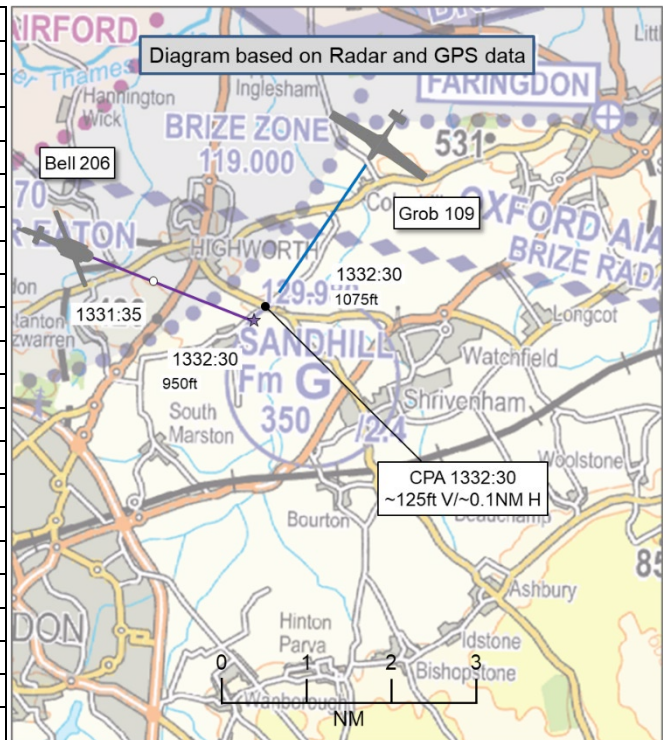


**AIRPROX REPORT No 2024071**

Date: 26 Apr 2024 Time: 1333Z Position: 5136N 00141W Location: Sandhill Farm

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

| Recorded                 | Aircraft 1        | Aircraft 2           |
|--------------------------|-------------------|----------------------|
| Aircraft                 | Grob 109          | Bell 206             |
| Operator                 | Civ FW            | Civ Helo             |
| Airspace                 | London FIR        | London FIR           |
| Class                    | G                 | G                    |
| Rules                    | VFR               | VFR                  |
| Service                  | Listening Out     | Basic                |
| Provider                 | Sandhill          | Brize Radar          |
| Altitude/FL              | 1075ft            | 950ft                |
| Transponder              | None <sup>1</sup> | A, C, S <sup>2</sup> |
| <b>Reported</b>          |                   |                      |
| Colours                  | White             | Red and white        |
| Lighting                 | Strobes           | Yes                  |
| Conditions               | VMC               | VMC                  |
| Visibility               | >10km             | NR                   |
| Altitude/FL              | 800ft             | 1275ft               |
| Altimeter                | QFE               | QNH                  |
| Heading                  | 220°              | 105°                 |
| Speed                    | 80kt              | 95kt                 |
| ACAS/TAS                 | SkyEcho           | Not fitted           |
| Alert                    | None              | N/A                  |
| <b>Separation at CPA</b> |                   |                      |
| Reported                 | 20ft V/30-50m H   | Not seen             |
| Recorded                 | ~125ft V/~0.1NM   |                      |



**THE GROB 109 PILOT** reports that they had been in the circuit at Sandhill Farm. Whilst downwind at 800ft in a left-hand pattern, they encountered a red helicopter coming in the opposite direction. The aircraft was approximately 100ft ahead and 10-20ft below. An avoidance turn was initiated and the threat avoided. The pilot reports that they fly with a moving map and [EC equipment] [...]. The red helicopter then continued to transit through the overhead of Sandhill Farm Airfield, continuing at the same altitude. Sandhill Farm Airfield is an active gliding site [although] there had been no gliding taking place at the time of the event.

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

**THE BELL 206 PILOT** reports that their helicopter had been flown manually (no autopilot) on the return trip from [destination airfield to departure airfield]. Approximately 3hr had been spent on the ground at [destination airfield], stress free, unrushed. They report to have been operating under the see-and-avoid principle with support from Brize Radar under a Basic Service. They had passed north of Sandhill Farm at 1275ft having looked for evidence of winch-launch equipment on the runway with nothing seen. They had been in contact with Brize Radar for "Basic [Service] and Fairford MATZ transit". The frequency had appeared to be generally quiet. [...]. No Traffic Information had been received in regard to the Airprox. The pilot recalls that later in the trip they had received Traffic Information in the vicinity of Benson southern stub. The pilot reports having taken no avoiding action as the other aircraft [in the Airprox event] had not been seen. [They opined that] if the conflicting aircraft had been above or behind them it would have been totally in the blind spot of their aircraft. They highlighted that the P1 sits to the starboard side of the cockpit and a combination of the interior structure and a passenger in the port

<sup>1</sup> A, C, S Reported. Not displayed on NATS radar but visible intermittently on the Brize radar.

