Sport and Recreational Aviation occurrence insights

Insights period: 1 January 2025 through to 31 March 2026

Executive summary

The Civil Aviation Authority is working to share insights into safety risks in a way that leads to greater awareness across the aviation sector. By highlighting key occurrences and trends, we aim to provide access to timely and relevant safety and security information that helps industry to assess the risk to their own operation, improve existing controls, meet safety obligations, strengthen collaboration, and ultimately contribute to a safer, more resilient aviation environment.

This report provides an overview of occurrence data from the sport and recreational aviation sector between 1 January 2025 and 31 March 2026, highlighting emerging patterns and system-level risks to support proactive safety management.

Key system insights

Across the sport and recreational aviation sector, several patterns consistently appeared in reported occurrences. This section highlights these key insights, which are further expanded on later in this report.

1. Small events are warning signs

Most reported occurrences were minor, and few resulted in injury. However, recurring low-consequence events consistently pointed to persistent systemic safety vulnerabilities.

This pattern aligns with Heinrich's Triangle theory[1], which suggests that serious incidents are typically preceded by far more frequent minor events and near misses. Routine deviations, incorrect procedures and airspace errors should be treated as early indicators of system stress – not accepted as part of normal operations.

2. Airspace remains the dominant system challenge

Across gliders, microlights and gyroplanes, the largest recurring issue was operating safely within increasingly busy airspace. Common themes included:

- controlled airspace infringements and ADS-B issues
- altitude deviations
- incomplete radio communication, and
- loss of situational awareness.

As traffic density increases, small navigation or communication errors leave less room for recovery.

3. Low altitude removes options

Many occurrences developed close to terrain or during launch and landing, once control was lost, pilots often had little opportunity to recover.

[1] Heinrich, H. W. (1931). *Industrial Accident Prevention: A Scientific Approach*. McGraw-Hill.

Whether flying gliders, paragliders or microlights, low altitude consistently turned manageable errors into accidents. Protecting recovery margin remains one of the strongest safety defences.

4. Experience does not guarantee safety

Many narratives involved experienced pilots. Several described:

- overconfidence
- familiarity with the site
- pushing personal limits, and
- continuing in marginal conditions.

The data suggests that experience sometimes shifts the nature of risk rather than eliminating it. Sound judgement remains the most effective risk control.

5. Operational drift deserves attention

Repeated procedural shortcuts appeared across several aircraft types. Examples included:

- joining errors
- runway selection mistakes
- non-compliant ADS-B operation
- incomplete checks,
- informal verification processes.

Individually these events were minor but collectively they indicate gradual drift away from standard practice.

6. Bottom line

The data doesn't point to widespread unsafe flying. Instead, it shows that routine operational drift, increasing airspace complexity and reduced recovery margins continue to shape risk across sport and recreational aviation.

How to read this report

We highlight selected examples and patterns that provide the greatest value for understanding emerging system risks. These insights are indicative, not exhaustive, and are intended to support early awareness and proactive risk management.

The insights provided are high-level and may not yet be fully analysed. They are not shared to attribute blame, but to reinforce that aviation safety depends on shared responsibility and collaboration across the system. It is also expected that these insights may assist you in identifying or mitigating potential risks within your own aviation activities.

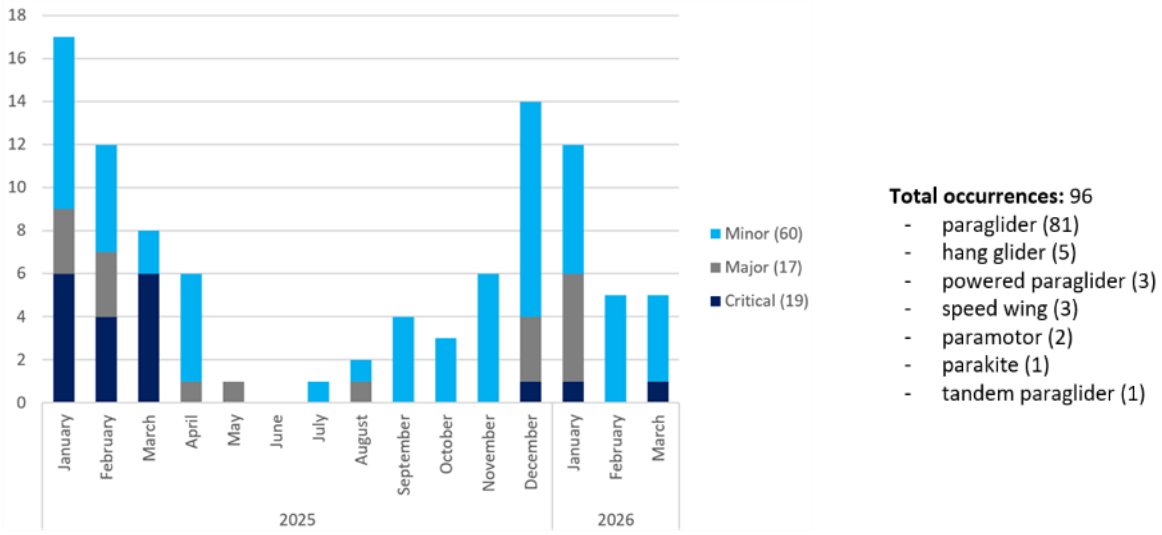
Please note that the data referred to in this insight report was pulled on the 1st of May 2026 and reflects the reported information available at that time.

