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The Gliding Federation of Australia Inc.



Operations

Operational Safety Bulletin No. 02/06 (Revision 2)

Airspace Clear for Launch

It should be obvious to all that it is essential for pilots preparing to launch to be aware of any airspace activities in their vicinity and the threat, if any, posed by the presence of other aircraft.

Lookout is the principal method for implementing see-and-avoid. Effective lookout means seeing what is 'out there' and assessing the information that is received before making an appropriate decision.

Prior to 2006 the wingtip runner's, or cable hook-up person's, advice to pilots was *"all clear above and behind"* prior to the commencement of launches. The 'above and behind' advice was intended to inform the pilot of any activity in that airspace that is not readily (or possibly) visible to the pilot from his/her position when seated in the glider ready for launch. However, experience showed the wingtip runner or cable hook-up person had a far better view of the airspace than the pilot, so the lookout responsibility of the wingtip runner/cable hook-up person was at that time expanded to advise the pilot of all airspace activity to enhance operational safety.

For example, clubs operating at sites where:

- parachute operations are conducted, or
- reciprocal runway operations are conducted, such as taking off downhill and landing uphill, or
- simultaneous crosswind operations are conducted from a runway crossing the operational runway, or
- gliders occasionally fly a circuit on the opposite side to the standard circuit direction, or
- the traffic density is high, and the traffic mix is varied (e.g., comprising commercial, recreational and sport aircraft and helicopters), or
- powered aircraft make straight-in approaches at low level, or
- the view of approaches is hindered by obstacles such as trees,

must carry out an "airspace clear for launch" check that covers all potential areas of conflict to achieve the required situational awareness.

However, it must always be accepted that the ultimate responsibility for proceeding with any launch rests with the pilot, and *the pilot must be satisfied that the surrounding airspace is safe to launch into by whatever means the pilot chooses to establish its status*. In this regard, pilots and launch crew should maintain a listening watch on the radio as an aid to situational awareness.

The take-up slack command should not be given until *the Pilot In-Command (PIC) has ascertained the airspace is clear for launch*. Launch crews must not pressure the PIC to abbreviate pre-flight checks and situational awareness. Launch point discipline and hygiene is vital; distractions must be avoided, and onlookers kept out of the way.

Beware of launch crew dilution of PIC responsibility. The launch crew may assist in improving the PIC's situational awareness, but their input does not obviate the PIC's responsibility.

Pilot and ground crew fatigue, particularly for instructors and tug pilots conducting multiple flights, may detract from lookout and situational awareness, or introduce complacency and lax airspace clearance checks. Pilots and ground crew must be vigilant to ensure this does not occur.

Training for wing runners, forward signallers and other ground staff must include specific training on **systematically scanning airspace** and providing reliable advice to the PIC. At many clubs, very junior or inexperienced members are often involved in these duties, so proper briefing and supervision is required (Refer also to <u>GPC Trainer Guide Unit 2 - Ground Handling and Signals</u> and the equivalent <u>Pilot's Guide</u>).

Supervising instructors should routinely *monitor the* **process** of airspace clearance and intervene if there are shortfalls in either PIC or launch crew checks or lookout. This includes correcting older habitual "Clear above and behind" checks to "Airspace clear for launch" and explaining the rationale. *Runway and circuit incursions can occur at any time, from all directions, with potentially serious consequences.*

Remember also: **ANYBODY** can, and must if they perceive a conflict or danger, initiate a halt to proceedings with the words "**STOP**, **STOP**, **STOP**". Whenever possible, raise one or both arms with palms and fingers outstretched as a visual cue.

Airfield Operations

Gliding operations must always be conducted in a manner that conforms to Gliding Australia requirements and any site-specific requirements. They must also be conducted in a manner that is predictable and minimises the possibility of potential conflicts. For example:

- Gliding Australia recommends having both a 'wingtip' signaller and 'forward' signaller for aerotow operations, as this ensures the maximum monitoring of airspace during the launch sequence.
- Launch points should be chosen on the basis of providing the maximum visibility of airspace on approach, overhead, in the circuit (both sides) and into which the glider is about to launch (refer SOAR report <u>S-0242</u>); and
- If the airfield is large enough, different take-off and landing strips could be employed to separate launching and landing gliders.
- Where two or more clubs operate from the same site, it is important that they operate safely together. Gliding Australia expects procedures to achieve an acceptable level of safety to be documented in the Clubs' SMS and the aerodrome operations manual or similar document (Refer <u>MOSP Part 5 SMS</u>, Section 7.5).

It should always be remembered that if there is a possibility for conflict, it will almost certainly one day occur.