<sup>2</sup> Shows on radar from 1332:25 until 1333:15 only.

front seat does compromise the view from the P1's approximate 5 o'clock to approximate 10 o'clock position, if indeed that's where the conflict had been.

**THE CFI AT SANDHILL FARM** reports that Sandhill Farm is a gliding site which operates on 129.980MHz (Common glider frequency). They have no recorded data and are not a manned radio station.

**THE BRIZE NORTON RADAR CONTROLLER** notes that this [report] had been written [for their higher authority] in reference to a reported Airprox that had occurred at approximately 1330. The Grob 109 and a Bell 206 had both been in the vicinity of Sandhill Farm Airfield at approximately 800ft AGL. An Airprox had occurred but not declared on a Brize Norton frequency. The Bell 206 pilot had been in receipt of a Basic Service from the controller on LARS. During the time of this occurrence, the controller reports that they had been occupied with calling traffic to [another aircraft] on a Traffic Service on frequency.

The controller perceived the severity of the incident as 'Low'.

## Factual Background

The weather at Brize Norton was recorded as follows:

METAR EGVN 261320Z 08005KT 9999 SCT044 BKN100 11/00 Q1004 NOSIG RMK BLU BLU=

## Analysis and Investigation

### Military ATM

Utilising occurrence reports and information from the local investigation, outlined below are the key events that preceded the Airprox. NATS radar data did not display either aircraft for the period of the event. As a result of a technical issue, the radar replay recording does not have associated timestamps therefore timings are approximate based on FlightRadar24 comparison.

The Brize Norton Lower Airspace Radar Service controller was providing a Lower Airspace Radar Service to several aircraft transiting through the Brize Norton area of responsibility. This included a mixture of Traffic Service and Basic Service aircraft.

### Sequence of Events

At approximately 1333, the Brize Norton Lower Airspace Radar Service controller provided Traffic Information to another aircraft in receipt of a Traffic Service [uninvolved directly with the Airprox event, Figure 1]. This aircraft was south of Benson and tracking south, with conflicting traffic crossing left-to-right ahead with an indicated vertical separation of 1100ft. It was at this stage that the Bell 206 transited in the vicinity of the Sandhill Farm Airfield and the Grob 109.

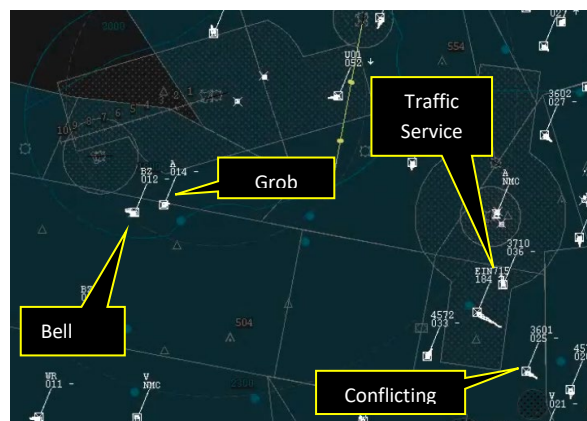


Figure 1: Snapshot showing relative positions of described traffic

The Grob 109 was detected by the Brize Norton non-cooperative radar throughout but not continually as an active Mode 3A/C track by WAM (co-operative radar) [...] and hence was displayed to the controller with no height information through “NMC”. Intermittently height information was presented where the Mode 3C information was detected. In line with MAA policy for the use of Unassured Surveillance Data, where controllers utilise the ADS-B information displayed they are instructed to provide it in the form of generic information to differentiate from standard traffic information.

#### Local BM Investigation(s)

The local investigation conducted by RAF Brize Norton identified the event outcome as a loss of safe separation between two non-cooperating aircraft. A BM-related causal/aggravating factor was identified:

a. The controller prioritised the provision of Traffic Information to a Traffic Service aircraft, which resulted in the Basic Service Bell 206 pilot receiving no ATC-provided information regarding the Grob 109.

i. No recommendation, as the prioritisation of Traffic Service over Basic Service is in accordance with UK Flight Information Service provision rules.