Key themes and insights

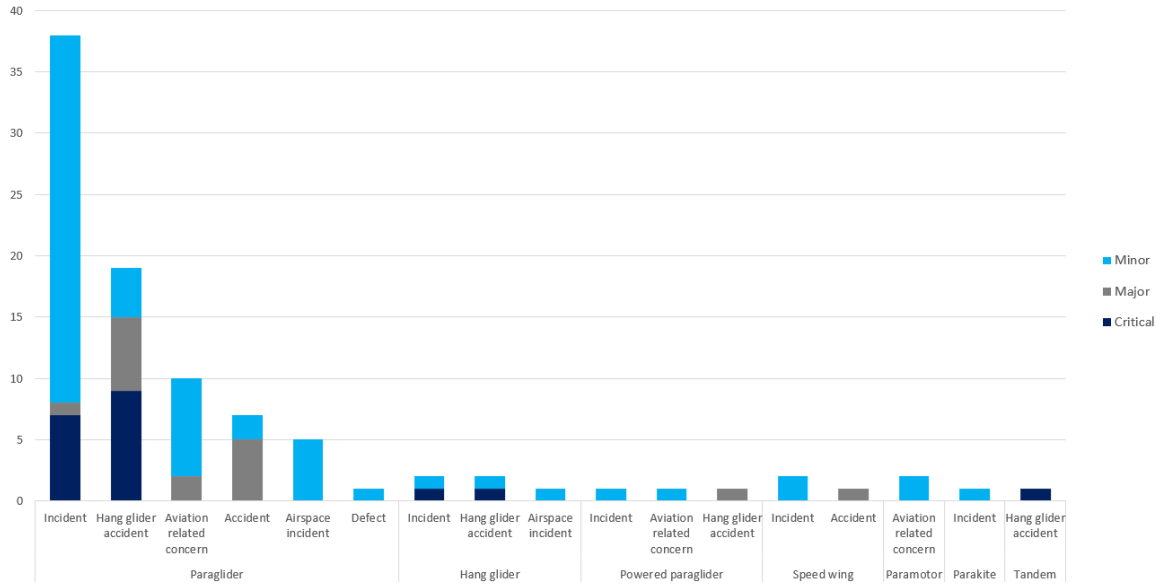
1. What keeps showing up in sport and recreational aviation

Risk driver	Appears in
Decision-making in marginal / changing conditions	Paraglider, microlight
Airspace integration & ADS-B visibility issues	Glider, microlight, gyroplane
Routine operational deviations (normalised behaviours)	Microlight, paraglider
Low-altitude operations (reduced recovery margins)	Paraglider, gyroplane, microlight
High-frequency, low-consequence events	All sectors

2. Paraglider/tandem paraglider/hang glider



Graph 1: Paraglider/tandem paraglider/hang glider occurrences (includes paramotor, parakite, speed wing, and powered paraglider)



Graph 2: Paraglider/tandem paraglider/hang glider occurrences by type (includes paramotor, parakite, speed wing, and powered paraglider)

What the data shows

As to be expected, the data shows a trend of higher occurrence rates during the warmer months of the year when more people are on holiday, and the weather is generally better. The year 2026 has started to see a decline in the number of reported occurrences, including fewer severe criticality occurrences. This may be, in part, due to the NZHGPA's "Fly Like a Bird, Think Like a Pilot" safety campaign, made in partnership with the CAA.

Incidents make up the majority of the occurrences at 46 percent, while accidents make up 32 percent. Accident occurrences include paraglider accidents or hang glider accidents – two involved hang gliders, one a speed wing, one a powered paraglider, one a tandem paraglider, and the remaining 27 involved paragliders.

The data reflects a consistent pattern where lower-severity incidents occur frequently. But when control is lost or conditions are misjudged, the event escalates quickly and often results in injury.

Many occurrences take place at low altitude, particularly during:

- launch
- landing or top landing attempts, and
- ridge soaring and thermalling close to terrain.

These environments inherently limit recovery options, meaning small errors can quickly become a loss of control event.

Some common occurrence types include:

- loss of control events such as collapses, spins, and stalls
- hard or uncontrolled landings
- unstable or aborted launches, and
- collisions with terrain, obstacles, or water.

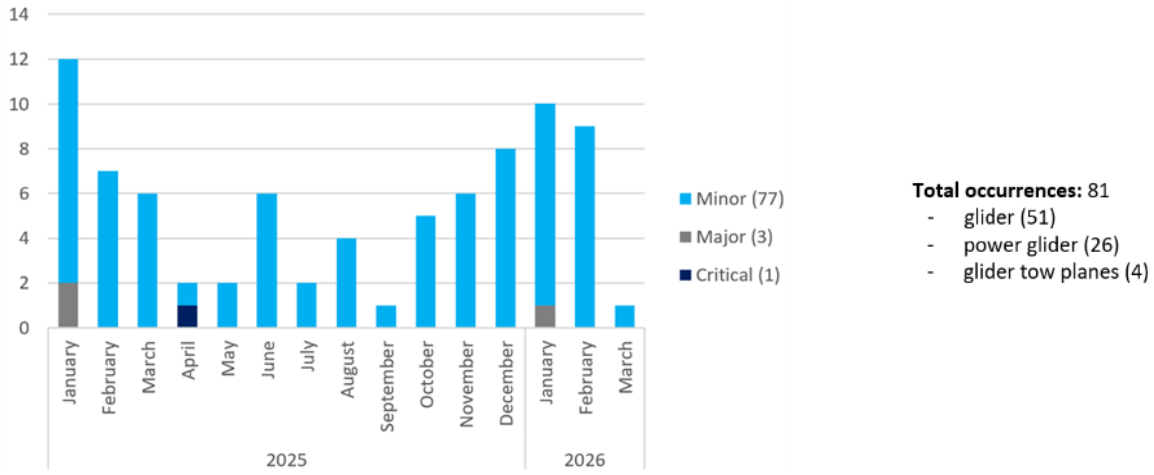
Environmental conditions are a dominant feature across many occurrences. Repeated references include:

