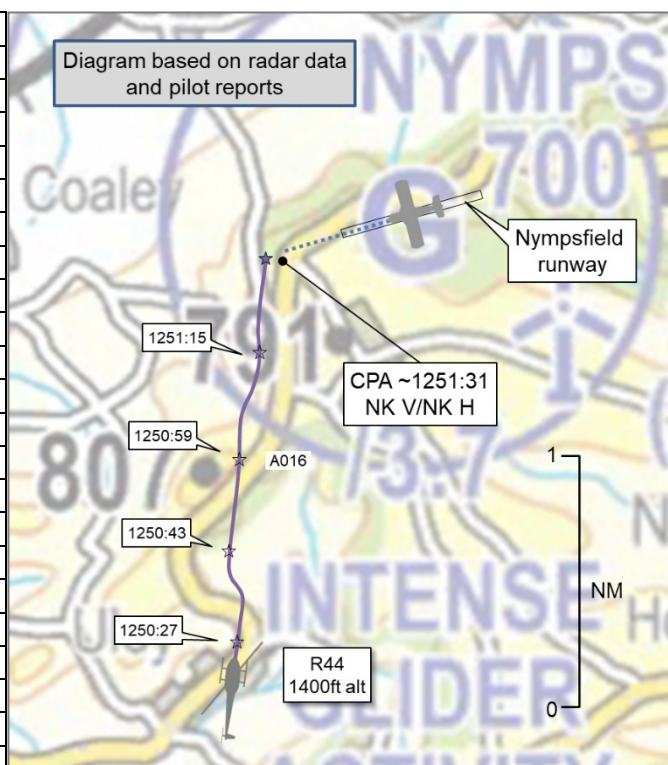


AIRPROX REPORT No 2022121

Date: 03 Jul 2022 Time: ~1252Z Position: 5143N 00218W Location: 0.5NM W Nympsfield

PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

| Recorded | Aircraft 1 | Aircraft 2 |
|-------------------|------------------|------------------|
| Aircraft | PA25 | R44 |
| Operator | Civ FW | Civ Helo |
| Airspace | London FIR | London FIR |
| Class | G | G |
| Rules | VFR | VFR |
| Service | Listening Out | Basic |
| Provider | Nympsfield Radio | Gloster Approach |
| Altitude/FL | NK | 1400ft |
| Transponder | Not fitted | A, C, S |
| Reported | | |
| Colours | Orange | Blue |
| Lighting | Nav, Strobe | Strobe |
| Conditions | VMC | VMC |
| Visibility | >10km | >10km |
| Altitude/FL | 1000ft | 1390ft |
| Altimeter | QNH (1021hPa) | QNH (NK hPa) |
| Heading | 270° | 005° |
| Speed | 70kt | 91kt |
| ACAS/TAS | FLARM | Not fitted |
| Alert | None | N/A |
| Separation at CPA | | |
| Reported | 100ft V/0m H | 300ft V/150ft H |
| Recorded | NK V/NK H | |



THE PA25 PILOT reports that they were flying the tug aircraft with a two-seater [glider] on tow. They were launching towards the west. As they climbed out, at approximately 200ft above the airfield (which is 700ft elevation), they saw the helicopter flying from south-to-north following the ridgeline. It made no deviation from its flight path. If it had been 50ft lower and they [the PA25] had been 50ft higher, they would have collided unless avoiding action was taken. Because they saw the helicopter they were able to monitor the situation.

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

THE R44 PILOT reports that after departing from [departure] airfield, they followed a VFR flight plan, returning to [destination] airport. Some isolated showers necessitated deviation from the original flight plan, resulting in a more westerly track past Nympsfield than originally intended. A recent radio frequency change to Gloster Approach for an en-route call also added to their workload. When they spotted the PA25 and associated glider, it was tracking right-to-left, below their altitude and the genuine risk of collision based on the relative tracks seemed low. However, the aircraft was tracking close enough for cautious corrective action to be taken, so they increased altitude and changed heading to track behind the PA25 and associated glider. Apologies were made to the pilot in command of the PA25 on the radio at the time of the incident. Upon landing, they reviewed the incident with an instructor to debrief so they could learn from it. They also made a courtesy call to the gliding club at Nympsfield, but unfortunately nobody answered the telephone.

