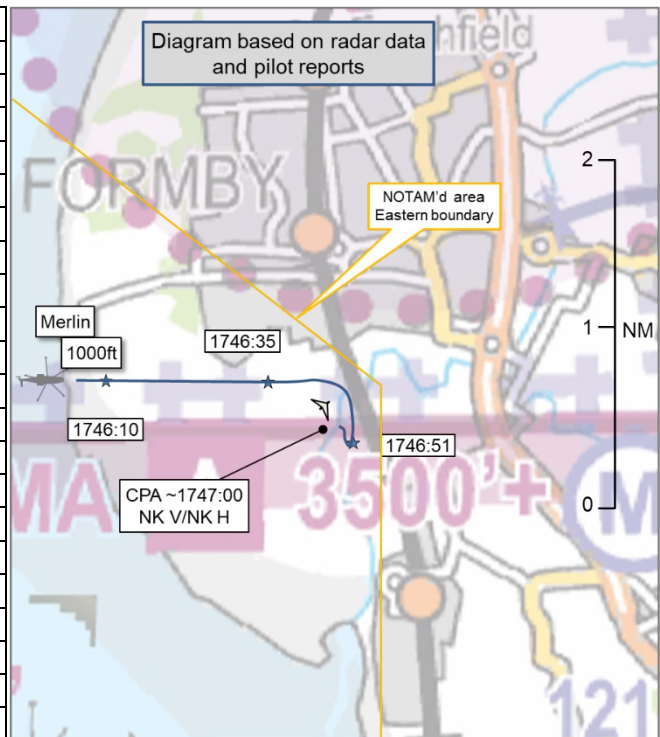


**AIRPROX REPORT No 2023151**

Date: 13 Jul 2023 Time: ~1747Z Position: 5332N 00304W Location: 3NM SSE Formby

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	Merlin	Microlight
Operator	HQ JHC	Unknown
Airspace	London FIR	NK
Class	G	G
Rules	VFR	VFR
Service	None	Unknown
Provider	Renegade Ops	N/A
Altitude/FL	NR	NK
Transponder	A, C, S	None
<b>Reported</b>		Not reported
Colours	NR	
Lighting	Nav, strobes	
Conditions	VMC	
Visibility	>10km	
Altitude/FL	1000ft	
Altimeter	NK	
Heading	NR	
Speed	120kt	
ACAS/TAS	TAS	
Alert	Information	
<b>Separation at CPA</b>		
Reported	50ft V/<50m H	NK
Recorded	NK V/NK H	



**THE MERLIN PILOT** reports that on return to [...] on completion of training with an RFA vessel, (formation callsign 4) had joined [...] via the southern gate [...] following on from formation callsign 5. During the join the crew had been looking to sight a TAS contact which turned out to be fixed-wing traffic transiting from south-to-north approximately 700ft above the aircraft. After joining through the southern gate the aircraft had then flown a downwind leg, positioning for the FARP. The ground track of the aircraft had been tight to the Western side of the A565 (a pre-agreed deconfliction with [the local] microlight site) to avoid overflight of a number of local avoids that had submitted a number of noise complaints during the exercise. At this time, the HP of the aircraft had spotted a microlight approximately 50ft below and 2 rotor spans in front of the aircraft, not transponding or displaying on TAS. As the aircraft had been in a gentle left-hand turn [they recall] on a base turn for the FARP the turn was continued which resulted in a divergence from the microlight.

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

**THE MICROLIGHT PILOT** could not be traced.

**Factual Background**

The weather at Warton was recorded as follows:

METAR EGNO 131750Z 26011KT 9999 FEW020 17/12 Q1014=

**Analysis and Investigation**

**UKAB Secretariat**

The area of operation had been NOTAM'd as follows:

H4170/23 NOTAMN

Q) EGTT/QWELW/IV/BO /W /000/020/5335N00322W013

A) EGTT B) 2307101100 C) 2307141100

E) EXER FARADAY FIELD. UP TO 8 MIL ROTARY WING ACFT WILL CONDUCT HIGH ENERGY MANOEUVRES WI AREA BOUNDED BY:

534400N 0033500W - 533200N 0030300W - 533000N 0030300W -

533000N 0034000W - 534400N 0033500W. ACFT MAY BE UNABLE TO COMPLY WITH RAC. 2023-07-0486/AS4.