- gusting or crosswind conditions
- thermic activity and turbulence
- rotor and lee-side effects near terrain, and
- rapid or unexpected changes in wind strength and direction.

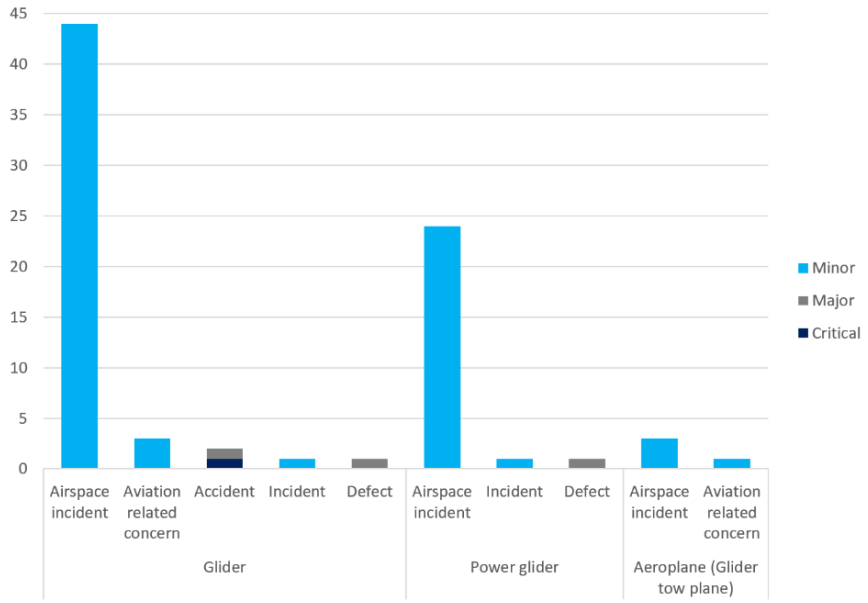
Many reports describe issues related to decision-making, judgement, and overall flight management. These include launching in marginal weather conditions (particularly during wind events), continuing flights despite deteriorating conditions, or misjudging landing options.

There's also evidence of fatigue and overconfidence influencing pilot performance, particularly during longer flights or when operating in unfamiliar locations.

3. Glider/power glider



Graph 3: Glider/power glider occurrences (includes glider tow aircraft)



Graph 4: Glider/power glider occurrences by type (includes glider tow aircraft)

What the data shows

Glider and power glider occurrences are predominantly low severity and high frequency, with most events classified as minor incidents. Despite this, they highlight persistent challenges across the system, particularly in airspace integration and compliance.

A clear trend in the data is the dominance of airspace-related occurrences (88 percent), including:

- entry into controlled airspace without clearance
- exceeding assigned altitude limits
- lateral deviations from designated sectors, and
- incorrect or incomplete joining and circuit procedures.

Many of these occurrences are reported with no immediate impact on operations. However, the regularity of these occurrences indicates ongoing issues with situational awareness and compliance with standard operating procedures.

There are also multiple instances involving interaction with other airspace users, including:

- conflicts or near-conflicts with commercial aircraft
- operations near parachute activity, and
- other gliders and general aviation traffic in shared airspace.

Although most of these events do not result in collision, several describe close proximity events, highlighting the importance of maintaining awareness in increasingly complex airspace environments.

Operational factors contributing to these events include:

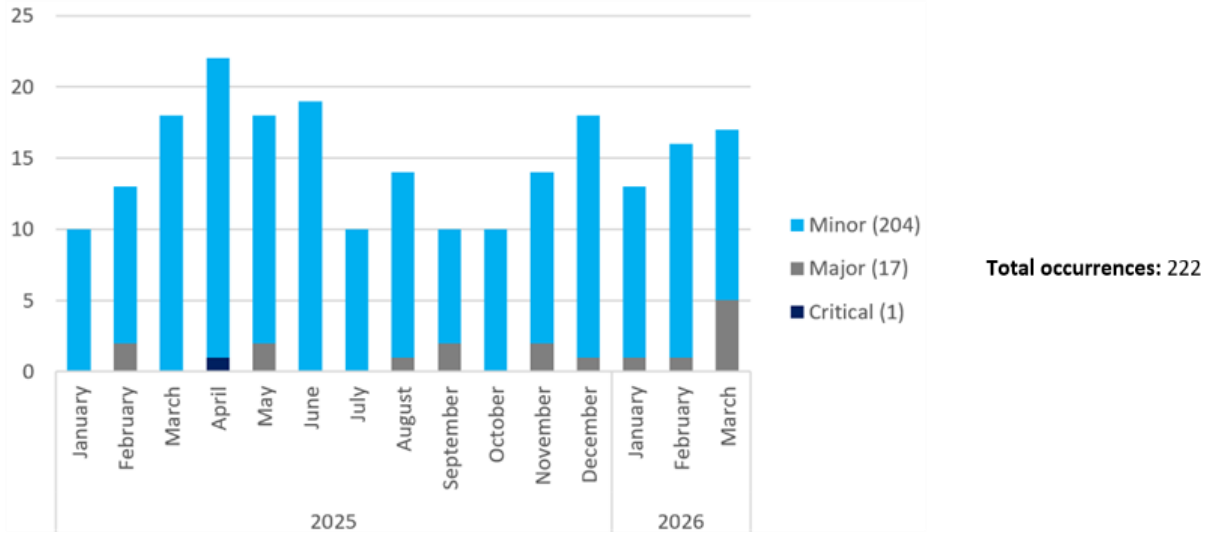
- high workload during cross-country or competition flying, and
- challenges maintaining accurate altitude and positional awareness in dynamic soaring conditions.

