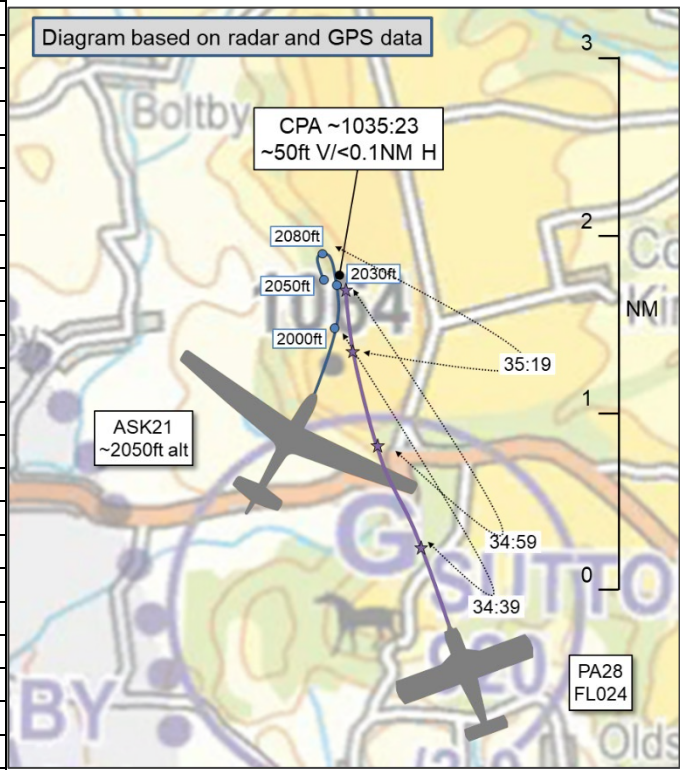


AIRPROX REPORT No 2021133

Date: 29 Jul 2021 Time: 1035Z Position: 5415N 00113W Location: 2NM N 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 | NK |
| Service | None | Basic |
| Provider | | Leeming |
| Altitude/FL | ~2050ft | FL024 |
| Transponder | Not fitted | A, C, S |
| Reported | | |
| Colours | White, Blue | Red, White |
| Lighting | Nil | NK |
| Conditions | VMC | NK |
| Visibility | >10km | NK |
| Altitude/FL | 800ft | NK |
| Altimeter | QFE | NK |
| Heading | 170° | NK |
| Speed | 55kt | NK |
| ACAS/TAS | FLARM | Unknown |
| Alert | None | Unknown |
| Separation at CPA | | |
| Reported | 0ft V/40m H | NK |
| Recorded | ~50ft V/<0.1NM H ¹ | |



THE ASK21 PILOT reports that their glider was in a left 180° turn while ridge flying. Just before rolling out, the student in the front seat saw an aircraft coming the other way on reciprocal heading about 0.25NM away and reversed the turn to avoid. The Cherokee passed down the port side about 30-40m, close enough to read the fuselage registration. The pilot opined that the PA28 pilot had probably seen them as they had initiated a right turn. It was then seen to depart north. On landing, the gliding launch marshal informed them that the PA28 had overflown the middle of the airfield, fortunately not while a winch launch was in progress. Sutton Bank is clearly marked on the 1:500,000 chart as a gliding site.

The pilot assessed the risk of collision as ‘Medium’.

THE PA28 PILOT did not file a report.

THE LEEMING CONTROLLER reports that they were the Zone controller providing the PA28 pilot with a Basic Service. No Airprox was mentioned on frequency. They were informed about the Airprox between this aircraft and a glider from Sutton Bank (not on their frequency) some time after the event and could not recall any further detail².

Factual Background

The weather at Leeming was recorded as follows:

METAR EGXE 291020Z 25018KT 9999 FEW024 SCT080 17/12 Q1003 NOSIG RMK BLU BLU=

¹ Separation calculated by comparing GPS and radar data.

² The time elapsed meant that there was no RT data available, although a photograph of the flight strip was provided.

Analysis and Investigation

UKAB Secretariat

Analysis of the NATS radars showed the PA28, squawking 0401 (Leeming) transited through the area at FL024. The PA28 pilot did not submit a report, however, the Leeming flight strip indicated that the PA28 was flying on a pressure setting of 999hPa and therefore was at an altitude of approximately 2000ft. At Figure 1, a primary contact, probably the glider, could be seen, but this faded from radar. CPA most likely occurred around 1035:23, the PA28 could be seen to turn right and a comparison with the GPS track provided by the glider pilot indicated that the glider was in the vicinity at that time.

