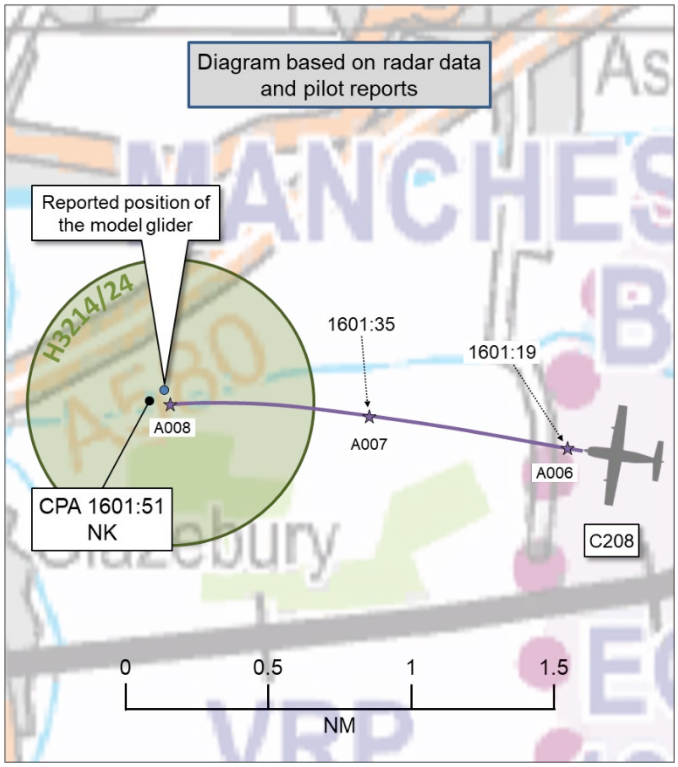
AIRPROX REPORT No 2024174

Date: 28 Jul 2024 Time: 1602Z Position: 5329N 00229W Location: 3.5NM WNW Manchester Barton

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

Recorded	Aircraft 1	Aircraft 2
Aircraft	Model glider	C208
Operator	Civ UAS	Civ Comm
Airspace	London FIR	London FIR
Class	G	G
Rules	VLOS (Specific Cat.)	VFR
Service	None	AFIS
Provider	N/A	Barton Information
Altitude/FL	NK	800ft
Transponder	Not fitted	A, C, S+
Reported		
Colours	Yellow	Blue, white
Lighting	None	Strobes, nav
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	1200ft	1000ft
Altimeter	AGL	QNH
Heading	NK	"*west*"
Speed	NK	120kt
ACAS/TAS	Not fitted	TCAS I
Alert	N/A	None
Separation at CPA		
Reported	300ft V/400ft H	"*not seen*"
Recorded	NK	



THE MODEL GLIDER PILOT reports that they were flying a 1/3 scale radio-controlled Fox glider at altitude through an aerobatic routine from their flying club south of Tyldesley. The site is covered by a NOTAM to 1500ft awaiting inclusion into the AIP. The site is registered with the British Model Flying Association and is fully permitted to 1500ft for models up to 25kg MTOW. [Other] members spotted a Cessna flying low towards [their position] and almost directly overhead. Alerted, they had to take avoiding action and steered their model to the north and then descended vertically to a low altitude (circa 100ft) at speed to avoid the Cessna.

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

THE C208 PILOT reports that, having departed Manchester Barton, they were transiting towards the low-level route to the west of Barton. The NOTAM was seen prior to flight and no information was offered by Barton that it was active. The C208 is a big aircraft and they feel that the model club is not used to seeing that size and had misjudged the proximity.

[The pilot of the C208] did not see the model but [opined that] it is also the responsibility of the model flyer to see and avoid other aircraft. There is a factor that due to the proximity of controlled airspace vertically and laterally with special procedures down the corridor, they were working on that rather than checking for models. With the proximity [of the model club to Barton], they would have thought the model club would have notified Barton that they were operating. [Subsequent to] this Airprox, they have heard that they are. [The pilot of the C208 opined that] there is an issue that in the UK the airspace is covered with NOTAMs for model sites with large vertical and lateral coverage. Although notified as being permanently active they rarely are and, as in this case, it leads to see-and-avoid by pilots of light aircraft.

THE MANCHESTER BARTON SENIOR AFISO reports that the [pilot of the C208] did not report an Airprox, and RT was conducted per standard operations.