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

THE GLOSTER APPROACH CONTROLLER reports that at 1252, the pilot of a PA25 glider-towing aircraft called on the Gloster Approach frequency to report that a helicopter had flown northbound along the Cotswold ridgeline and come into conflict with them when passing abeam Nympsfield Gliding Site. The PA25 pilot then asked if they were in contact with that pilot, to which they replied that they were in

contact with an R44 helicopter [routing] from the south. They then contacted the R44 pilot to ask if they had heard the previous transmissions, to which they replied that they had, and said that it was them and apologised for routing close to the gliding site. The PA25 pilot then said that they were changing back to Nympsfield Radio and did not say that they wished to file an Airprox at that time. At approximately 1315 the ATSA received a call on the landline from the PA25 pilot stating their intention file an Airprox.

Factual Background

The weather at Gloucestershire was recorded as follows:

EGBJ METAR 031250Z 33005KT 9999 VCSH FEW024 BKN035 18/12 Q1020

Analysis and Investigation

Gloucestershire ATSU investigation

Gloucestershire ATSU conducted an investigation and the details provided have been summarised below.

[Summary of RT] Recording:

| Time | Detail |
|------|--|
| 1247 | [R44 pilot] calls but told to standby. |
| 1248 | [R44 c/s] R44 1.5a 2 POB [departure airfield] to [destination airfield], ETA 2PM , request Basic Service and [redacted]. |
| 1249 | [R44 c/s] Basic Service QNH1020 and given traffic on an aircraft [redacted] who called at 1245. Aircraft asks if they should radio in at 3 miles and asked range (9NM of J18 VRP or 9NM west of Kemble) QNH1020. |
| 1249 | [R44 c/s] given [relevant destination information] and readback ([unrelated a/c] passed traffic regarding [R44 c/s]). |
| 1252 | [PA25 c/s] calls but transmission difficult to hear but aircraft is a PA25 near Nympsfield and just had a helicopter pass, is the helicopter on your frequency? |
| 1252 | Controller asks [R44 c/s] if they copied the transmission, apologies from [R44 c/s] and didn't see them from my right. |
| 1253 | [PA25 c/s] just a warning and gliding site is active and you need to be more careful. |
| 1253 | The controller offers [R44 c/s] the Nympsfield frequency. |
| 1253 | [PA25 c/s] transfers back to Nympsfield. |
| 1254 | [R44 c/s] remains with [Gloster Approach controller] and receives a new QFE. |

Telephone call to Tower – summary:

1307 [A representative] from Nympsfield [stated that the] pilot of a PA25 was close to an R44, and spoke to the CFI at Nympsfield , stating that if they were flying 50ft lower or higher then they would have hit and that they were towing a glider. They stated that the pilot of the PA25 would be filing an Airprox, their position was 300ft to 1000ft, just taking-off. The pilot of the PA25 watched the helicopter which didn't deviate from its course - the R44 went straight over the aircraft by 100ft.

The primary radar was reviewed and they were not able to see anything conclusive on the primary radar pictures as to [be sure] if any contacts were seen in this location.

Findings and observations.

An R44 flew in close proximity to another aircraft with a glider in tow according to the pilot of [the PA25]. No details of Nympsfield [traffic were] passed to the R44 [pilot].

