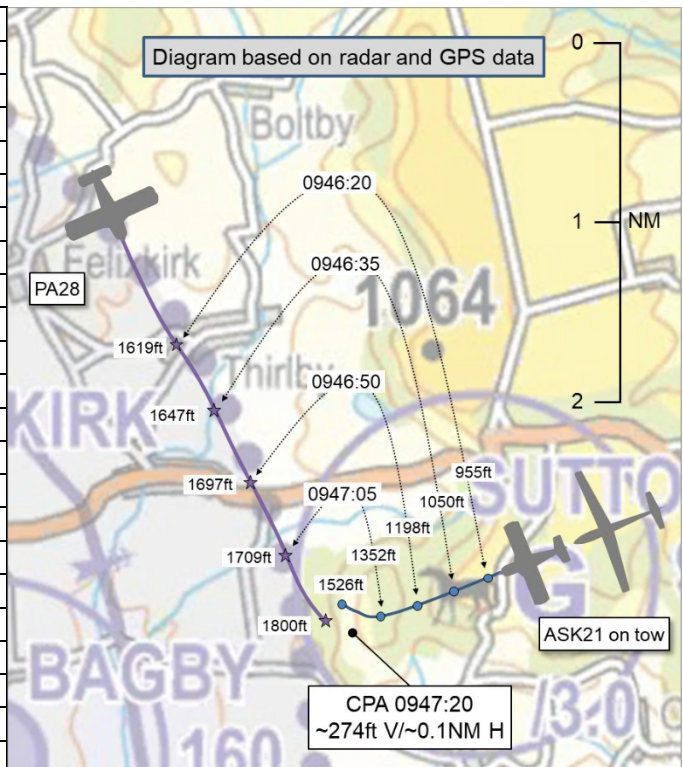


**AIRPROX REPORT No 2023009**

Date: 29 Jan 2023 Time: 0947Z Position: 5414N 00114W Location: 1NM W Sutton Bank

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

Recorded	Aircraft 1	Aircraft 2
Aircraft	ASK21	PA28
Operator	Civ Gld	Civ FW
Airspace	London FIR	London FIR
Class	G	G
Rules	VFR	VFR
Service	None	Basic
Provider	N/A	Teesside Radar
Altitude/FL	~1800ft	~1526ft
Transponder	Not fitted	A, C, S
<b>Reported</b>		
Colours	White, blue	White, blue
Lighting	None	Landing, taxi
Conditions	VMC	VMC
Visibility	>10km	>10km
Altitude/FL	400ft	1500ft
Altimeter	QFE (0987hPa)	QNH (NR hPa)
Heading	270°	160°
Speed	65kt	95kt
ACAS/TAS	FLARM	Not fitted
Alert	None	N/A
<b>Separation at CPA</b>		
Reported	100ft V/100m H	400ft V/300m H
Recorded	~274ft V/~0.1NM H	



**THE ASK21 PILOT** reports that they had been on tow behind a Piper Pawnee. In the climb-out, the other aircraft was seen first at about half a mile, flying straight-and-level across the regular tow-out path. The combination (the tug and tow) had already started turning to the right. The other aircraft was seen to alter course to the right shortly after it was seen. The combination tightened the turn slightly, and both aircraft passed clear.

The risk of collision was low because, shortly after it was sighted, the other aircraft appeared to turn away from the path of the combination, so increasing separation. An Airprox report was filed because the aircraft was closer than would normally have been acceptable in an open-air situation. It was filed because the towing combination was in the early stages of a climb-out from a recognised busy gliding site, and the encounter was unexpected, so low, and close to the airfield. The other aircraft could not be identified and their routeing cannot be verified (other than flying south). It is possible, however, that [the other pilot] had chosen their route to try and avoid penetrating the Topcliffe MATZ.