The [model] was not ADS-B-out equipped, so the Flight Information Display (FID) system did not pick up the flightpath.

On the 29th July at 1029, Barton 'tower' received a phone call from the [pilot of the model glider] reporting the Airprox. The caller had a 25min discussion with one of the FISOs regarding [the C208] flying within the NOTAM'd area. All calls are recorded. In summary, both parties agreed that procedures could be put in place to improve awareness of the model flying site. The caller stated that they will look into the process of having club members call Barton Information on their direct number to inform the team of any activity so warnings can be put on the ATIS and communicated over the RT where required.

Factual Background

A NOTAM for the flying of model aircraft approximately 3.5NM west of Manchester Barton:

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H3214/24
Q) EGTT/QWULW/IV/BO/W/000/016/5329N00229W001
A) EGTT  B) FROM: 24/05/30 08:00  TO: 24/08/29 20:00
E) FLYING OF MODEL ACFT WI 0.5NM RADIUS OF PSN 532854N 0022839W
(GLAZEBURY). FOR INFO CTC 07969 460032. AR-2024-3469/AU2.
LOWER: SFC
UPPER: 1600FT AMSL
SCHEDULE: 0800-2000
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The weather at Manchester was recorded as follows:

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METAR COR EGCC 281620Z AUTO 19004KT 130V230 9999 NCD 23/11 Q1023 NOSIG
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Analysis and Investigation

UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The C208 first appeared on the radar replay at 1600:27 (approximately 2.9NM from the reported position of the model glider) and could be positively identified from Mode S data (Figure 1). The model glider was not observed.

Figure 1 – The C208 first appeared on the radar replay at 1600:27

The pilot of the model glider reported that their aircraft was at 1200ft AGL. The elevation of the terrain at the reported position of the model glider is 60ft. Therefore, the model glider may have been at 1260ft AMSL. The C208 was depicted on the radar replay as having been at Flight Levels. A suitable correction was applied to determine its altitude. The vertical separation between the C208 and the reported altitude of the model glider may have been 400ft (with the model glider higher than the C208) but the actual separation could not be verified. The horizontal separation between the C208 and the reported position of the model glider was 0.1NM but the actual separation could not be verified. The diagram was constructed by reference to the radar data and pilot reports.