F) SFC G) 2000FT AMSL

The Merlin and Microlight 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> 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>2</sup>

## Comments

### JAC

The potential hazard between aircraft and the methods of deconfliction were reiterated in the Supervision, Authorisation and Pre-Flight briefing. The crew flew the procedure which placed the aircraft in a clear area between the microlight site and other local avoids. Despite this, an Airprox occurred. The Unit concerned will not return to Altcar Camp until further notice with no planned activity for at least 18 months.

- The A565 had been agreed as a physical deconfliction line between respective approach / departures.
- A NOTAM was published for the exercise.
- The Duty Aviator called the Microlight site daily and published the activity.
- Measures were formally detailed in the Ex Directive and SOE.
- The hazard had been briefed at the Exercise In-Brief, Authorisation and Flight Out-Brief.
- Crews signed the 'Hot Poop' to confirm their understanding before flying on the exercise.

In short, crews were hyper-vigilant of microlight activity. They avoided the microlight, submitted an Airprox, and will not return to Altcar.

## Summary

An Airprox was reported when a Merlin and a Microlight flew into proximity 3NM south-southeast of Formby at around 1747Z on Thursday 13<sup>th</sup> July 2023. The Merlin pilot was operating under VFR in VMC and not in receipt of an Air Traffic Service. The Microlight pilot could not be traced.

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

Information available consisted of a report from the Merlin pilot 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.

Board members firstly considered the actions of the Merlin pilot. They noted that they had flown a path as pre-agreed both to avoid noise-sensitive areas and for deconfliction with traffic operating from the nearby microlight site. Members noted the clarity of the NOTAM issued for the Merlin operation, accepting that it had not been an 'exclusion zone' and had therefore not offered any particular level of protection to the Merlin operation. They also noted that the Merlin pilot had been operating without an air traffic service which, if utilised, could have aided in situational awareness of surrounding traffic,

<sup>1</sup> UK Reg (EU) SERA.3205 Proximity. MAA RA 2307 paragraphs 1 and 2.

<sup>2</sup> UK Reg (EU) SERA.3225 Operation on and in the Vicinity of an Aerodrome. MAA RA 2307 paragraph 17.

although in this case the Merlin TAS equipment, which had alerted the crew to earlier traffic, did not detect the microlight (CF4) and therefore a Basic Service might equally have been unable to identify the microlight. The Board praised the Merlin pilot for their decision making and judgement when having encountered the microlight, despite their lack of situational awareness of that aircraft (CF3) prior to it being sighted.

In considering the actions of the microlight pilot, members acknowledged the difficulty in tracing such aircraft. They expressed disappointment that the microlight pilot had operated within the NOTAM'd area (CF1), and without apparent conspicuity or radio-based support, concluding that the pilot had likely been unaware of the ongoing activity. With apparently no situational awareness of the Merlin recovering to its landing site, the Board agreed that the microlight pilot had neither conformed with nor avoided the pattern of traffic at that site (CF2).

When determining the risk of collision the Board agreed that, although safety had been degraded, there had not on this occasion been a risk of collision as the Merlin pilot, although concerned by the proximity of the Microlight (CF5), had had sufficiently early sighting to take timely and effective avoiding action to prevent the aircraft flightpaths coming into conflict. As such, the Board assigned a Risk Category C to this Airprox.

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

### Contributory Factors:

	2023151			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>• Tactical Planning and Execution</b>				
1	Human Factors	• Aircraft Navigation	An event involving navigation of the aircraft.	Flew through promulgated and active airspace, e.g. Glider Site
2	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
<b>• Situational Awareness of the Conflicting Aircraft and Action</b>				
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
<b>• Electronic Warning System Operation and Compliance</b>				
4	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>				
5	Human Factors	• Perception of Visual Information	<del>Events involving flight crew incorrectly perceiving a situation visually and then taking the wrong course of action or path of movement</del>	Pilot was concerned by the proximity of the other aircraft

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:**

<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](#).

**Tactical Planning and Execution** was assessed as **ineffective** because the Microlight pilot flew within the NOTAM'd area of operation of the Merlin and did not conform with or avoid the traffic pattern in place.

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the Merlin pilot had no situational awareness of the presence of the Microlight.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the onboard TAS unit for the Merlin did not detect any signals from the Microlight.

<b>Airprox Barrier Assessment: 2023151</b>		Outside Controlled Airspace						
<b>Barrier</b>		<b>Provision</b>	<b>Application</b>	<b>Effectiveness</b> Barrier Weighting				
				0%	5%	10%	15%	20%
Ground Element	Regulations, Processes, Procedures and Compliance	○	○					
	Manning & Equipment	○	○					
	Situational Awareness of the Conflicting Aircraft & 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	■	■	■	■	□			