Tug pilots, self-launching sailplane pilots & winch/tow car drivers

Tug pilots and self-launching sailplane pilots should comply with the requirements of REGs 91.365 and 91.375 and manoeuvre their aircraft so that they are able to observe incoming and outgoing traffic as well as traffic on the manoeuvring area of the aerodrome, in order that they may avoid collision with other aircraft during the take-off. Also be alert to vehicles engaged in towing and retrieving gliders or cables.

When departing, tug pilots must avoid the circuit by climbing upwind as far as practicable while keeping the glider withing safe distance of suitable landing areas. Turns into the downwind leg of the circuit and overhead departures must be avoided unless operationally required. Section 10.1.22 of the <u>Aerotowing Manual</u> describes suggested towing patterns and provides a graphical representation together with some words of guidance. Tow Pilots are exempt from REG 91.390 that requires an aircraft, after take-off, to maintain the take-off track until the aircraft is above 500 ft AGL unless a track change is necessary to avoid terrain.

Winch/tow car drivers must check the area ahead of the launch for other taxying aircraft, traffic on crossing runways, etc. before applying launch power.

Airborne pilot's responsibilities

Consideration should always be given to the manner in which the circuit is joined, particularly when returning from cross-country flights, in order to minimise the risk of conflict.

Whilst pilots preparing to land have right of way, they should always be aware that it is prudent and responsible to ensure that they remain clear of airspace used by launching gliders and other aircraft. They should also ensure that their activities are predictable and do not unnecessarily conflict with other aircraft taking-off.

Pilots flying while winch launching is in progress must be particularly conscious of the necessity to remain clear of the launch area. The winch end of a runway should also be considered a potential hazard and be given a wide berth. It is recommended that pilots stay outside a 500-metre radius of the winch and that pilots should never approach and land from the winch end unless in an emergency or operationally necessary (refer to SOAR report <u>S-0711</u>). It is recognised that some winch clubs adopt a policy that allows pilots to 'get away' from the launch and thermal in the vicinity of the winch immediately following a launch. Apart from this concession, the winch launching area during winch launching operations must be a strictly adhered to "no-fly zone".

Radio

The primary tool of **alerted** see-and-avoid that is common across aviation is the radio. Radio allows for the communication of information to the pilot from the ground or from other aircraft. Radio is also useful for the wing runner, to aid in situational awareness, monitoring of gliders or aircraft that might affect the launch operation, and monitoring tug pilot communications.

A radio announcement prior to each and every launch is a standard operating procedure at all gliding sites and is expected by other operators. It is always prudent to make prior radio announcements of launch intentions on the appropriate frequency (or frequencies) in the interest of enhancing overall safety.

For aerotow combinations, the tug pilot should give a rolling call when ready to launch. With winch launching operations, Gliding Australia now requires all launch commands, including the 'take-up slack' and 'all out' commands, be given on the CTAF or local aerodrome frequency. These additional calls improve situational awareness for pilots flying in the area and are known to have been responsible for reducing conflict with transiting powered traffic at, at least, two winch sites in Australia.

Conclusion

There have been many occasions when launches have proceeded when local airspace safety has been compromised, sometimes with serious consequences.

The Club's SMS is a proven system and set of processes for managing risk that ties all elements of the organisation together and ensures appropriate allocation of resources to hazards and safety issues. Pilots, Training Panels and Club's/Organisation's Safety Committee should consider their local circumstances and adopt policies that best suit their situations within the framework of required operational procedures.

Many Clubs will no doubt confirm that their current procedures are safe. However, no club or pilot should be content that because there have not been any problems that there will never be. Complacency is a major risk driver, from a human factor's perspective. Independent checks of procedures, including Operations Safety Audits and advice from visiting Regional Managers of Operations or Level 3 instructors, can improve the integrity of processes and procedures. Analysis of near misses and incidents can also inform better procedures.

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References:

- Manual of Standard Procedures Part 2 (Operations)
- Manual of Standard Procedures <u>Part 5 SMS</u>
- <u>Airways & Radio Procedures Manual</u>
- <u>Aerotowing Manual</u>
- Winch Launching Manual
- GPC Unit 2 Ground Handling and Signals
- AC 91-02 <u>Guidelines for aeroplanes with MTOW not exceeding 5 700 kg suitable places</u>
 <u>to take off and land</u>
- AC 91-10 Operations in the vicinity of non-controlled aerodromes
- AC 91-14 Pilots' responsibility for collision avoidance
- Australian Transport Safety Bureau (ATSB) Aviation Research Report published 1 April 1991 <u>Limitations of the See-and-Avoid Principle</u>