Technical occurrences are present but less common, including:

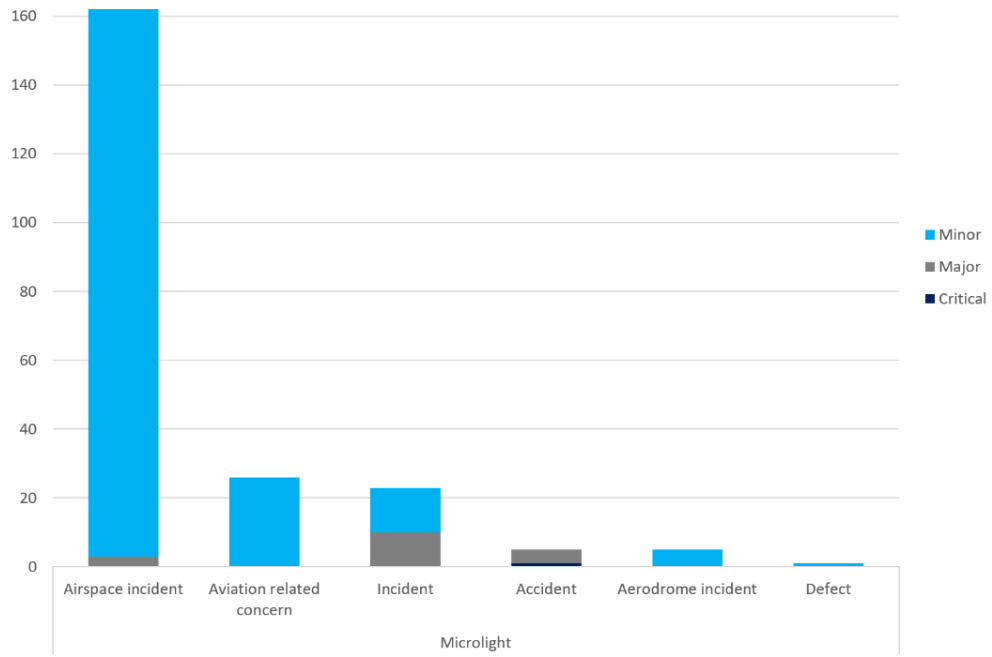
- control system issues (eg, control surface malfunctions)
- engine or propulsion issues in power gliders, and
- avionics or instrumentation limitations.

Overall, glider operations show a pattern of frequent, low-consequence events driven largely by airspace and operational factors, with underlying dependencies on pilot awareness, navigation accuracy, and coordination with other airspace users.

4. Microlight



Graph 5: Microlight occurrences



Graph 6: Microlight occurrences by type

What the data shows

Microlight occurrences represent a high-number of occurrences in sport and recreational aviation, with the majority classified as minor-severity incidents.

A dominant feature of the data is the prevalence of airspace and operational compliance issues, including:

- entry into controlled airspace without clearance
- altitude deviations, particularly climbing above airspace limits
- incorrect joining or circuit procedures, and
- limited or ineffective radio communication.

While many of these events do not result in immediate impact to operations, they reduce visibility to other airspace users and controllers, contributing to reduced situational awareness of all.

Operational deviations are common and include:

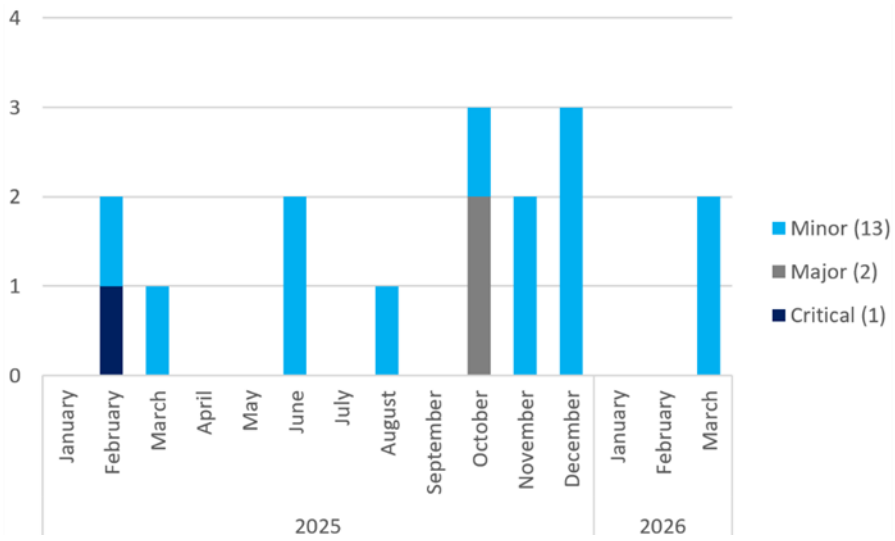
- taxi, runway, and circuit errors
- use of closed or incorrect runways, and
- low-level flying concerns raised by the public.