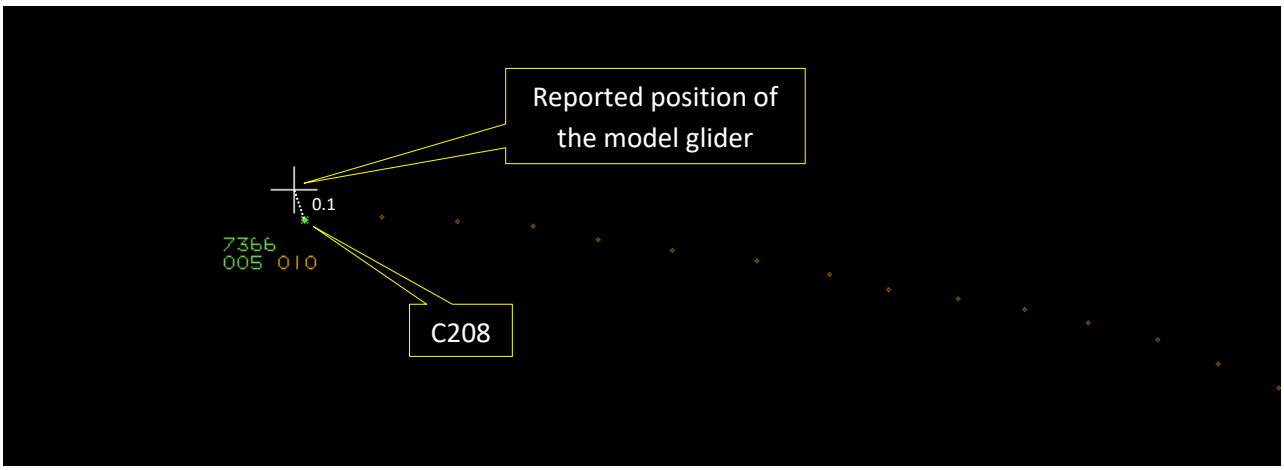


Figure 2 – CPA at 1601:51

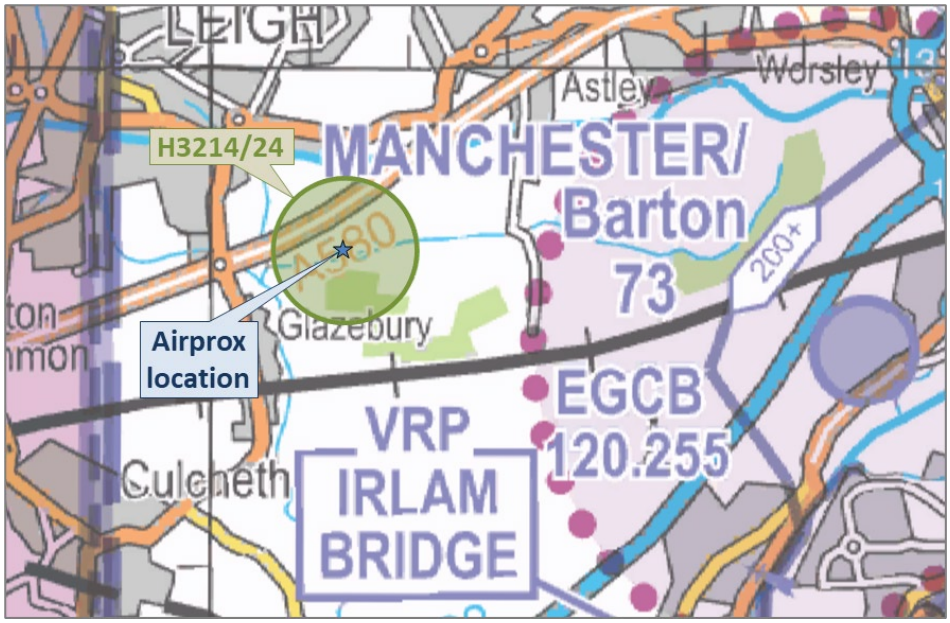


Figure 3 - The location of Manchester Barton and the NOTAM'd area

It is understood that, subsequent to this Airprox occurrence, the AFISOs at Manchester Barton use pre-printed flight progress strips with the details of the model flying club, and update the ATIS when they are notified that the club is active.

The model glider and C208 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] The remote pilot of a model aircraft must maintain VLOS as per the definition given in UK Regulation (EU) No. 2019/947, Article 2(7) […].[2] A model aircraft is permitted to fly at a height in excess of 120m (400ft) above the surface […] if […] the model aircraft is being operated at an established club site approved for the operation of model aircraft with a MTOM greater than 7.5kg but less than 25kg above 400ft, by the BMFA.[2] Before starting a UAS operation, the remote pilot shall […] ensure that any relevant information about the operation has been made available to the relevant air traffic service (ATS) unit, other airspace users and relevant stakeholders, when required.[2] During the flight, the remote pilot shall […] avoid any risk of collision with any manned aircraft and discontinue a flight when continuing it may pose a risk to other aircraft, people, animals, environment or property.[2]

[1] (UK) SERA.3205 Proximity.
[2] Article 16 authorisation issued to the British Model Flyers Association (of which the Tyldesley Model Flying Club is an affiliated member) clauses 3.8(1), 3.9(2)(d)(ii), 3.10(2)(d), 3.10(3)(b)

Summary

An Airprox was reported when a model glider and a C208 flew into proximity 3.5NM west-northwest of Manchester Barton at 1602Z on Sunday 28th July 2024. The model glider pilot was operating under VLOS in VMC, not in receipt of an ATS. The C208 pilot was operating under VFR in VMC in receipt of an AFIS from Barton Information.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings and a report from the AFISO 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 considered the actions of the pilot of the model glider. Members noted that they had been alerted to the presence of a piloted aircraft by a fellow member of the model club standing nearby. Members agreed that the pilot of the model glider had therefore gleaned generic situational awareness of the C208, albeit somewhat late (**CF6**). Members noted that the pilot of the model glider had had time to have taken effective avoiding action, although appreciated that the sudden appearance of the C208 over their operating field had caused concern (**CF9**). Members noted that the pilot of the model glider had correctly discontinued their flight once they had assessed that continuation may have posed a risk to the pilot of the C208. Members would return to ponder the subsequent telephone call between the model glider pilot and the Barton AFISO later in the discussion.