#### 2 Gp BM Analysis

The actions of the Brize Norton Lower Airspace Radar Service controller to prioritise the Traffic Service aircraft ahead of the Basic Service Bell 206 pilot are entirely supported. It could not be ascertained if the controller had assessed the Bell 206's proximity to the Grob 109 prior to provision of the Traffic Information to the other aircraft. If they had, then considering the profiles and intermittent height information being provided an assessment of no definite risk of collision would have been deemed suitable. Additionally, as the Bell 206 pilot was in receipt of a Basic Service the Brize Norton Lower Airspace Radar Service controller was not required to maintain continual oversight of the Bell 206 particularly when multiple Traffic Service aircraft which did require radar oversight were on frequency.

Overall, the actions taken by the Brize Norton Lower Airspace Radar Service controller are deemed suitable and in accordance with UK Flight Information Service provision rules.

#### UKAB Secretariat

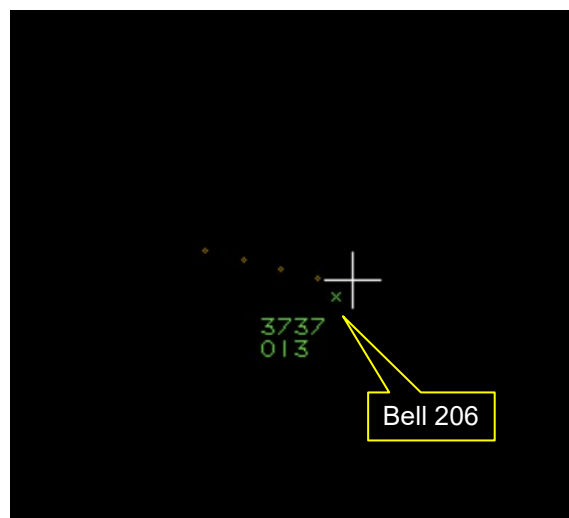


Figure 2: Reported CPA – 1332:30 – white cross indicates the reported position of the CPA.



Figure 3: At CPA 1332:30

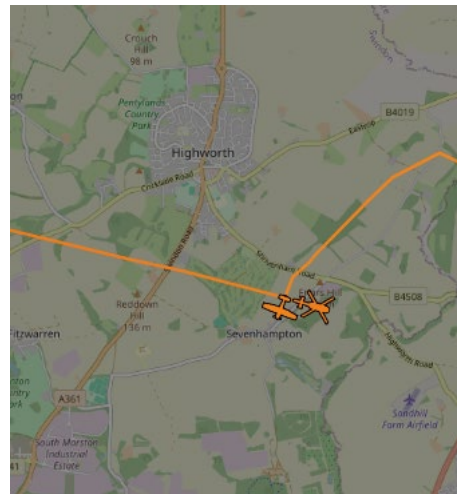


Figure 4: At CPA plus 10sec

Extract from V2.0 of Sandhill Farm Airfield Information:

### **Circuits**

*Sandhill Farm Airfield is an active gliding site, operating motorised-gliders and pure gliders launched by tow plane. All circuits to be flown to the north (RW22RH, RW04LH).*

The Grob 109 pilot reported as having a Mode A/C/S transponder but reviews of NATS radar replays showed no sign of the aircraft in the reported Airprox window (+/- 2 minutes). Figures 3 and 4 (above) show the tracks (extracted from an ADS-B tracking tool) taken by the Bell 206 and the Grob 109 to and beyond the reported CPA.

The Grob 109 and Bell 206 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>3</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>4</sup>

### **Comments**

#### **BGA**

Sandhill Farm Airfield is an active gliding site, operating motor gliders and pure gliders (launched by aerotow). Notified hours of operation are sunrise to sunset every day (see AIP ENR 5.5). In common with most gliding sites, circuits are commenced at about 800ft AGL (which is 1150ft AMSL here), with the downwind leg typically flown 700m to 1500m laterally from the runway.

Gliders and motor gliders operating within 10NM of Sandhill Farm below 3000ft AAL usually monitor and make traffic calls on VHF channel 129.980MHz, as notified on CAA charts and in AIP ENR 5.5. If transiting nearby, a brief broadcast call using "Unattended Aerodrome" phraseology (CAP 413 §4.162 et seq) would increase everyone's situational awareness and help avoid conflicts.

