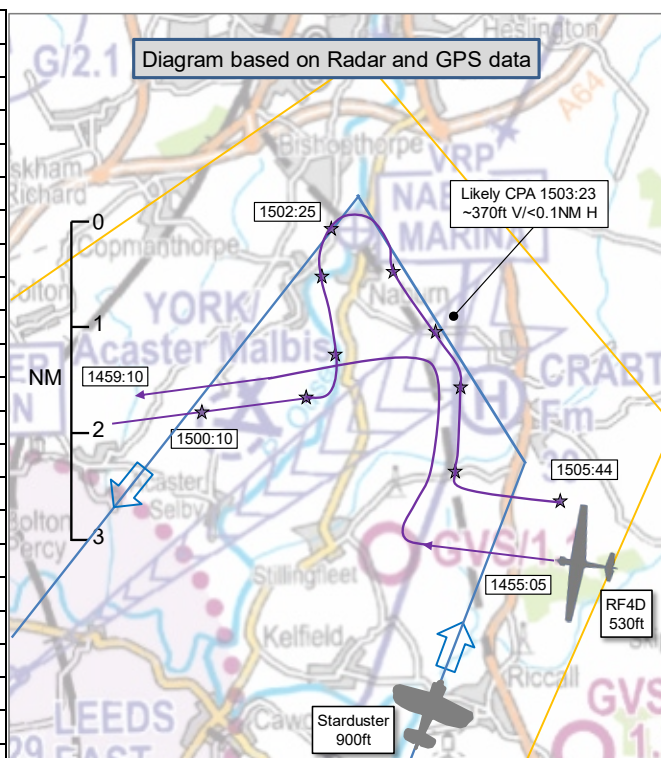


AIRPROX REPORT No 2023133

Date: 24 Jun 2023 Time: 1503Z Position: 5354N 00104W Location: 1NM SE Leeds East Marina

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Starduster	RF4D
Operator	Civ FW	Civ FW
Airspace	London FIR	London FIR
Class	RA(T)	RA(T)
Rules	VFR	VFR
Service	AGCS	Listening Out
Provider	Leeds East	Brighton
Altitude/FL	900ft	530ft
Transponder	Not fitted	A, C, S
Reported		
Colours	Blue	White/Green
Lighting	None	None
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	700ft	600-700ft
Altimeter	QFE (1021hPa)	QFE (NKhPa)
Heading	Northerly	Easterly
Speed	120kt	80kt
ACAS/TAS	SkyEcho	Not fitted
Alert	None	N/A
Separation at CPA		
Reported	50ft V/200yds H	200ft V/250m H
Recorded	~370ft V/<0.1NM H	



THE STARDUSTER PILOT reports that during an air race approaching turn point 4 (Leeds East Marina) they met a motor glider head on.

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

THE RF4D PILOT reports that they had been on an unplanned flight without navigation equipment. They had not accessed the NOTAMs for the day, and consequently had not been aware that they had flown into a RA(T). They continued with their flight and had been aware of other aircraft at similar heights. They did not have to take any avoiding action, they [recall that] they had maintained a good lookout and monitored their track. The RF4D pilot reports having subsequently returned eastwards towards [their departure/destination] airfield. The biplane had rocked its wings in recognition as it passed by. The RF4D pilot did not reciprocate.

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

THE LEEDS EAST A/G OPERATOR reports that an air race had been staged by the Royal Aero Club to the east of Leeds East Airport. Leeds East Airport had been subject to a NOTAM'd closure submitted by Leeds East, and the area to the east subject to a RA(T) arranged by the Royal Aero Club. Leeds East is Air-to-Ground only and the incident happened during the race. Leeds East AGO had access to [TAS unit] but was not allowed to give position reports from this software package. However, the AGO had seen an aircraft in the RA(T) with an aircraft registration [...] that they did not recognise as part of the race and informed the Clerk of the Course. The above is [reported as] their total involvement in this incident.

Factual Background

The weather at Leeds Bradford was recorded as follows:

METAR EGNM 261520Z 26017KT 9999 SCT040 18/08 Q1018=

Analysis and Investigation

UKAB Secretariat

The air race had been promulgated via CANP/NOTAM as follows:

(J2471/23 NOTAMN

Q) EGTG/QRTCA/IV/BO /AW/000/015/5352N00109W006

A) EGCM

B) 2306241045

C) 2306251515

D) 24 1045-1215 1415-1545, 25 1015-1145 1345-1515

E) RESTRICTED AREA (TEMPORARY) AT (LEEDS EAST). RESTRICTION OF FLYING REGULATIONS MADE UNDER ARTICLE 239 OF THE AIR NAVIGATION ORDER 2016. AIC M055/2023, WHICH INCLUDES A CHART, WILL REFER. NO ACFT IS TO FLY WI THE AREA BOUNDED BY STRAIGHT LINES JOINING SUCCESSIVELY THE FOLLOWING POINTS 535046N 0011623W - 535606N 0010517W - 535215N 0010037W - 534832N 0010506W - 534847N 0011514W - 535046N 0011623W. EXCEPT ACFT FLYING IN ACCORDANCE WITH A PERMISSION FROM FENTON RADIO ON 120.710MHZ WHILST IN THE LOCAL FLYING AREA OR OPERATING WITH THE PERMISSION OF THE ROYAL AERO CLUB RECORDS, RACING AND RALLY ASSOCIATION CLERK OF THE COURSE WHO MAY BE CONTACTED ON 07725 629947. 2023-06-0032/AS6