Technical and mechanical issues occur less frequently but are notable in several cases, including:

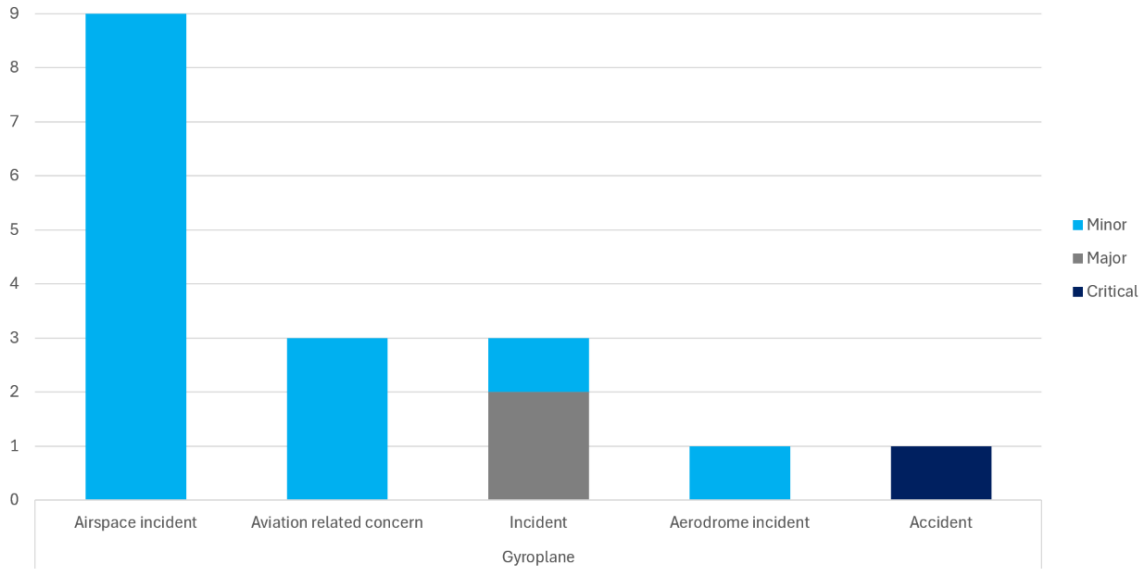
- engine failures or partial power loss requiring precautionary landings
- landing gear or structural failures during landing, and
- avionics or transponder faults.

Across the dataset, there's a clear pattern of frequent, low-consequence events, often reflecting routine operational deviations and equipment issues, rather than catastrophic failures, but with consistent implications for overall safety.

5. Gyroplane/gyrocopter



Graph 7: Gyroplane/gyrocopter occurrences



Graph 8: Gyroplane/gyrocopter occurrences by type

What the data shows

Gyroplane occurrences are relatively low in number but display a mix of operational, technical, and ground-handling related events, with most classified as minor severity.

Occurrences included:

- engine run-up or testing events leading to unintended aircraft movement

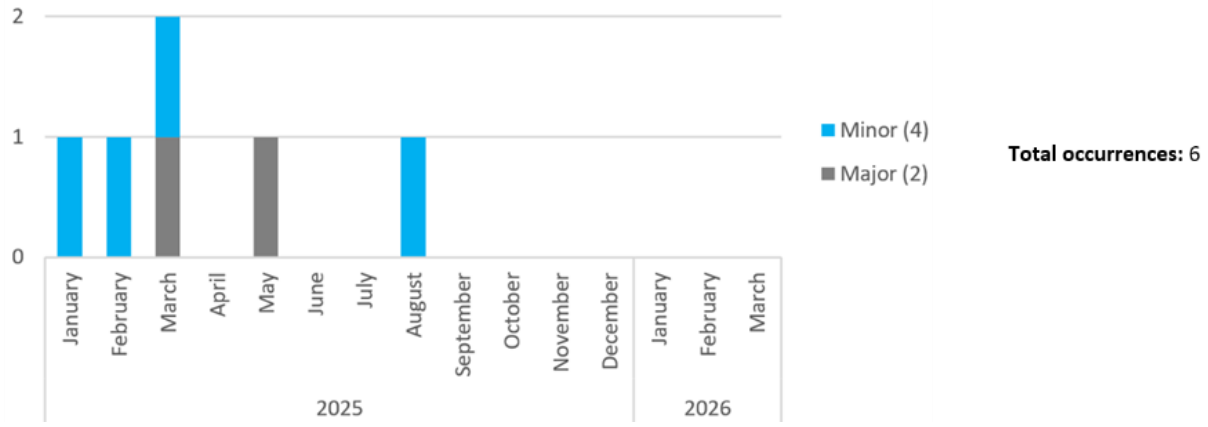
- communication issues, including radio failures
- airspace-related non-compliance in controlled airspace, and
- low-level operations attracting public concern.

