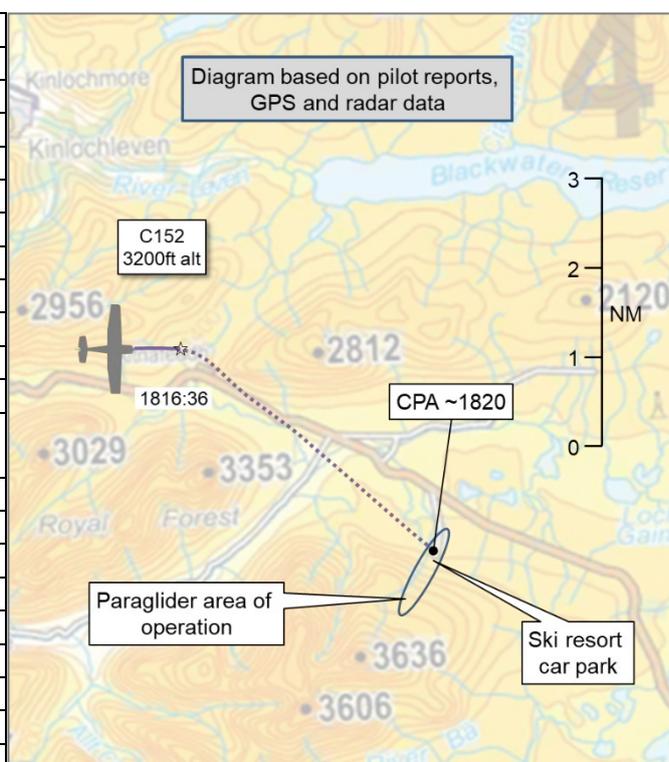


## AIRPROX REPORT No 2021160

Date: 25 Aug 2021 Time: ~1820Z Position: 5638N 00449W Location: Glencoe mountain resort

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

| Recorded                 | Aircraft 1   | Aircraft 2           |
|--------------------------|--------------|----------------------|
| Aircraft                 | Paraglider   | C152                 |
| Operator                 | Civ Hang     | Civ FW               |
| Airspace                 | Scottish FIR | Scottish FIR         |
| Class                    | G            | G                    |
| Rules                    | VFR          | VFR                  |
| Service                  | None         | Basic                |
| Provider                 | N/A          | Scottish Info        |
| Altitude/FL              | NK           | NK                   |
| Transponder              | None         | A, C, S              |
| <b>Reported</b>          |              |                      |
| Colours                  | Lime green   | White                |
| Lighting                 | None         | Nav, beacon, strobes |
| Conditions               | VMC          | VMC                  |
| Visibility               | >10km        | >10km                |
| Altitude/FL              | 3000ft       | 3200ft               |
| Altimeter                | QNH (NK hPa) | QNH (NK hPa)         |
| Heading                  | 360°         | 090°                 |
| Speed                    | 12kt         | 90kt                 |
| ACAS/TAS                 | Not fitted   | Not fitted           |
| <b>Separation at CPA</b> |              |                      |
| Reported                 | 0ft V/100m H | 100ft V/800ft H      |
| Recorded                 | NK V/NK H    |                      |



**THE PARAGLIDER PILOT** reports that they had been flying their paraglider round Glencoe for about 2½ hrs. They had set out across the valley heading north and had flown for maybe ½ or 1km to the east of the mountain resort car park at approximately 3000ft. Conditions were very good visibility, the sky was cloudless and it was a little after 1800, so shadows were getting long on the ground. To see anything to the west was difficult at times due to the low, strong sun and, in the event, they reported hearing the other aircraft before seeing it. They didn't see it until just before (maybe 3sec) it crossed in front of them. Both aircraft were at exactly the same altitude. They assumed that they would have been very visible to the other pilot as [the other pilot] had the sun behind them. They did not have a chance to note the registration but the [other] pilot did not appear to be looking in the direction [of the paraglider] and no avoiding action was taken [by the other pilot], and so they presumed they had not been seen. It was all over before they could take any action.

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

**THE C152 PILOT** reports that they were flying east along Glencoe. Roughly north of the Ski Centre they noticed the other aircraft at a similar height, heading roughly NW. They were in contact with Scottish Information who did not know of any traffic in the area, and there was no nearby traffic on frequency. They banked to the left after seeing the paramotor (they are not sure exactly what it was). At the closest point [they estimate that] there was approximately 800ft [lateral] separation. They informed Scottish Information that there was at least one [paraglider] operating in the area afterwards and continued east along Loch Rannoch. The paramotor [pilot] never joined the frequency.

