateral limits	Vertical Limits	Airspace Class	ATS unit callsign/ language	Transition Altitude	Hours of applicability	Remarks
1	2	3	4	5	6	7
WALNEY ATZ A circle, 2 NM radius, centred at 540752N 0031548W on the mid-point of the longest runway	Upper limit: 2000 FT AGL Lower limit: SFC	G	WALNEY INFORMATION English	3000 FT		Caution: Requirements for access to EGR445 as detailed in the UK AIP remain extant.

## Analysis and Investigation

### Warton Occurrence Investigation

Summary of sequence of events:

1531 [Bell 505 C/S] called – advised only readability 3. ATCO passed Basic Service and QNH. The pilot reported abeam Walney.

1532 ATCO responded with “*I can see you there, squawk 3642 please*” and the pilot read back the instruction.

1532 Coordination took place between [Warton controller] and [another controller] regarding an unrelated track.

1532 Call initiated to Walney to advise on the position of the helicopter after the ATCO had spotted the conflicting aircraft airborne from Walney airfield. Traffic Information was passed to [Bell 505 C/S] who advised visual with the traffic.

1533 Walney call was answered. ATCO advised AFISO “*Just watch, there is traffic right ahead of him 100ft above*”.

1533:20 Aircraft passed abeam (approximately ¼ mile) both indicated 700ft – Walney aircraft to the west of [Bell 505 C/S].

15:38 Further call received from Walney AFISO stated that the Captain was querying whether or not [the Bell 505] was in the Walney ATZ.

The ATCO was working [Bell 505 C/S] under a Basic Service. It was noted that the ATCO was coordinating with an adjacent radar controller working UHF at the time of the departure of the aircraft from Walney. However, the ATCO was able to recognise the potential for the incident and was able to pass Traffic Information to both parties which may have prevented the event from being significantly worse. There was no action taken by the ATCO that contributed to the occurrence and the aircraft that was under their service was operating in Class G airspace.

The Airprox Board will determine the cause of the incident in this case. This investigation has only considered whether the actions of the ATCO have contributed to the incident in any way. It is clear from the review of the recordings and the subsequent statement provided by the ATCO that there was nothing else that could realistically have been done to prevent the incident and that the quick actions of the ATCO in recognising the potential for an incident, even though the traffic on their frequency was under a Basic Service, may have helped prevent the issue from being significantly worse. It is recommended that at the next review of the Walney/Warton Letter of Agreement, consideration is given to whether notification (to the Warton Radar ATCO) of the commencement of circuit activity at Walney would be a better way of ensuring that traffic adjacent to the Walney ATZ can be notified in a timely fashion to the Walney AFISO.

### **Walney Occurrence Investigation**

Detailed summary:

The [King Air] was carrying out a local circuit in order to burn off fuel prior to its scheduled flight.

Cloudbase had been reported as 3500ft.

Passing information to the Walney Tower about this additional flight was hindered by the internal phone system issues. An updated cloudbase report could have been given at this point. It was considerably reduced.

Two scheduled flights departed RW17 prior to [the King Air] departing RW23.

According to the MAFIS, no information about [the King Air] was required to be passed to Warton. Warton did not pass Traffic Information to Walney of the helicopter flying in the vicinity of the airfield.

The LOA specifies the use of transponder code 7010 for Walney circuit traffic. This was not used.

There was TCAS information displayed to the King Air crew but no RA or TA given.

At the closest point of contact (within 0.5NM and 100ft of each other) the King Air was flying north and the helicopter flying south. Both aircraft took avoiding action by turning left.

During this incident Warton contacted Walney AFISO to inform them of the potential Airprox. The AFISO immediately passed that information to the King Air pilot.

A number of recommendations have been made:

- Education of the vagaries of Class G airspace.

- Review of MAFIS - Procedures of phone calls to Warton.
- Review the LOA between Walney and Warton.
- Reporting of the deterioration of the weather.
- Technical knowledge of the limitations of the TCAS system to crews.
- Review of dedicated callsigns for training and appendages i.e. T for training, P for positioning.
- Use of designated transponder code for circuit work education.
- Review Risk Assessment 'Flight Operations within Class G Airspace'.
- Review Risk Assessment 'Airprox'.