F) SFC G) 1500FT AMSL

This event had been reported by the Starduster pilot as having occurred at 1530 at a point 2NM south of the Naburn Marina visual reporting point (VRP) with the Starduster heading 'northerly' and the RF4D heading 'easterly' ['head on' they recall]. The RF4D had cleared the NOTAM'd area by 1507 and had landed at their destination airfield by 1522. The Starduster landed at 1524.

The Starduster had been completing race laps in approximately 9min intervals which, when plotted against the radar track of the RF4D, showed one possible point of interaction as described between the two aircraft.

The RF4D flight plot aligned to the GPS plot of the Starduster showed the most likely point of Airprox to have been at 1503:23, approximately 1NM southeast of the Naburn Marina VRP with the Starduster heading towards that VRP at an altitude of 900ft and the RF4D, having turned around the same VRP in the opposite direction, tracking on a reciprocal heading at an altitude of 530ft.

The Starduster and RF4D 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 If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.²

Summary

An Airprox was reported when a Starduster and an RF4D flew into proximity 1NM south of Leeds East Marina at 1503Z on Saturday 24th June 2023. Both pilots were operating under VFR in VMC, the Starduster pilot in receipt of an Air-to-Ground Communication Service from Leeds East and the RF4D pilot listening out on the Brighton frequency.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recording, ADS-B-derived track data and a report from the AGO involved. Relevant contributory factors mentioned during

¹ (UK) SERA.3205 Proximity.

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

the Board's discussions are highlighted within the text in bold, with the numbers referring to the Contributory Factors table displayed in Part C.

Members firstly discussed the actions of the Starduster pilot. They had been taking part in an air race which had been NOTAM'd and had been afforded protective airspace in place in the form of a RA(T), recognising that their flight path had been driven by the aim of the event in which they had been participating and their primary focus had been on navigation and fellow competitors in their immediate vicinity and that the pilots involved may not have been able to maintain the normal levels of lookout. The Board opined that the Starduster pilot had been comfortable operating within the confines of the RA(T) established for the event and that the RF4D's appearance had been unexpected.

In considering the actions of the RF4D pilot, members expressed disappointment that the pilot had elected to fly without having fully prepared, briefed and checked NOTAMs and restrictions in their intended operating area, even though their intent had been to remain within the local circuit pattern at their departure airfield (**CF1**, **CF3**). This, coupled with a reluctance to seek a more appropriate air traffic service from local providers and carrying no electronic conspicuity equipment (**CF5**), had led to no situational awareness having been available for either themselves or those operating around them (**CF4**) and to their penetration of a publicised RA(T) (**CF2**). However, the Board praised the RF4D pilot for their openness and honesty in the report of their actions, noting that such an approach helps the Airprox Board members to best examine the circumstances of the event and offers greater learning for others.

Board members went on to discuss the role of the Leeds East AGO and their link to the event Clerk of the Course. They accepted that, as an AGO, there is no responsibility for flight or traffic monitoring under normal circumstances but, in this event, they received and passed messages from competitors to the Clerk of the Course and, ultimately, any decision concerning continuation or cancellation of the event would have been disseminated via the AGO. On this occasion, no decision to cancel had been made by the Clerk of the Course or announced by the AGO.

When determining the risk, the Board agreed that although safety had been degraded and that both pilots had achieved only a late-sighting of the other (**CF6**), the Starduster pilot had acknowledged the oncoming presence of the RF4D and that there had not therefore on this occasion been a risk of collision between the Starduster and the RF4D. As such, the Board assigned a Risk Category C to this Airprox.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2023133			
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	• Airspace Infringement	An event involving an infringement / unauthorized penetration of a controlled or restricted airspace.	E.g. ATZ or Controlled Airspace
3	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			
4	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
	• Electronic Warning System Operation and Compliance			
5	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
	• See and Avoid			

6	Human Factors	• Identification/ Recognition	Events involving flight crew not fully identifying or recognising the reality of a situation	Late sighting by one or both pilots
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Degree of Risk: C.

Safety Barrier Assessment³

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 neither pilot was operating under an air traffic service required to monitor their flight.

Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **ineffective** because the RF4D pilot infringed the RA(T) established for the protection of aircraft within the air race event.

Tactical Planning and Execution was assessed as **ineffective** because the RF4D pilot had not noted the established NOTAM and RA(T) for the air race event.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because neither pilot had any situational awareness of the presence of the other aircraft.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the onboard electronic conspicuity equipment carried by the Starduster could not detect any signal from the RF4D.

See and Avoid were assessed as **partially effective** because both aircraft pilots achieved only late-sightings of the other aircraft.

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