Members next turned their attention to the actions of the pilot of the C208. One member with knowledge of operations in the vicinity of the Manchester CTA/CTR commented that the area is often congested with traffic and the volume of airspace described by NOTAM H3214/24, particularly its vertical extent, is significant. Members noted that the NOTAM extends to 1600ft AMSL (approximately 1540ft AGL) and the permitted activity at the model club in question includes the operation of models less than 25kg. It was clear to members that the pilot of the C208 had been aware of the NOTAM and, as such, agreed that they had had generic situational awareness of the model flying activity (**CF6**). However, members noted that the track of the C208 had passed, essentially, straight through the middle of the NOTAM'd area at half the height of its maximum extent. Members agreed that the TCAS equipment fitted to the C208 would not have alerted to the presence of the model glider (**CF7**). Members were keen to emphasise that a model glider, albeit a 1/3 scale model, would have been extremely difficult to have acquired visually and were therefore somewhat surprised that the C208 pilot's safe passage through the NOTAM'd area had appeared to have relied upon the barrier of 'See and Avoid'. Members agreed that, despite having had situational awareness of the NOTAM'd area and the possibility of encountering a UAS, the pilot of the C208 had not visually acquired the model glider (**CF8**) but had flown close enough to it to have caused its pilot concern (**CF5**). Members pointed out that, although the pilot of the C208 had been at liberty to have entered the NOTAM'd area, their chosen route through promulgated and active airspace (**CF4**) had, perhaps, not been the most prudent.

Members next considered the actions of the Barton AFISO and it was agreed that they had been aware of the NOTAM'd area but had not had specific situational awareness of the model glider in question (**CF2**). One member suggested that it may have been prudent for the Barton AFISO to have passed a generic caution to the pilot of the C208 in the knowledge that they had intended to depart to the west towards the NOTAM'd area. Notwithstanding, members agreed that, utilising the equipment at their disposal, the Barton AFISO could not have detected the presence of the model glider and, therefore, had not detected a potential conflict between the model glider and C208 (**CF1**).

Members returned to their thoughts on the interaction between the model glider pilot and the Barton AFISO subsequent to the Airprox and pondered the Article 16 authorisation under which the model club had operated. Members applauded the productive dialogue between the two parties and wished to encourage steps to promote a healthy working relationship. It was noted that, on subsequent occasions, a representative of the model club had informed the Barton AFISO of their operation but this had not

been the case on the day of the Airprox. Members turned to the Article 16 authorisation and noted a clause that addressed the dissemination of such information:

3.10(2) Before starting a UAS operation, the remote pilot shall comply with all of the following:
: :
(d) Ensure that any relevant information about the operation has been made available to the relevant air traffic service (ATS) unit, other airspace users and relevant stakeholders, when required.

Members agreed that, on the day of the Airprox, the model glider pilot (or a representative of their model flying club) had not attended to that responsibility and had therefore not complied with the terms of their authorisation (**CF3**).

Concluding their discussion, members agreed that neither pilot had had specific situational awareness of the presence of the other aircraft. It was further agreed that the pilot of the C208 had flown through the NOTAM'd area and had not sighted the model glider. Although the exact separation at CPA could not be determined, members agreed that safety margins had been degraded and it had been the actions taken by the pilot of the model glider that had averted a risk of collision. The Board assigned Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

	2024174			
CF	**Factor**	**Description**	**ECCAIRS Amplification**	**UKAB Amplification**
	Ground Elements			
	• Situational Awareness and Action			
1	Human Factors	• Conflict Detection - Not Detected	An event involving Air Navigation Services conflict not being detected.	
2	Contextual	• Traffic Management Information Action	An event involving traffic management information actions	The ground element had only generic, late, no or inaccurate Situational Awareness
	Flight Elements			
	• Regulations, Processes, Procedures and Compliance			
3	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			
4	Human Factors	• Aircraft Navigation	An event involving navigation of the aircraft.	Flew through promulgated and active airspace, e.g. Glider Site
	• Situational Awareness of the Conflicting Aircraft and Action			
5	Human Factors	• Lack of Action	Events involving flight crew not taking any action at all when they should have done so	Pilot flew close enough to cause concern despite Situational Awareness
6	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			
7	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			
8	Human Factors	• Monitoring of Other Aircraft	Events involving flight crew not fully monitoring another aircraft	Non-sighting or effectively a non-sighting by one or both pilots
9	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: 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 **ineffective** because the Manchester Barton AFISO had not had specific situational awareness of the presence of the model glider.