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

**THE PA28 PILOT** reports that they had planned to fly south on the western side of the North York Moors. They were aware that, due to the beautiful day on the Sunday morning in question, that there could be glider activity at Sutton Bank even though it was early morning. As a result, they were actively scanning the area for gliders. Although from quite some distance away they could see no sign of any activity on the ground at Sutton Bank, they continued their scan for gliders. As they passed west abeam at a range of approximately 1-2NM, they spotted a PA12 [they recall] towing a glider in their 11 o'clock at a range of about 0.5NM and about 500ft below. They immediately assessed that the tow/glider was below, that they were ahead of any collision angle, and that the tow/glider would pass behind. They chose not to turn [left] as that would have put them directly over the top of the tow/glider, and they chose not to turn right [as that] would have meant losing sight due to the airframe obscuring the other aircraft.

They did however dip their left wing momentarily as the tow/glider passed their 8 o'clock in order to maintain visual with them. A climb was not felt necessary due to visually assessing that the other aircraft was below and would pass behind.

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

**THE TEESIDE CONTROLLER** reports that the [PA28 pilot], from [departure airfield] to [destination airfield], was being provided with a Basic Service. [It came to their attention subsequently] that there had been an Airprox filed with this aircraft 1NM to the west of Sutton Bank gliding site. The [controller] was not aware of any activity at Sutton Bank at the time, hence why they did not inform the pilot. The pilot of [the PA28] did not state anything to them regarding the Airprox.

## Factual Background

The weather at Leeming was recorded as follows:

EGXE 290950Z AUTO 26016KT 9999 NCD 06/03 Q1021

## Analysis and Investigation

### TEESIDE INTERNATIONAL AIRPORT UNIT

Airprox timeline:

- 0934:00 [PA28 callsign] departing controlled airspace to the south
- 0947:00 [PA28 callsign] 1600ft, west of Sutton Bank by approximately half a mile
- 0947:10 [PA28 callsign] 1700ft (climbing)
- 0947:35 [PA28 callsign] 1800ft (climbing) approximately 0.5NM south west of Sutton Bank
- 0947:38 Primary contact appeared for the first time 0.5NM west-northwest of Sutton bank northbound with [PA28 callsign] approximately 1NM to its southeast
- 0947:52 [PA28 callsign] 1700ft (descending) south of Sutton Bank continuing in a south easterly direction, the primary contact faded
- 0948:15 Primary contact gone, [PA28 callsign] south east of Sutton Bank by 1NM east-bound maintaining 1700ft
- 0948:47 Primary contact reappeared 1.5NM north west of Sutton bank northbound with [PA28 callsign] approximately 3NM southeast of it.

No transcript was required as [the pilot of the PA28] had only made calls regarding leaving and joining controlled airspace and made no mention of glider activity at Sutton Bank. No contacts were visible other than at the times listed above after [the PA28] had passed the area.

Investigation Findings: [The pilot of the PA28] left controlled airspace to the south. It has been identified that at the time of the incident, and due to minimal staffing at the time, Teesside International Airport (TIA) Radar [controller] was on a comfort break with no scheduled IFR departures or arrivals.

[The pilot of the PA28] was subsequently transferred to the Radar frequency which was being operated by the ADC ATCO at the time, however only a Basic Service (BS) was prescribed in accordance with the MATS Part 1/2. Upon review of the [RT recording], there was no mention of conflicting glider traffic by [the pilot of the PA28] at any point, and no contacts were observed in the vicinity of Sutton Bank at the time of the incident. An intermittent, primary-only contact was observed approximately 0.5NM NW of Sutton Bank and 1NM to the northwest of [the PA28], routeing northbound, with [the pilot of the PA28] routeing southbound and indicating 1800ft at the time. The primary contact faded shortly after this and was not observed again until [the PA28] was approximately 3NM SE of the contact.

Due to the lack of radar data on the unknown aircraft, and intermittent primary contact only being visible after [the PA28] had passed the location of the contact when it displayed on radar, there is no indication as to how close the two aircraft came.

Recommendations:

- 1) As the aircraft was operating on a BS outside CAS, the onus is on the pilot to ensure a good visual lookout is maintained in an area of intense air activity. The Sutton Bank gliding site is also notified as being active 7 days a week and adequate briefing should help pilots mitigate.
- 2) It has been established that a Letter of Agreement is not required with Yorkshire Gliding Club (Sutton Bank), however, due to the unit receiving this notification of a second Airprox since August 2022, it is apparent that further barriers may be required to assist in mitigating this event type in the Sutton Bank area in the future.