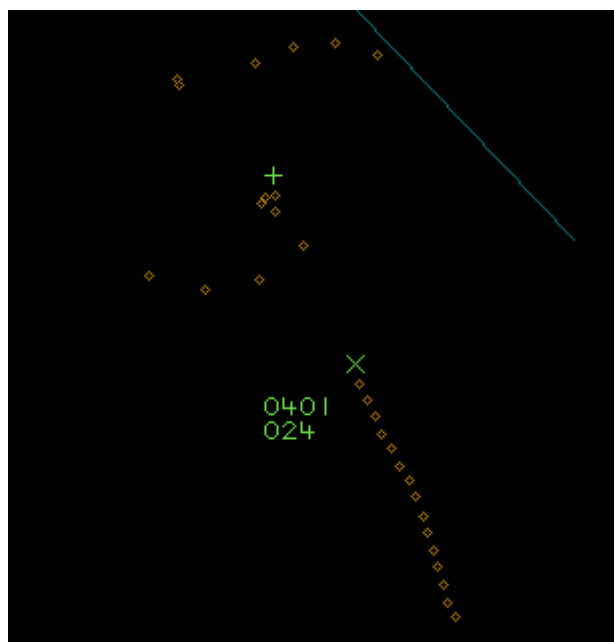


Figure 1: 1034:28

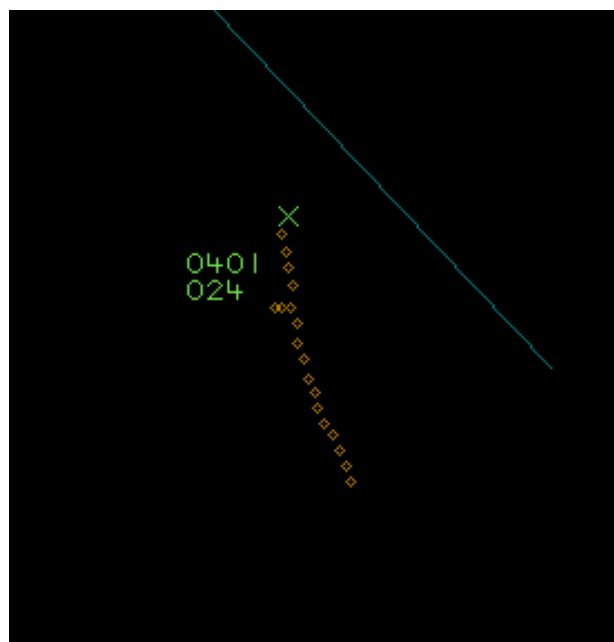


Figure 2: 1035:23 probable CPA

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.³ If the incident geometry is considered as head-on or nearly so then both pilots were required to turn to the right.⁴

Comments

BGA

With the reported wind, conditions would have been ideal for ridge soaring on westerly facing slopes, such as at Sutton Bank. Gliders are likely to be found over or just in front of the crest of a ridge, where the rising air is, although they can drift back if there are thermals to climb in. In lighter winds, hang gliders and/or paragliders could be expected to join them. 500-1000'+ above the ground is not uncommon, but lower in marginal soaring conditions.

As sailplanes will be 'beating' across the slope in order to stay in the lift area, most encounters will be close to head on where they will be most difficult to spot. It would be wise not to track directly along a ridge line at low level, especially when within a mile or two of a gliding site.

Directly overflying an active gliding site, unannounced, at circuit height is a highly risky undertaking, especially when winch launching is being used. Gliding sites are shown on air charts, both paper and digital, with clear representation of the altitude wire launches can reach.

³ (UK) SERA.3205 Proximity.

⁴ (UK) SERA.3210 Right-of-way (c)(1) Approaching head-on.

It is most unfortunate that the PA28 pilot has chosen not to file a report, as it would be helpful to understand why they chose to route as they did in order to assist others in not making the same mistake.

Summary

An Airprox was reported when an ASK21 and a PA28 flew into proximity 2NM north of Sutton Bank at around 1035Z on Thursday 29th July 2021. The ASK21 pilot was operating under VFR in VMC and was not in receipt of an ATS. The PA28 pilot was in receipt of a Basic Service from Leeming.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from the glider pilot, radar photographs/video recordings and the glider's GPS trace and a report from the air traffic controllers' unit 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.

Due to the exceptional circumstances presented by the coronavirus pandemic, this incident was assessed as part of a 'virtual' UK Airprox Board meeting where members provided a combination of written contributions and dial-in/VTC comments.

The Board first looked at the actions of the glider pilot; they were ridge soaring and as such were operating on a north/south track along the ridge. As they tracked northbound they had no knowledge that the PA28 pilot was behind them, **(CF5)** their FLARM could not detect the PA28 **(CF6)** and consequently they could not have known about the other aircraft until they turned and saw it as they began to roll out on heading **(CF7)**. Although they saw the other aircraft late, they did manage to take avoiding action by reversing the turn.