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

**THE SCOTTISH INFORMATION FISO** reports that the FIR was particularly busy that day. They have checked the flight progress strips for that day and [the C152 pilot] initially called-in on the FIR frequency at 1712. According to the flight progress strip [the C152 pilot] reported microlights in the Glencoe area

at 3000ft at about 1819. They acknowledged this report and then annotated it on the flight progress strip. They were unaware that there had been an Airprox and [believe] that this was merely Traffic Information passed to them in the event that [it could be passed on should] they have other aircraft traversing that area.

## Factual Background

The weather at Glasgow was recorded as follows:

METAR EGPV 251820Z AUTO VRB03KT 9999 NCD 24/18 Q1025=

## Analysis and Investigation

### NATS Safety Investigations

NATS Safety Investigations was advised by the UK Airprox Board that a paraglider had submitted an Airprox report reference a confliction with a C152 in receipt of a Basic Service from Scottish Information. The event occurred whilst in the vicinity of Glencoe, where the pilot of [the C152] encountered microlight activity at 3000ft. The pilot of [the C152] did not report any intention to file an Airprox on the frequency.

Information available to the investigation included:

- Radar and R/T recordings
- UK Airprox Board incident notification
- Redacted copy of the pilot's Airprox report
- CA4114 from Scottish Flight Information Service Officer (FISO) filed retrospectively

[The C152 pilot] was in receipt of a Basic Service from Scottish Information and displaying Mode-A code. The radar images from around the time that the Airprox was reported show that [the C152] (identified using Mode-S transponder data) was in the vicinity of Glencoe and indicating an altitude of 3000ft. However, the aircraft was not consistently within radar coverage and was not visible at all between 1816:42 (all times UTC) and 1822:37. The track of [the C152] indicated that it was during this period that they would have flown near to Glencoe ski centre, the location where the Airprox was reported to have occurred. No other radar returns were visible around the location at this time.

At **1819:16**, the pilot of [the C152] reported to the Scottish FISO;

[C152 c/s] : *"Err Scottish information, [C152 c/s] just for information there are microlights operating in the Glencoe"*

Scottish FISO: *"[C152 c/s] Scottish roger thank you"*.

At **1819:48** the pilot repeated:

[C152 c/s] - *"Scottish information, [C152 c/s]"*

Scottish FISO - *"[C152 c/s] Scottish, go ahead"*

[C152 c/s] - *"Err just for information there are microlights operating at around 3000 feet at Glencoe"*

Scottish FISO - *"[C152 c/s] Scottish roger thank you"*

Due to the aircraft being outside radar coverage at the time, with no contacts related to the microlight/paraglider activity, there are no useful radar images that could be provided for this event.

The FISO reported that it was a particularly busy day in the FIR. The FISO also reviewed the flight progress strips for the day and recalled annotating the report of microlight activity on the strip so that it could be passed to other aircraft, but was unaware that an Airprox had occurred.

The Airprox occurred when [the C152] encountered paraglider/microlight activity in the vicinity of Glencoe at approximately 3000ft.

Safety Investigations reviewed the radar at the time the Airprox was reported and the time that the pilot of [the C152] reported the microlight activity, however, [the C152] was outside radar coverage and no other radar contacts were visible.

## UKAB Secretariat

An analysis of the NATS radar replay was undertaken. The C152 was observed on radar until 1816:36 at which point it disappeared (Figure 1). It reappeared at 1822:30 in a position approximately 7.8NM away (Figure 2). The groundspeed of the C152 recorded on the radar was ~83kts meaning the maximum distance it could have flown in that time is 8.3NM, therefore, it is likely that it did not follow a direct routing between these points. The paraglider pilot supplied the UKAB Secretariat with a GPS log file from which their area of operation has been extracted, as shown in the diagram. As the C152 pilot's routing between the recorded radar returns was unlikely to have been direct, this could have allowed them to pass near to, or through, the northern part of the area of operation of the paraglider.

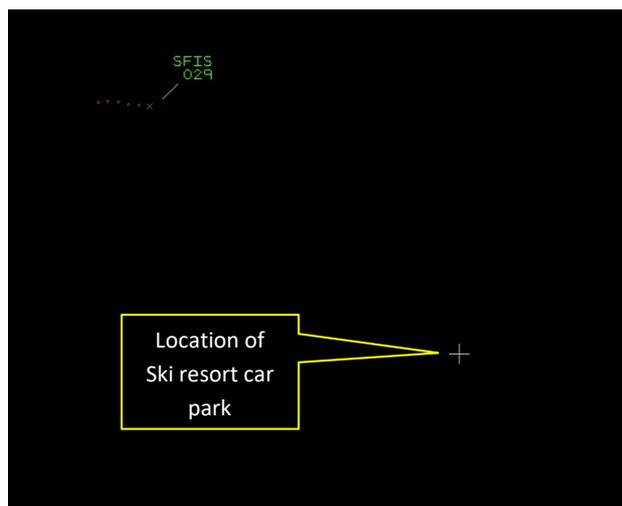


Figure 1. 1816:36 – C152 disappears from radar.