**UKAB Secretariat**

An analysis of the NATS radar replay was undertaken. Both aircraft could be identified using Mode S data. At Figure 1 the King Air could be seen climbing out from Walney as the Bell 505 transited southbound indicating 800ft (radar QNH 1019hPa). The two aircraft continued to close until CPA at 1533:15, with both aircraft indicating 600ft and 0.3NM horizontal separation. At this point the King Air was 2.9NM from Walney (see Figure 4); Walney’s ATZ has a 2NM radius.

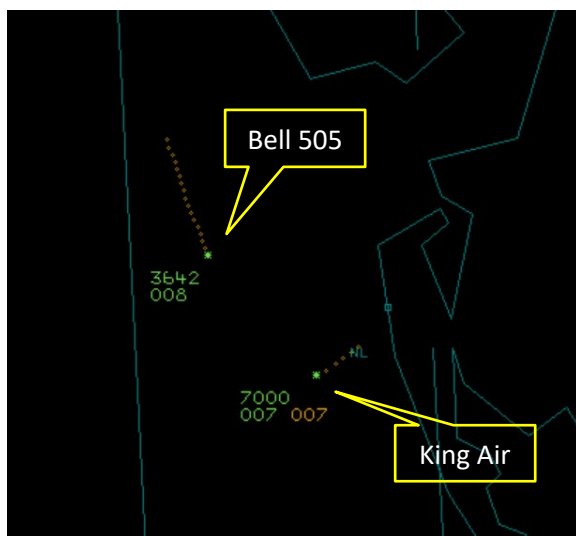


Figure 1 – 1532:39

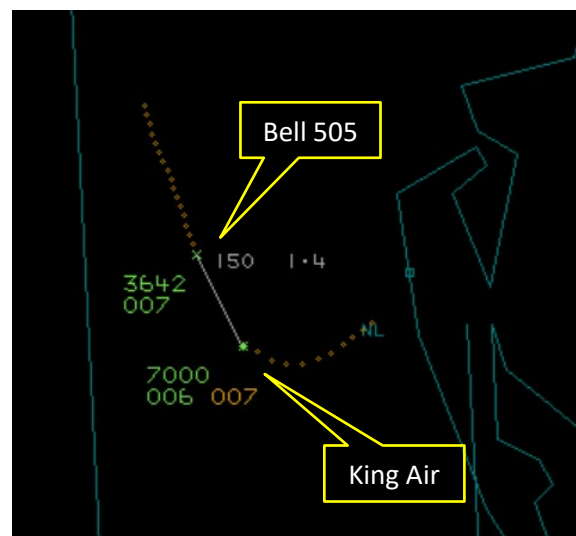


Figure 2 -1532:59

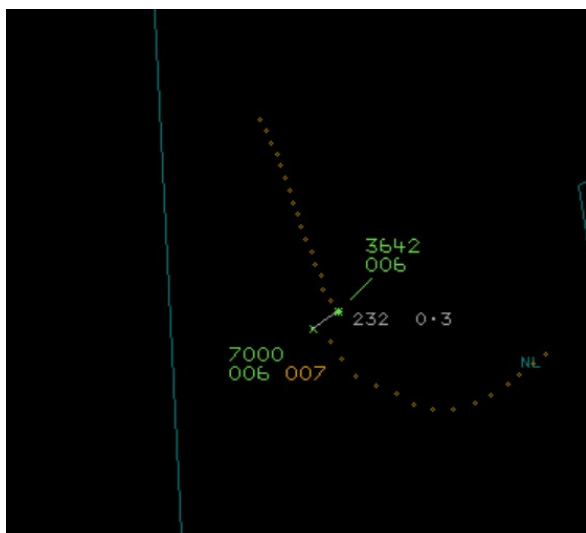


Figure 3 – CPA, 1533:15

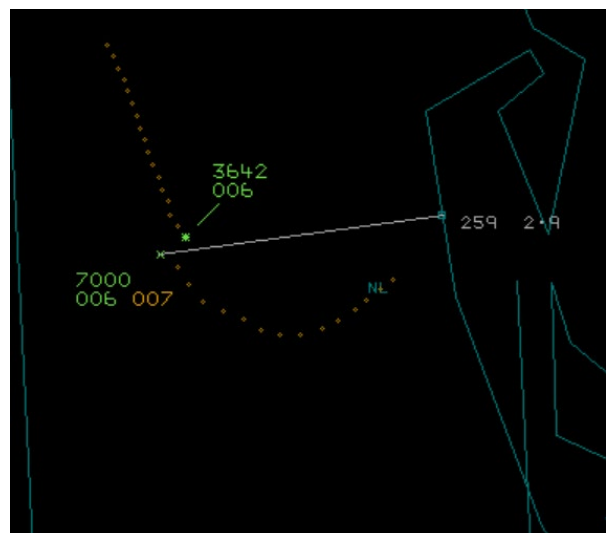


Figure 4 – Aircraft 2.9NM from Walney at CPA

The King Air and Bell 505 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> 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.<sup>3</sup>