The Yorkshire Gliding Club SOPs state:

- 3.1.1. Every weekday the Duty Instructor will email RAF Leeming with details of the flying expected to take place that day at Sutton Bank.

A recommendation has been raised to contact Sutton Bank Gliding site and establish whether a call to ATC would be achievable at the start of each day so that TIA ATC have an increased awareness over operations at the site which can be passed on to pilots on the TIA frequency wishing to operate in the area.

- 3) The addition of the Sutton Bank Gliding Site onto the radar screen will allow ATCOs to more accurately identify the area. This can also be updated on the various maps available as aides memoire to ATCOs.

## ATSI

ATSI agrees with the findings and recommendations made in the Teesside Investigation report and wondered if an aircraft is known to be flying in or due to pass within the vicinity of Sutton Bank a generic warning could be issued by the Teesside controller.

## UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The PA28 could be positively identified from Mode S data. Neither the tug aircraft nor the ASK21 were observed on radar (see Figure 1).

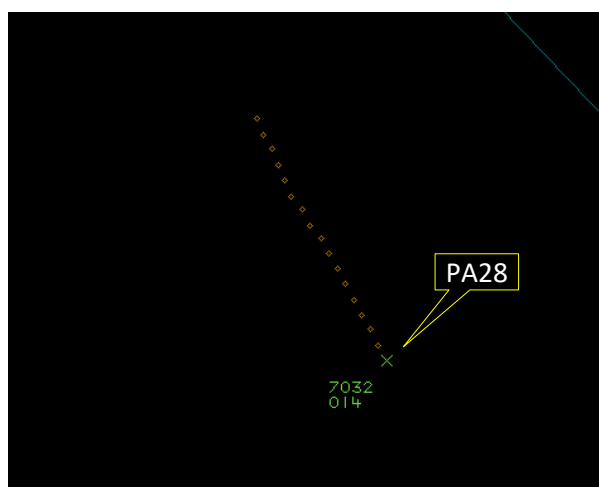


Figure 1 – CPA at 0947:20. No other aircraft were observed on radar in the vicinity of the PA28.

Both pilots kindly supplied GPS data of their respective flights and it is with this combination of data sources that the diagram was constructed and the separation at CPA measured.

The ASK21 and PA28 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 converging then the PA28 pilot was required to give way to the ASK21 glider being towed.<sup>2</sup> When two aircraft are converging at approximately the same level, power-driven aircraft shall give way to aircraft which are seen to be towing other aircraft or objects.<sup>3</sup>

## Comments

### BGA

Sutton Bank airfield operates 364 days per year during daylight hours (weather permitting). There were 18,178 aircraft movements there in 2022, the vast majority being aerotow-launched glider flights (16,920 movements). The airfield's western boundary is 0.9NM from the edge of the RAF Topcliffe MATZ. Aerotow glider launches in westerly winds depart from RW24, towards the MATZ boundary (as in this case).

RAF Topcliffe is home to both 645 Volunteer Gliding Squadron (which operates at weekends, Public Holidays, and by NOTAM) and to the Yorkshire Air Ambulance (which operates 0700-2200 every day). According to AIP ENR 2.2, a MATZ is operative when the aerodrome concerned (or in the case of a CMATZ, any one of the aerodromes) is open, and civilian pilots are invited to contact Leeming Zone before entering RAF Topcliffe MATZ during its hours of operation. Local pilots report that Leeming controllers are invariably helpful when thus contacted, and do not attempt to exclude civilian traffic from the MATZ. Nevertheless, some civilian pilots transiting the area may instead prefer to route around the edge of this MATZ, especially if unable or unwilling to contact Leeming Zone. Traffic skirting the eastern side of the RAF Topcliffe MATZ would be concentrated into an area that includes the routes of Sutton Bank RW24 aerotow departures.

Glider/Tug combinations have limited manoeuvrability, and are best given a wide berth.