CAA ATSI

CAA ATSI reviewed the RT recording for this event and noted the following points:

- At the time that the R44 pilot reported their position, they were still south of Nympsfield, and so could have been provided with generic Traffic Information by the Gloster Approach controller had they been aware of any activity. However, the controller did not include in their report any reference to being aware of activity there.
- Gloucestershire MATS Pt 2 requires:
 - *“All ATC staff are to remain vigilant for the presence of gliders both visually and on radar. When appropriate, pilots are to be advised if their planned or observed track is likely to take them into the proximity of known gliding activity.”*
- However, the unit subsequently reviewed the recording from their (primary) radar which is used as an ATM and reported that they were *“not able to see anything conclusive on the primary radar pictures as to if any contacts were seen in this location”*.

UKAB Secretariat

The PA25 and R44 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 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.² 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.³

Comments

AOPA

Whilst flying, it is good threat and error management and wise to have a ‘plan B’ and be ready to implement it. Whilst talking to an ATC unit, obtaining the best service available is good airmanship. In this case, and routing overhead a known gliding site, it would have been advantageous to call the gliding site, improving everyone’s Situational Awareness, rather than utilising a Basic Service from an ATC unit some distance away.

BGA

UK glider launch sites are listed in UK AIP ENR 5.5 and labelled on the CAA 1:500,000 and 1:250,000 charts with a "G" symbol, as shown in the chart segment in Part A. A greater density of gliders may be expected nearby at any time during daylight hours, and at any altitude up to cloudbase. Glider circuits at UK gliding sites are typically commenced at 700-900 ft AAL (i.e. 1400-1600ft AMSL at Nympsfield), in approximately the location where the Airprox occurred, so the R44 was also at risk of encountering Nympsfield circuit traffic.

ATSUs providing an ATS to aircraft flying near busy gliding sites should consider installing low-cost equipment that uses gliders’ EC transmissions to give controllers instantaneous situational

¹ (UK) SERA.3205 Proximity.

² (UK) SERA.3210 Right-of-way (c)(2)(iv) Converging.

³ (UK) SERA.3225 Operation on and in the Vicinity of an Aerodrome.

awareness of the intensity of gliding activity at those sites. The BGA would be happy to advise interested ATSUs.

Summary

An Airprox was reported when a PA25 and an R44 flew into proximity approximately 0.5NM west of Nympsfield at approximately 1252Z on Sunday 3rd July 2022. Both pilots were operating under VFR in VMC, the R44 pilot in receipt of a Basic Service from Gloster Approach and the PA25 pilot not in receipt of an ATS.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available consisted of reports from both pilots, radar photographs/video recordings, reports from the air traffic controllers 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 PA25 pilot and a glider pilot member stated that, when towing a glider and during the early stages after departure, the ability to manoeuvre is limited for tug pilots, especially when still close to the ground. Members noted that, although the PA25 pilot had been carrying EC equipment, this had been of a type commonly used by glider pilots and had not been compatible with, and therefore had been unable to detect, the EC equipment carried by the R44 pilot (**CF6**). Members agreed that with the absence of compatible EC, and having had no mechanism to gain information relating to the R44 via the radio, the PA25 pilot would have not had any awareness of its presence prior to sighting it (**CF5**). However, the Board was encouraged that the PA25 pilot had been able to visually acquire the R44 and monitor its progress, although members noted that they had been concerned by its proximity (**CF8**).