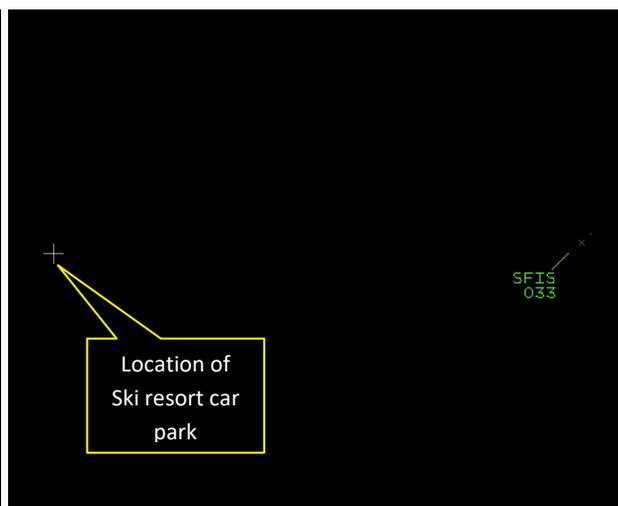


Figure 2. 1822:30 – C152 reappears on radar.

The paraglider and C152 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 C152 pilot was required to give way to the paraglider.<sup>2</sup>

## Comments

### BHPA

The BHPA believes luck more than judgement prevented the outcome of this incident from being more serious as, according to the Cessna pilot's account, it appears that they saw the other aircraft and simultaneously initiated a turn. Nevertheless, the distance to the paraglider pilot was worryingly small. The paraglider pilot was using their hearing and eyesight to eventually spot the Cessna, but with the amount of time left (3secs) until a potential mid-air collision, and a paraglider's limited speed and manoeuvrability, they were acutely aware that they would probably not have been able to prevent a collision.

## Summary

An Airprox was reported when a paraglider and a C152 flew into proximity at Glencoe mountain resort at approximately 1820Z on Wednesday 25<sup>th</sup> August 2021. Both pilots were operating under VFR in VMC, the C152 pilot in receipt of a Basic service from Scottish Information and the paraglider pilot not in receipt of an air traffic service.

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

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

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

Information available consisted of reports from both pilots, radar photographs/video recordings, GPS data files, 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.

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 considered the actions of the paraglider pilot and discussed that they had not been in communication with any ATS provider. A paraglider pilot member stated that only a tiny percentage of paraglider, hang-glider and paramotor pilots have an FRTOL licence and/or carry an air-band radio and that most will carry either a 2-metre radio or a PMR (private/professional mobile radio) management-type radio to communicate with their fellow free-flyers or a retrieve crew. Understanding this limitation, the Board agreed, however, that as a result of the paraglider pilot not being in receipt of an ATS they had not had any situational awareness regarding the presence of the C152 (**CF2**).

In considering the actions of the C152 pilot, a GA pilot member noted that they were utilising a Basic Service from Scottish Information where the FISO is not required to monitor the flight (**CF1**) and that, although this had been the best available ATS in that location, the limitations of the Service meant that the FISO had not been able to provide the pilot with any situational awareness regarding the paraglider (**CF2**). A discussion followed regarding the issuing of NOTAMS which inform of paraglider operations however, this system is only available when there are five or more paragliders operating together which had not been the case in this instance. A paraglider pilot member pointed out that the C152 pilot had seemed unsure whether the other aircraft was a paramotor, a paraglider or a microlight and reported: "*there are microlights operating in the Glencoe*". They opined that this may have misled other pilots into keeping a look-out for other aircraft and not a lone, slow moving paraglider. Members agreed that the C152 pilot had become visual with the paraglider in time to be able to take what they felt had been effective avoiding action; however, the separation was such that the paraglider pilot was concerned by the proximity of the C152 (**CF3**). It was also highlighted by a paraglider pilot member that the paraglider pilot may have been concerned that the lingering propwash/downwash from a powered aircraft acting upon a collapsible nylon canopy can have disastrous/fatal results even at actual CPA distances which do not appear that close.