### AOPA

The pilot planned and studied a route applying suitable TEM, threading through several airfields that were close together. Utilising an effective lookout, the pilot spotted the combination in good time and took appropriate action. This action, in conjunction with the action taken by pilot of the glider-combination, was effective to ensure separation but still close enough to cause concern. Communication with the gliding site may have alleviated this concern and improved everyone's situational awareness.

## Summary

An Airprox was reported when a ASK21 and a PA28 flew into proximity 1NM west of Sutton Bank at 0947Z on Sunday 29<sup>th</sup> January 2023. Both pilots were operating under VFR in VMC, the ASK21 pilot not in receipt of an ATS, and the PA28 pilot in receipt of a Basic Service from Teesside Radar.

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

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS track data, a report from the air traffic controller 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 considered the actions of the pilot of the ASK21 pilot. A member with particular knowledge of gliding operations noted that the pilot of the tug aircraft had not reported this encounter as an Airprox. It was explained to members that it would be most likely that the pilot of the ASK21 would

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

<sup>2</sup> (UK) SERA.3210 Right-of-way (c)(2) Converging.

<sup>3</sup> (UK) SERA.3210 Right-of-way (c)(2)(iv) Converging.

have been concentrating on the tow cable and their position relative to the tug aircraft and that they would not have been expected to have contributed to a wider lookout. It would therefore be reasonably expected that the pilot of the tug aircraft would have sighted the PA28 sooner and that it had been more likely the pilot of the ASK21 had been startled by the encounter. Members noted that the ASK21 had been fitted with additional EC equipment but that it would not have been expected to have detected the presence of the PA28 (**CF3**). Consequently, members agreed that the pilot of the ASK21 had not had situational awareness of the PA28 until it had been visually acquired and, upon first sighting, had been concerned by the proximity of the other aircraft (**CF2, CF4**).

Members next considered the actions of the Teesside controller and were in agreement that there had been no requirement for them to have monitored the flight under the terms of a Basic Service (**CF1**). However, members wished to further understand the comment made by the Teesside controller in their narrative report that they had not been aware of any activity at Sutton Bank. Acknowledging that there may not have been any reliable radar returns from gliders available to the Teesside controller, and that the gliders may have been at or below the Teesside radar horizon, members pondered the passing of information between the operator of the Yorkshire Gliding Club at Sutton Bank and the controllers at RAF Leeming and Teesside. Members noted that pilots wishing to route through the Leeming/Topcliffe CMATZ are expected to contact the Leeming controller. It was also noted that it is an SOP of the Yorkshire Gliding Club for the Duty Instructor to email RAF Leeming every weekday with details of the flying expected to take place that day at Sutton Bank. The Leeming controller would, on weekdays, have valuable insight into the activity at Sutton Bank and could pass that information to other controllers in the area, such as the controller at Teesside. However, noting that this encounter had occurred on a Sunday, no such information on the operations at Sutton Bank had been passed to the Teesside controller. Notwithstanding, members wished to commend the recommendations from the Teesside Airport Unit investigation which, it was agreed, would assist the promulgation of situational awareness of glider activity at Sutton Bank.

Turning their attention to the pilot of the PA28, members noted that there had been an awareness that their route would have taken them close to Sutton Bank and for the need for extra vigilance. Members discussed the depiction of the Sutton Bank gliding site on navigational charts and agreed that the blue circle, of 1NM radius, is indicative of the location of the site and does not represent the area in which all gliding activity would occur. Consequently, members wondered why the pilot of the PA28 had chosen a route which, when plotted on a chart, had appeared to have carefully bisected the CMATZ and the 'blue circle' of the Sutton Bank site. Members were in agreement that, whether the CMATZ had been active that day or not, it may have been more prudent to have given Sutton Bank a wider berth. It was noted that the PA28 had not been fitted with additional EC equipment and the pilot of the PA28 had had only generic awareness of activity at Sutton Bank (**CF2**). Members agreed that it had therefore been of paramount importance to have maintained a very thorough and effective lookout.

In determination of risk, members agreed that safety had been degraded through the reduction in separation between the aircraft but were satisfied that there had been no risk of collision. As such, they assigned Risk Category C to this encounter.