As with other recreational aircraft types, there are repeated instances of ADS-B related issues, resulting in reduced aircraft visibility and tracking reliability.

Although occurrences are fewer in number, the major and critical ones highlight scenarios where loss of control or unexpected aircraft behaviour occurs in close proximity to people, buildings, or other aircraft, indicating the potential for higher consequences, despite lower frequency.

Overall, gyroplane operations show a pattern of low-frequency, but varied, occurrences, with a combination of factors related to ground-handling, operational deviations, and equipment.

6. Skydive



Graph 9: Skydive occurrences

What the data shows

Skydive occurrences in sport and recreational are relatively low in number and predominantly minor in severity, with most events classified as incidents rather than accidents. This sector is not required to report which is why occurrence data is scarce.

The most common types of occurrences involve:

- hard or abnormal canopy openings
- minor injuries such as sprains or whiplash following deployment, and
- isolated equipment or packing-related issues.

Several occurrences describe non-standard canopy behaviour, often requiring corrective actions or the use of emergency procedures such as cutaway and reserve deployment. These have resulted in consistently safe results.

Recurring contributors include:

- variability in packing quality or technique

- incomplete or ineffective gear checks, and
- relying on checking processes that are informal or inconsistent.

Human factors are evident in several reports, including:

- lapses in attention during preparation
- continuing jumps despite identified issues, and
- relying on others to verify things are being/have been done safely.

Overall, skydive operations demonstrate effective recovery techniques and low levels of severe harm - but with repeated low-level technical and procedural issues requiring active management to maintain safety margins.

Sample of occurrence narratives

Note: These occurrence narratives are presented largely as they were originally reported to the CAA. Identifying information has been removed, including details that could identify people, aircraft, operators, or organisations.

Paraglider/tandem paraglider/hang glider

1. *We got to the launch site and the wind was low, gusting every few minutes. I launched and soared abit at the cliffs watching the speedflyers make their descents. They made the descent above the landing site look easy. It was here that I made an error, I changed my mind on the spot without thinking through the decision. I began my descent manoeuvres further back from where the speed flyers had descended rationalising that I'd need more space to come down. I hit a patch of sink and began descending more rapidly than I had expected. Suddenly my trajectory looked like it was going to be too low to make the landing site. At the time I thought I have 3 options. 1) get the paraglider tangled on a tree to the right side of the park entrance, 2) risk hitting a fence but perhaps make it over into the park or 3) spot land on the roof. I had lost alot of forward speed coming down as the easterly wind lower down was stronger than up higher. A condition I did not account for nor had experienced previously. I decided that I would spot land on the flat ish roof to the right of the entrance to the park as the area looked large enough. I aimed right pulling on the break and killed my wing above the house. I landed very gently, no issues, killed the wing and stood on the in full view of two guy and their barbecue. I had been practicing spot landings at [redacted] in previous flights and at that moment I was very grateful for having done that practice. The incident was a near miss and I hope that in reporting this someone learns from it. I wish I had received a better brief for this site or been following another paraglider.*

2. *Low altitude 50% collapse right side of glider while thermaling ridge line above T/C take off. Inadequate correcting input resulting in shoot and dive leading to reserve deployment at 100m AGL and hard landing on right side of back and hip but resulting in no significant injury. Lessons learnt: Proximity to terrain should not be underestimated especially in thermic conditions. In thick gloves locating the reserve handle took several attempts even with regular training of grabbing the handle during flights. Be ready to throw at low altitude.*

3. *Complacency - I had done all my pre-flight checks, then on launch we were discussing which radio channel to use and decided to change channel. With where my radio is, I had to unclip my pod, and *on this occasion* I also unclipped the RH leg strap/waist belt (can you see where this is going yet?). Changed radio channel, refastened the pod but omitted to reattach the leg strap. Launched.*

Unsurprisingly it felt weird on launch, then entering a climb there was a lot of yaw and poor responsiveness of the wing, so I flew out into clear space and reattached the buckle.

4. *There were many other pilots flying including commercial tandems at the take off. There was a low layer of sea cloud that was varying in height, but staying above the main take-off. Wind strength was just below the maximum I'm comfortable to fly in on my rather floaty EN-A wing. I took off and immediately found the lift to be more than anticipated and that I had very little forward penetration. Concerned I would be pushed up into the low cloud layer I decided I should descend and attempt to top land. I pushed forward of the take off some way attempting to get out of the lift band (in hindsight not enough for the current conditions) and attempted to reduce height using big-ears and, then big-ears with speedbar, but was still gaining height. I then decided to try and lose height by doing some tight turn figure 8s (I'm not yet confident at aggressive wingovers). I came off speedbar and then big ears, and then initiated a hard right turn, at which point the inside tip stalled and the wing spun around approximately 360 deg, before recovering quickly as I had released all brakes. Fortunately, I did not lose much height and was still well clear of terrain. I was grateful for an experienced pilot on the ground who responded immediately on the radio giving me advice on how to better get out of the lift and successfully top land. After discussion with witnesses on the ground, I believe the main contributing factors of the spin are likely to have been, not allowing the wing to regain speed again after releasing the speedbar and big ears, in combination with being too forceful on the brake when initiating the turn.*