Finally, the Board considered the risk involved in this Airprox. Members noted that the C152 pilot had been unable to provide a GPS log file for their flight and had been below the coverage of the NATS radar system at the point of the Airprox occurring, meaning that they had no positional data for the C152. Consequently, no recorded CPA was available so the Board considered the estimated separation reported by both pilots. Members noted that the paraglider pilot had assessed the risk of collision to be 'high', whilst the C152 pilot had reported sighting the paraglider early enough to take avoiding action and had assessed the risk of collision as 'low'. Considering the superior manoeuvrability of the C152 and the pilot reporting being visual with the paraglider, the Board concluded that there had been no risk of collision but that safety had been reduced. Consequently, the Board assigned a Risk Category C to this event.

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

### Contributory Factors:

| 2021160                                   |            |                                    |                                     |  |
|---|------------|------------------------------------|-------------------------------------|--|
| 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 |

| Flight Elements  |               |  |   |  |
|--|---------------|--|---|--|
| • 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 or only generic, Situational Awareness  |
| • See and Avoid  |               |  |   |  |
| 3  | 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>3</sup>

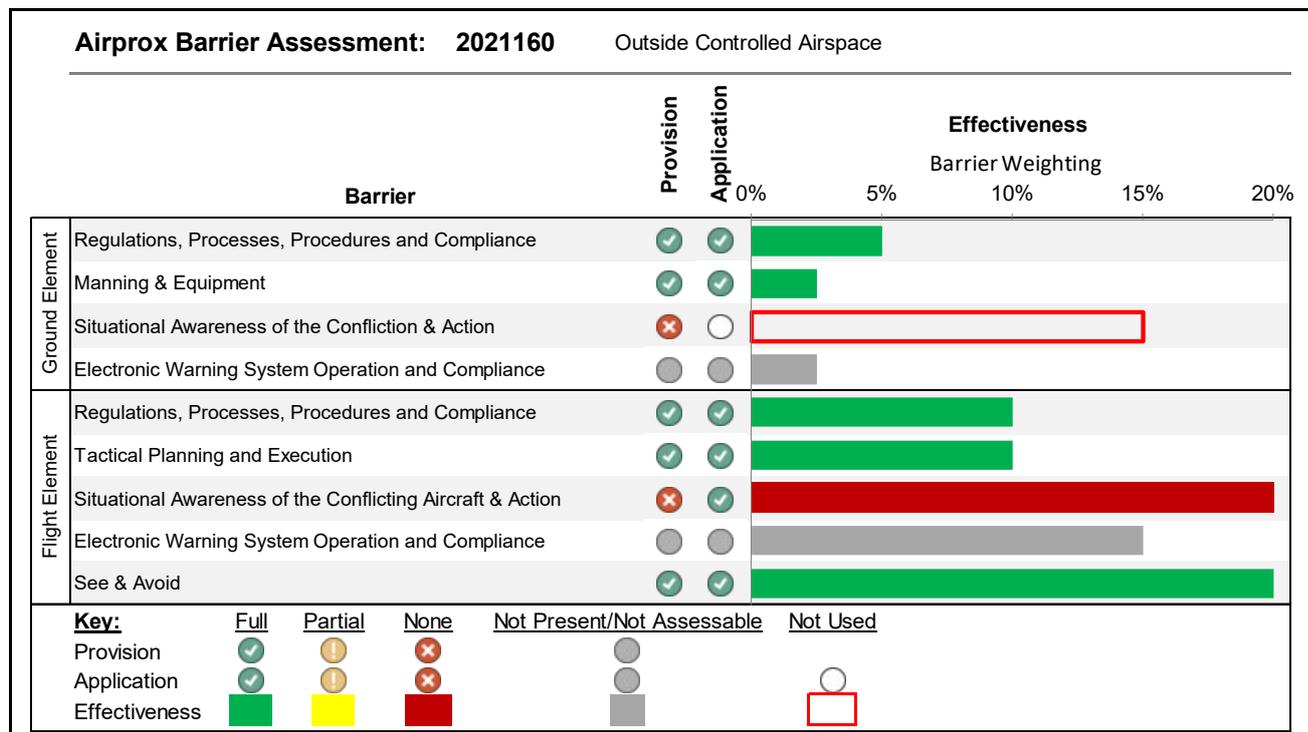
In assessing the effectiveness of the safety barriers associated with this incident, the Board concluded that the key factors had been that:

**Ground Elements:**

**Situational Awareness of the Confliction and Action** were assessed as **not used** because under a Basic service, the FISO is not required to monitor the flight

**Flight Elements:**

**Situational Awareness of the Conflicting Aircraft and Action** were assessed as **ineffective** because neither pilot had any knowledge regarding the presence of the other aircraft prior to sighting it.



<sup>3</sup> The UK Airprox Board scheme for assessing the Availability, Functionality and Effectiveness of safety barriers can be found on the [UKAB Website](#).