Next, members considered the actions of the R44 pilot, noting that they had reported routing close to Nympsfield after having been unable to follow their intended routing due to weather. The Board agreed that the pilot had had an awareness of the gliding site at Nympsfield and of the possibility that aircraft may have been operating there (**CF5**). The Board wondered whether the presence of the Severn bird sanctuary to the west had influenced the R44 pilot's choice of route, resulting in them flying close to the Nympsfield overhead (**CF2**), which had resulted in them not avoiding the established pattern of traffic (**CF3**, **CF4**). The Board then considered the Flight Information Service that the R44 pilot had been utilising and, whilst members appreciated why the pilot had chosen a service from Gloster, they also examined whether other options had been available. Members noted that Gloster is a non-surveillance unit and therefore would only have information relating to known traffic. The Board examined the availability of surveillance-based services and, although the location of the Airprox does fall within the UK LARS provision, due to the low level nature of the event, a LARS controller may have had only limited radar information available. Members also considered whether a call on the Nympsfield radio frequency would have been appropriate, and agreed that in this instance that may have provided additional, relevant, information however, the Board went to on conclude that it is often not appropriate or practicable for pilots to call every small airfield along their routing. The Board was encouraged that the R44 pilot had become visual with the PA25, and the associated glider, and that the pilot had adjusted their course to facilitate additional separation. However, members agreed that the R44 pilot had still flown sufficiently close to the PA25 to have caused its pilot some concern (**CF7**). A glider pilot member highlighted that the right turn that the R44 pilot had made may have taken them closer to the glider site, stating that pilots should be constantly alert to the risk of encountering glider winch cables.

The Board then turned its attention to the ground element involvement and quickly agreed that the Gloster controller had not been required to monitor the R44 pilot's flight under the Basic Service which they had been delivering (**CF1**). A civil ATC member stated that, as Gloster is not surveillance-equipped and they had not been informed of gliding activity at Nympsfield, they would have had no knowledge of the presence of the PA25.

Finally, the Board considered the risk involved in this Airprox. Members discussed that, despite having no prior awareness of the presence of the R44, the PA25 pilot had become visual with it early enough to allow them to monitor the situation without having to take any action. Members agreed that the R44 pilot had visually acquired the PA25 with sufficient time to enable them to make a small track adjustment to maintain separation however, their proximity had concerned the PA25 pilot. The Board concluded that there had been no risk of collision however, safety had been degraded. Consequently, the Board assigned a Risk Category C to this event.

PART C: ASSESSMENT OF CONTRIBUTORY FACTORS AND RISK

Contributory Factors:

| | 2022121 | | | |
|---|---------------|--|--|--|
| 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 |
| 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 |
| • Situational Awareness of the Conflicting Aircraft and Action | | | | |
| 5 | 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 | | | | |
| 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 | • Incorrect Action Selection | Events involving flight crew performing or choosing the wrong course of action | Pilot flew close enough to cause concern |
| 8 | 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 Assessment⁴

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, when providing a Basic Service, the controller is not required to monitor the flight.

⁴ The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).

Flight Elements:

Tactical Planning and Execution was assessed as **partially effective** because, when planning their weather avoidance, the routing chosen by the R44 pilot had not been sufficiently adapted to avoid flight in the vicinity of Nympsfield and the associated traffic pattern.

Situational Awareness of the Conflicting Aircraft and Action were assessed as **ineffective** because the PA25 pilot had not had any prior awareness of the presence of the R44, and the R44 pilot had only generic situational awareness that there may be gliders in the vicinity by virtue of their proximity to Nympsfield glider site.

Electronic Warning System Operation and Compliance were assessed as **ineffective** because the EC equipment carried by the PA25 pilot had been incompatible with, and therefore unable to detect, the EC equipment on the R44.

| Airprox Barrier Assessment: 2022121 | | Outside Controlled Airspace | | Effectiveness | | | | | |
|-------------------------------------|--|-----------------------------|-------------|---------------|----------------------------|----------|-----|-----|--|
| Barrier | | Provision | Application | 0% | 5% | 10% | 15% | 20% | |
| Ground Element | Regulations, Processes, Procedures and Compliance | ✓ | ✓ | | | | | | |
| | Manning & Equipment | ✓ | ✓ | | | | | | |
| | Situational Awareness of the Conflicting Aircraft & 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 | ✓ | ✓ | | | | | | |
| Key: | | Full | Partial | None | Not Present/Not Assessable | Not Used | | | |
| Provision | ✓ | ⚠ | ✗ | ● | | | | | |
| Application | ✓ | ⚠ | ✗ | ● | ○ | | | | |
| Effectiveness | | | | | | | | | |