5. *I was flying a 22m Parakite a wing I wasn't very familiar with and still riding the buzz from some fun flying earlier in the day. Coming into land, I misjudged my approach. I'd been spiralling beforehand, and I was coming in faster than I was comfortable with. Because I wasn't used to how this wing handled, I didn't put in the right inputs at the right time. I started swinging toward a group of trees, and unfortunately, I got fixated on them, classic rookie mistake. That fixation caused me to clip the tree and lose momentum, and when I tried to turn away, the glider didn't respond how I expected. At that point, there wasn't much room to work with. I put the wing down but dropped straight through the trees and landed flat on my back from about 3 metres up. Thankfully, the pilots I was flying with did a thorough check on me, and I went through a self-assessment as well. Somehow, I walked away with: One tiny scratch on my leg. Almost no bruising No major pain or stiffness. All things considered, I got off extremely lucky and I've got a newfound respect for tree lines, unfamiliar wings, and not letting excitement cloud the basics. I normally keep a cool head and stay within my limits, but this time, I broke all my own rules and I knew better: I flew without back protection. I flew aggressively on a wing I didn't know I got absorbed in the moment and let small details slide. It wasn't like me, and I'm disappointed in how I handled it. That said, I'm grateful for the outcome and see this as a very clear reminder: don't let excitement override your judgement, especially when you're flying something new.*

6. *A tight turn in thermal lift low to the ground resulted in a spin to stall. Impacted the ground flat on the back. Impact bruising to right arm and back and later scan confirmed rib damage. Minor scrapes, cuts or bruises, Treatment required by a physio or other medical provider, Simple fracture on hands, feet or ribs. Contributing factors: I have been flying more aggressively of late and I am aware of the dangers of doing so close to the terrain. I will spend some time working through what I think may have contributed to this occurrence once I get back in the air. I'm discussing and seeking input from those I regularly fly with. Nature of equipment damage: Tear in the rear pocket on the harness. Repairable. Non-Structural. Weather comments: Was 3pm so punchy but predictable. Had flown for about 3 hours up until the incident. Lessons learnt: Be wary close to the ground. Good to feel current and confident but pushing the boundaries comes with significant risk.*

Glider/power glider

7. *Multiple gliders were observed on surveillance operating inside controlled airspace in the vicinity of [redacted] (approximately 7nm South of [redacted]) without clearance. Callsigns were ZK-[redacted], ZK-[redacted] and ZK-[redacted] (the last one had no Mode C information). The aircraft had vacated the CTA to the West by 0141 UTC. No traffic affected. Note: glider traffic is very infrequent in [redacted] airspace. The lower limit CTA in this area was lowered from 9500ft to 6500ft in November 2024; these aircraft would have been outside the CTA under the old structure.*

8. *Outlanding accident. Substantial damage to tail. Nil property damage. Wreckage not removed. CA005: During a Contest an outlanding became necessary. Pilot selected a Paddock from available choices at 1000 AGL. While on downwind, pilot realized that high tension power lines were closer than expected to base leg. While there was plenty of room for a circuit and base leg, this was a little distracting and a hump close to the threshold was not noticed in time. Glider initially touched down on the top of the hump and did not settle. On second touchdown wingtip caught and glider ground looped 90 degrees.*

9. *Gliding contest pre-start, I had emerged from under a very rough wave band and was concentrating on regaining height before the start. My moving map was zoomed in too far to identify the 7500' airspace boundary line and I climbed to approx. 9000' before heading south and leaving controlled airspace. I was monitoring 119.10MHz and 133.55MHz. [Redacted] Tower contacted the glider base, who then contacted me at approx. 1425. I called up [redacted] and they informed me of my airspace breach. Airways report: Multiple gliders including ZK-[redacted] climbed into controlled airspace approx 35nm south of [redacted] at 8000ft. They should have been 7500ft or below. Airways report received on [date]: Multiple Gliders observed on tower surveillance near [redacted] aerodrome operating several miles laterally and at least 1000ft vertically inside [redacted] CTA/D and close to [redacted] Class C airspace. This occurred over a moderate period of time. Callsigns observed inside controlled airspace without authorisation: [redacted], [redacted], [redacted], [redacted]. One of these aircraft eventually got in contact with [redacted] tower and they were notified and requested to pass on the airspace boundary points to the other gliding participants. This created potential separation issues vs IFR aircraft for [redacted] tracking via RIDLA. No aircraft ended up being affected.*

10. *[Redacted] called requesting climb into the CTA to A120 and had no SSR target. After recycling, the SSR target appeared but negative ADS-B. The pilot said they did have ADS-B and that it was showing ok in their aircraft. Negative ADS-B ops were authorised by the DM. At 2234, the controller noted that [redacted]'s ADS-B was working, but they were descending and clear of controlled airspace at that time. Further discussion in a phone call indicated that [redacted]'s ADS-B was being detected by their club's receiver for the entire flight.*

Microlight

11. *Wheels folded up on landing, aircraft skidded along runway until it came to a stop. Damage: Substantial/Minor Broken propeller, grazed undercarriage – unable to fully assess undercarriage damage. Pilot report: Picked [ZK-redacted] up from [redacted], at my engineer's hanger. Flew home to [redacted] and on landing at [redacted] landing gear failed to come completely down. Circuit breaker had popped and I was too late to realise the undercarriage was not locked. Resulted in a bellied landing and a broken prop. Not much other damage, other than to my pride. Engineer thinks the pilot may have had excessive speed on deployment, causing the circuit breaker to overload Engineer fitted new blades the next day, cycled the gear several times, inspected the*

alarm switches and the aircraft was released to fly, completing three circuits. Engineer will monitor the oil for any signs of metal. As it was at the airport, I notified CAA and they gave me permission to remove it. RAANZ will write articles in the Rec Pilot drawing attention to human factors and correct in-flight checks.