### **Summary**

An Airprox was reported when a Grob 109 and a Bell 206 flew into proximity at Sandhill Farm at 1333Z on Friday 26<sup>th</sup> April 2024. Both pilots were operating under VFR in VMC, the Grob 109 pilot listening out on the Sandhill Farm frequency and the Bell 206 pilot in receipt of a Basic Service from Brize Radar.

<sup>3</sup> (UK) SERA.3205 Proximity.

<sup>4</sup> (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

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

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS data, a report from the air traffic controller involved and a report from the appropriate operating authority. 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 discussed the actions of the Grob pilot, noting their sortie had been entirely within the circuit at Sandhill and had not been supported by any air traffic service, although they had been listening out on the Sandhill frequency. Although they had been carrying electronic conspicuity equipment, they had not been able to detect any electronic emissions from the Bell 206 (**CF7**), effectively depriving them of any situational awareness (**CF6**) but had fortuitously achieved visual contact with the Bell 206 at a late stage (**CF8**) as they had tracked downwind enabling them to make an avoidance manoeuvre.

Members next considered the actions of the Bell 206 pilot, noting that they had been on the return leg of a cross-country sortie having transited across Sandhill on the outbound leg and had not identified any traffic in that area. The Board did suggest that it may have been more appropriate to have planned to avoid overflight of marked glider sites (**CF2**) where activity can be significant when weather permits and this had been accentuated in this case because the chosen transit altitude had corresponded with the circuit height (**CF5**) and brought the Bell 206 into conflict with the Grob (**CF4**). Members also discussed the air traffic service requested by the Bell 206 pilot and opined that, where possible, a higher level of ATS, such as a Traffic Service (**CF3**) where available, afforded a higher priority within the controller's task load which may in this case have led to the Brize controller recognising the conflict with the Grob in the Sandhill circuit. Members noted the lack of electronic conspicuity equipment carried by the Bell and agreed that this, together with no mutual radio frequency with the Grob pilot, had left them only with the generic situational awareness of a marked glider site (**CF6**) and had ultimately contributed to a non-sighting of the Grob in this case (**CF9**).

When considering the contribution from the Brize Norton Radar controller, members recognised that in the provision of a Basic Service the controller is not required to monitor the flight (**CF1**) and had in this case prioritised other (non-involved) aircraft in receipt of a Traffic Service.

Concluding their discussion, members were in agreement that the separation between the aircraft had been such that it had caused the pilot of the Grob 109 concern and safety margins had been reduced, but were satisfied that there had not been a risk of collision. As such, the Board assigned Risk Category C to this event.

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

### Contributory Factors:

| 2024071                                   |               |  |  |  |
|---|---------------|--|--|--|
| CF  | Factor        | Description                                  | ECCAIRS Amplification  | UKAB Amplification   |
| <b>Ground Elements</b>                    |               |  |  |  |
| <b>• Situational Awareness and Action</b> |               |  |  |  |
| 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>                    |               |  |  |  |
| <b>• Tactical Planning and Execution</b>  |               |  |  |  |
| 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 | • Communications by Flight Crew with ANS     | An event related to the communications between the flight crew and the air navigation service. | Pilot did not request appropriate ATS service or communicate with appropriate provider |
| 4   | 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                       |
| 5   | 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 |               |  |  |   |
|--|---------------|--|--|---|
| 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 | • Identification/ Recognition              | Events involving flight crew not fully identifying or recognising the reality of a situation   | Late sighting by one or both pilots                                   |
| 9  | 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      |

Degree of Risk: C.

### Safety Barrier Assessment<sup>5</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 Air Traffic Control Officer is not required to monitor the flight under a Basic Service.

#### **Flight Elements:**

**Tactical Planning and Execution** was assessed as **ineffective** because the Bell 206 pilot had flown through a promulgated and active glider site at or around circuit altitude and had not conformed with or avoided the pattern of traffic formed by the Grob 109.

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

**Electronic Warning System Operation and Compliance** were assessed as **ineffective** because the equipment carried by the Grob 109 pilot had not been able to detect the electronic emissions from the Bell 206.

**See and Avoid** were assessed as **partially effective** because the Grob pilot had gained only a late sighting of the Bell 206 and the Bell 206 pilot had not gained visual contact with the Grob 109.

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

| <b>Airprox Barrier Assessment: 2024071</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 Conflicition & 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                              |  |                             |                    |                      |                                   |                 |     |     |