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

### Contributory Factors:

	2023009			
CF	Factor	Description	ECCAIRS Amplification	UKAB Amplification
<b>Ground Elements</b>				
• Situational Awareness and Action				
1	Contextual	• ANS Flight Information Provision	Provision of ANS flight information	The ATCO/FISO was not required to monitor the flight under a Basic Service
<b>Flight Elements</b>				
• Situational Awareness of the Conflicting Aircraft and Action				
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

• Electronic Warning System Operation and Compliance				
3	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				
4	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<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:

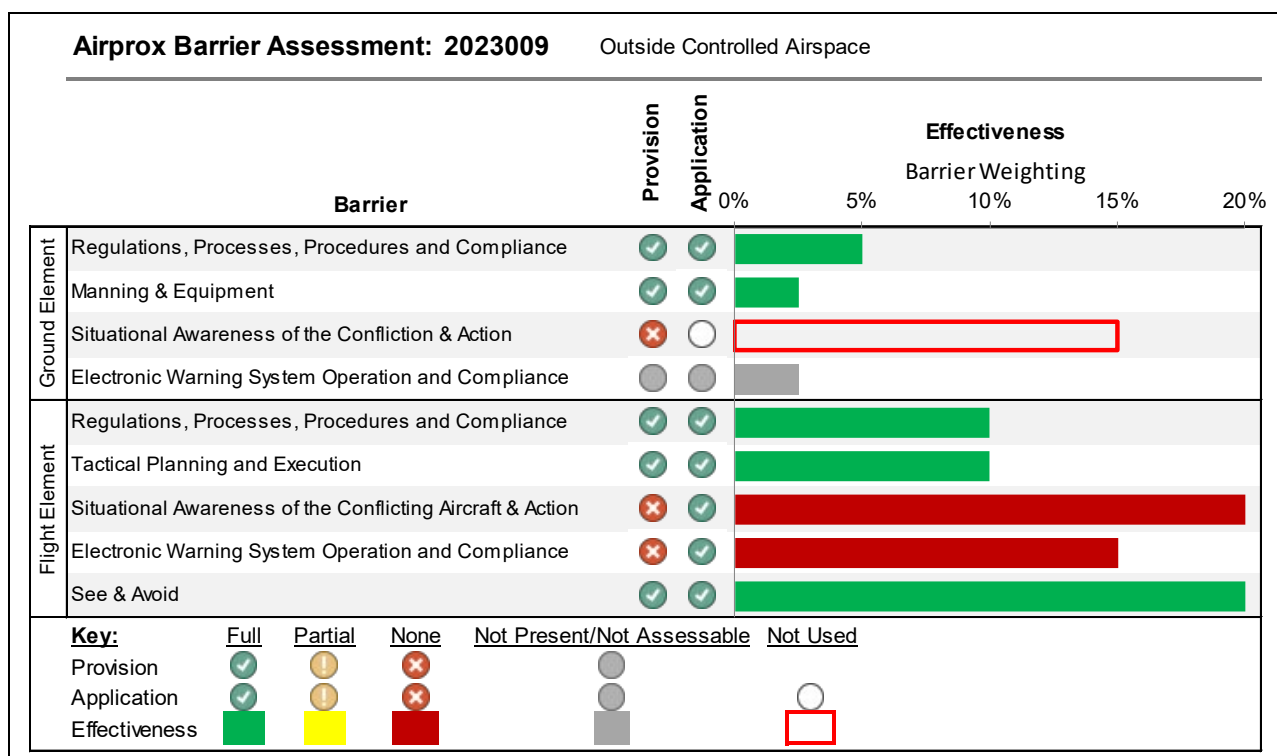
**Ground Elements:**

**Situational Awareness of the Confliction and Action** were assessed as **not used** because the Teesside controller had not been required to have monitored the flight under the terms of a Basic Service.

**Flight Elements:**

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because the pilot of the ASK21 had not had situational awareness of the presence of the PA28.

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the EC equipment fitted to the ASK21 would not have been expected to have detected the presence of the PA28.



<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](#).