12. *While doing circuits was just airborne off 06R at [redacted] aerodrome when an aircraft passed underneath me on finals for 24 seal. I called up my friend who was warming up his plane on the ground to get a rego of the aircraft. He relayed this to me and I called him up. I got no response. I then completed my circuit and landed and taxied over to the aircraft at the aeroclub so I could have a chat. I discussed the matter with him he told me that he had seen me, but continued to land opposite me anyway. There has been no radio traffic. I was the only aircraft on the radio. He told me he was on the wrong channel. I questioned why he didn't do a standard overhead rejoin and he didn't have an answer just said he decided to join on long finals 24. He also said he'd only been flying for 18 months.*

13. *[Redacted] Incident Report - Landed on Taxiway - ZK-[redacted]. My student and I were taxiing from the college base apron to the holding point for runway 02. As we rentered the main taxiway [redacted] made a radio call "Aircraft just entering grass runway, I'm on short final" to which my student and I looked up and saw he was lined up to land on the taxiway not the grass runway which is located immediately east of the sealed runway. I made a call saying "this is the taxiway not the runway" to which they responded "I'm coming in", so we initiated evasive action vacating the taxiway into the long grass next to the helicopter landing area. [Redacted] then continued their approach and landed on the taxiway making a final radio call "landing complete on taxiway, taxiing to the club".*

14. *I did not read Notam [redacted] and where on Finals for 03 when a Car drove onto the Runway. I avoided the Car and climbed away. Then got a Radio Call from the Airport that there was a Notam out for closure of all Runways after last Flight into [redacted]. Clear Case, my Fault and this will NOT happen again! Aerodrome report: [redacted] RWY 03/21 was NOTAMed closed from 2050 local time [redacted]. ZK-[redacted] approached to land on the runway, then aborted after seeing contractor vehicles pulling onto the runway. CCTV shows that the pilot began to climb before descending again, appearing to intentionally swoop on one of the contractor vehicles. Cross referencing CCTV and Flightradar data suggests there was only 2-3 metres of vertical separation when ZK-[redacted] flew over the vehicle. [Redacted] Airport's investigation is underway. Have you notified any other agencies? Other-Provide details: [redacted] Airport.*

<u>Gyroplane/gyrocopter</u>

15. *ZK-[redacted] GYRO [redacted], tracked from 2NM S [redacted] towards [redacted] and return transmitting NACP and/or NIC zero which is non compliant ADSB data, and a continuing issue for this GYRO. Consideration is being given to adding it to the ADSB suppression list until the issue is fixed.*

16. *Gyrocopter [redacted] engine run testing throttle cable on IDLE, suddenly accelerated full power with no pilot onboard into the opposite hangar. The [redacted] wrote itself off by driving into the opposite hangar door and through inside to damage the [other aircraft redacted] cowling and pushed back causing damage on the trailing edge of the wing. RCC report: Conducting engine run to test vibrations. Aircraft was chocked and parking brake set with engine idle. PIC left cockpit to check vibrations. Engine went to high power and jumped over chocks, PIC was pulled to the*

ground. Aircraft proceeded across the road and crashed into hanger. Engine still running until PIC was able to switch it off. Damage caused to another aircraft in the hanger.

Skydive

17. *Skydiver realised in aircraft that they didn't have an alti. Decided to jump anyway (exit 13,000ft with 45 second freefall). Suspected causal factors. Got a buddy check by an inexperienced A cert skydiver who 'didn't notice'. Didn't want to admit they had done a poor gear check. Didn't want to come down in the plane. Resulting Action Taken Grounded them - SQR raised. Debriefed the importance of gear checks, buddy checks with all sporties/students present.*

18. *After an uneventful camera skydive, on the opening stage, {skydiver} experienced a hard opening resulting in a neck and shoulder sprain. Suspected causal factors: Less care was taken when packing his main canopy than normal. More attention and care to be taken when packing higher performance parachutes. Resulting Action Taken: [redacted] went to seek medical attention and was informed of a sprained neck/shoulder muscles, [redacted] is now on a two week leave period from work.*

19. *During a routine solo skydive sports jumper [redacted] deployed the main parachute, the open was not as normal, on opening the brake lines spanned, she used emergency procedures followed by a good reserve deployment and landed safely on the PLA. [Redacted] rigger thinks the broken brake line came from an abnormal / harder than normal opening. Line set was inspected to evaluate if a full re-line was needed or not, Rigger confirmed the line set is still good for another 200 skydives. All other lines inspected and deemed good, brake lines to be replaced.*

What's next

Thank you for continuing to report occurrences to the CAA. The information you provide is incredibly valuable for identifying key risk areas and generating insights that help others learn, identify new controls, improve existing and operate more safely.

To further strengthen the usefulness of these reports, we encourage you to include complete and accurate details – such as aircraft type, model, operator information, pilot details and any analysis you've done to understand why the event occurred. Thoughtful, well-described reporting enables us to build a clearer picture of emerging risks and share more meaningful guidance back to industry.

If you have any further questions, or ideas for additional insights, please reach out to the Safety and Security Education team at education@caa.govt.nz.