## Summary

An Airprox was reported when a King Air and a Bell 505 flew into proximity 3NM west of Walney at 1533Z on Wednesday 24<sup>th</sup> July 2024. The King Air pilot was operating under VFR in VMC in receipt of an AFIS from Walney and the Bell 505 pilot was operating under VFR in VMC in receipt of a Basic Service from Warton.

## **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 controller and AFISO involved and reports from the appropriate operating authorities. 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 looked at the actions of the King Air pilot. They had been required to conduct some visual circuits in order to burn off fuel and had informed the Walney AFISO of their intentions. Once airborne, they had realised that the cloudbase had been lower than expected and therefore had needed to re-assess their height, increasing cockpit workload. Members wondered whether the pilot had been aware that their visual circuit had taken them out of the Walney ATZ and that had been why they had been so surprised to see another aircraft, noting that whilst many airfields do have visual circuits that extend beyond the ATZ, the protection provided does not extend outside the ATZ. Indeed, whilst the CAA would recommend that pilots should give ATZs a wide berth, often aircraft can be found avoiding them by routeing just outside. Noting the comments about the TCAS operation at low-level, members commented that although TCAS RAs are inhibited at low-level, TCAS TAs are not, and so it had been likely that the vectors and geometry of the two aircraft had been outside the envelope for alerting. Nevertheless, the TCAS had provided the pilot with some information about the Bell 505, however, the pilot had received no other situational awareness from ATC. Although the information from the TCAS could be considered to have been late, it had cued the King Air pilot to look for the other aircraft and, once visual, they had been able to take action to increase the separation.

Turning to the Bell 505 pilot, they had called Warton ATC for an ATS, although their altitude had meant that this had only been a Basic Service; despite this, they had received Traffic Information from the Warton controller. This information had enabled the pilot to become visual with the King Air and they had turned left to increase the separation.

Members then discussed the role of ATC. The Walney procedures meant that the AFISO had not been required to tell Warton ATC about traffic getting airborne to join the visual circuit. Likewise, the Warton controller had not needed to provide Walney with Traffic Information on an aircraft routeing outside their ATZ. Unfortunately, without a FID or any method of seeing aircraft in the surrounding area, this meant that the Walney AFISO had received no situational awareness about the helicopter and so could not have provided Traffic Information to the King Air pilot. As soon as the Warton controller had assimilated that the King Air had departed from Walney, they had passed Traffic Information to the Bell 505 pilot and had immediately rung the Walney AFISO; members agreed that there had been nothing more the Warton controller could have done in the circumstances.

When determining the risk of collision, members agreed that action taken by both pilots and the Warton controller ensured that the separation between the two aircraft had been such that no risk of collision had been present. Members were satisfied that normal safety margins had pertained and assigned Risk

---

<sup>1</sup> (UK) SERA.3205 Proximity.

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

<sup>3</sup> (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

Category E to this event. Nevertheless, they noted that the incident had highlighted some areas in which liaison could be improved between the two units, and noted that Walney had made a number of recommendations to review various documents and procedures. Members therefore thanked the King Air pilot for reporting the Airprox and thus enabling changes to prevent a similar occurrence in the future. The following contributory factors and outcomes were agreed upon:

**CF1.** The Walney AFISO had received no situational awareness that the Bell 505 had been in the vicinity.

**CF2.** The King Air pilot had received only late situational awareness of the presence of the Bell 505 from the TCAS.

**CF3.** The King Air pilot had been concerned by the proximity of the Bell 505.

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

### Contributory Factors:

2024175				
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
<b>• Situational Awareness and Action</b>				
1	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
<b>Flight Elements</b>				
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
2	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>• See and Avoid</b>				
3	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 Assessment<sup>4</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:**

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **partially effective** because the King Air pilot had received late situational awareness on the Bell 505.

<sup>4</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: 2024175</b>		Outside Controlled Airspace					
Barrier	Provision	Application	Effectiveness				
			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>							
	Full	Partial	None	Not Present/Not Assessable	Not Used		
Provision	✓	⚠	✗	○			
Application	✓	⚠	✗	○			
Effectiveness							