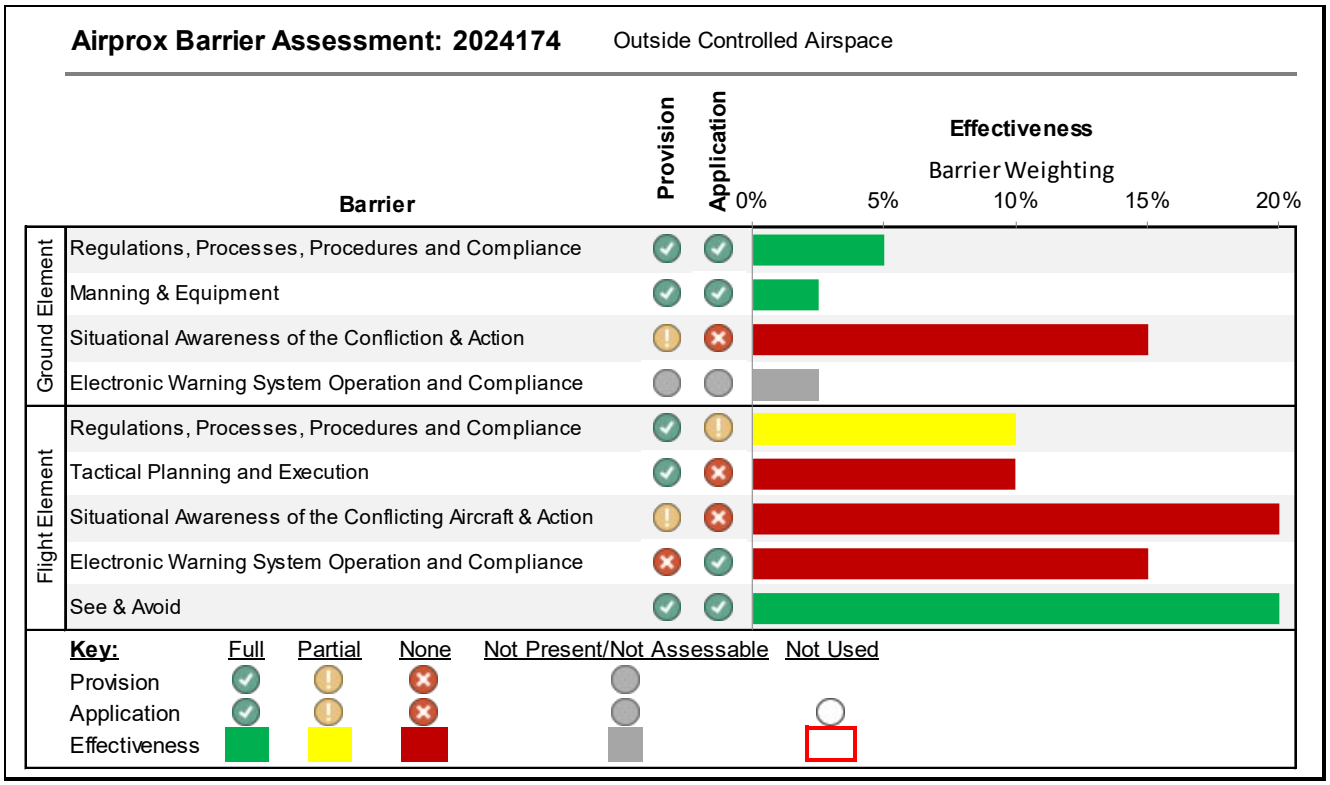
Flight Elements:

Regulations, Processes, Procedures and Compliance were assessed as **partially effective** because the pilot of the model glider (or a representative of the model flying club) had not informed the Manchester Barton Unit of the commencement of their UAS operations.

Tactical Planning and Execution was assessed as **ineffective** because the pilot of the C208 had selected a route through an area for which a NOTAM for the flying of model aircraft had been promulgated.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the pilot of the C208 had flown close enough to the model glider to have caused its pilot concern despite having had generic situational awareness of the presence of the UAS operations.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the TCAS fitted to the C208 would not have been expected to have detected the presence of the model glider.



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