The Board were disappointed that the PA28 pilot did not submit a report. Without it they did not know whether the pilot had not planned properly and so overflew Sutton Bank and into proximity with the glider, or whether they had been blown off-course and weren't aware of their position. Whatever the reason, gliding members noted that when approaching a ridge, pilots should be aware that if gliders are flying in the vicinity, they will be flying along it in order to gain the lift, and by following the ridgeline pilots would only have a head-on or view from behind the glider, making them difficult to spot. Crossing the ridgeline at 90° would make any gliders easier to see. Some members noted that the QNH was low and they wondered whether the pilot thought that at 2400ft they were above the gliding site. However, it was also pointed out that it was clearly marked on the chart that winch launching at Sutton Bank was up to 3000ft. Members noted that GASCo advised avoiding gliding sites by the same margin as CAS, 2NM and 2000ft and this led members to speculate as to whether the PA28 pilot had any electronic navigation system, because they noted that most would give a warning as the pilot approached. However, without knowing the full details members felt they could not attribute a contributory factor to poor pre-flight planning, although they urged pilots to take the time to fully prepare for all flights and to consider what actions to take if pilots found themselves unexpectedly off course. Whatever the reasons for getting into that position, the PA28 pilot had flown over Sutton Bank at an altitude below the winch launch altitude **(CF2)** and did not appear (given the radar track) to have taken any action to avoid it **(CF3)**, or call on the Sutton Bank frequency to advise of their position **(CF4)**. It was known from the Leeming flight strip that the PA28 had got airborne from an airfield based in the north-east and so members thought that the pilot should have had some generic knowledge that there would be gliders in the area, given that Sutton Bank was so well known and easy to spot with the White Horse on the hillside **(CF5)**. The glider pilot reported that the PA28 appeared to take avoiding action, and this was backed up by a turn on the radar just after CPA, so members thought it likely that the PA28 saw the glider late **(CF7)**.

The Board heard from SATCO Leeming that the controllers were very aware of Sutton Bank and that there was a good working relationship between RAF Leeming and the gliding club and that the club attended the regional airspace working group meetings organised by Leeming. As a consequence, Leeming based aircraft were required to avoid the gliding site by 2NM and 5000ft. Furthermore, controllers were trained to call Sutton Bank to any transiting pilots who were routing close by and that

if they thought an aircraft might be routing directly through it, they should instruct the pilot to call on the Sutton Bank frequency. Unfortunately, without the RT, it was not known whether this was done on this occasion, but anyway, because the PA28 was only receiving a Basic Service, the controller was not required to monitor the aircraft on radar (**CF1**).

When determining the risk, members took into consideration the report from the glider pilot and the comparison of the GPS with the radar. They noted that although the glider pilot saw the PA28 late, as they were in a turn onto south, they did manage to take avoiding action and believed that the PA28 pilot also turned away. Consequently, members agreed that safety had been much reduced, with avoiding action taken at the last minute to avoid a collision; Risk Category B (**CF8**).

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

| | 2021133 | | | |
|---|---------------|--|--|--|
| CF | Factor | Description | ECCAIRS Amplification | UKAB Amplification |
| Ground Elements | | | | |
| • 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 |
| Flight Elements | | | | |
| • Tactical Planning and Execution | | | | |
| 2 | Human Factors | • Aircraft Navigation | An event involving navigation of the aircraft. | Flew through promulgated and active airspace, e.g. Glider Site |
| 3 | Human Factors | • Insufficient Decision/Plan | Events involving flight crew not making a sufficiently detailed decision or plan to meet the needs of the situation | Inadequate plan adaption |
| • Situational Awareness of the Conflicting Aircraft and Action | | | | |
| 4 | Human Factors | • Lack of Communication | Events involving flight crew that did not communicate enough - not enough communication | Pilot did not request additional information |
| 5 | Contextual | • Situational Awareness and Sensory Events | Events involving a flight crew's awareness and perception of situations | Pilot had no, late or only generic, Situational Awareness |
| • Electronic Warning System Operation and Compliance | | | | |
| 6 | 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 | | | | |
| 7 | 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 |
| • Outcome Events | | | | |
| 8 | Contextual | • Near Airborne Collision with Aircraft | An event involving a near collision by an aircraft with an aircraft, balloon, dirigible or other piloted air vehicles | |

Degree of Risk:

B.

Safety Barrier Assessment⁵

⁵ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

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 glider pilot had no situational awareness that the PA28 was approaching and, due to the proximity of Sutton Bank glider site, the PA28 pilot would have had generic situational awareness that there may have been gliders in the area.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the FLARM on the glider could not detect the transponder on the PA28.

See and Avoid were assessed as **partially effective** because the glider pilot saw the PA28 late, and managed to take some avoiding action and the report from the glider pilot and the radar profile indicated that it was probable that the PA28 pilot also took some avoiding action.

