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5. Airfield Operations

This is an overview of the basic operations required to run the airfield. Please also refer A. Duty Pilot Briefing Notes and the Ground Rules document.

5.1 Flying list

A flying list is used to manage the order of flying in club aircraft and members and visitors wishing to fly club aircraft should put their name on the flying list (also indicating what aircraft they require and whether they need a flight with an instructor) as soon as possible after arriving at the airfield. Keep an eye on the list, if you are not available at your turn then you will miss out, the best place to do this is out at the launch point while giving a helping hand and not sat in the Clubhouse!

The Duty Team should use the list to ensure everyone gets treated fairly.

5.2 Daily Inspection/Rigging

All gliders require a Daily Inspection (DI) before being flown on any given day. Pilots must be cleared to DI club gliders, with a signature on the ground handling card and/or logbook. The DI book must be signed to show that a glider has been DI'd. Once a glider has been inspected it can be taken out to the launch point and not before.

Note that the DG505 DI book needs to be specifically annotated that the inspection included a check of the canopy locking mechanism.

Any defects found should be reported to an instructor or inspector who will then assess the appropriate actions. Any glider found to be subsequently unserviceable should have a "Do Not Fly" collar placed over the control column and a defect report placed in the night safe or handed in to the office; refer G. Reporting Defects in Club Gliders.

For pilots rigging their aircraft, do not get distracted by onlookers, etc. as mis-rigged gliders are still a (preventable) cause of serious accidents. Ensure the necessary rigging and control checks are done.

> Do not allow yourself to be distracted when rigging.

5.3 Daily Briefing

Each flying day a daily briefing will be given at 0900 hours in the Briefing room. The duty team should endeavour to have the launch point set up and glider DIs completed by this deadline. The briefing is compulsory and all pilots are encouraged to attend at least the first part of it, when flying

arrangements for the day will be promulgated. Any pilots who cannot attend are required to seek a personal briefing from the duty instructor before flying.

The briefing will be given by one of the duty instructors with the assistance of a senior pilot if required and will address:

- Airfield set-up
  - duty team members
  - wind/launch direction
  - winch vs aerotow
  - available gliders
  - tug availability
  - etc.
- NOTAMs and airspace issues e.g.
  - Fife (Glenrothes) operations
  - P600/TMA area?
  - Blairadam activity
  - etc
- Weather
  - Local conditions
  - Soaring conditions
- Tasks for up to Gold C pilots
- Club aircraft available for cross-country flying
- Seats available in private two-seaters
- People willing to retrieve

5.4 Weather Considerations

The Lead Instructor will determine whether or not any flying operations can commence or continue in the face of challenging weather conditions. The Lead Instructor's decision will be binding.

These are not absolute limits but once one or more of these conditions are met the Lead Instructor will continually review the wisdom of starting or continuing to fly:

Wind speed	Base wind in excess of 20kts with gusts in excess of 30kts. Wind direction will also have a great bearing on the decision.
Visibility	An in-flight forward visibility of 5km or less
Rain/snow	Any rain or snow as this will degrade aerodynamic performance and flight visibility
Cloudbase	Cloudbase at or below the top of the Bishop while ridge soaring particularly with orographic cloud i.e. 1000' aal with significant cloud cover (>4 oktas)
Thunderstorms	In the vicinity i.e. audible thunder or visible lightning.
Misting	Persistent and heavy canopy misting, usually early or late in the day
Icing	Persistent areas of hoar frost/ice on the wings and/or tailplane

First flights can only be conducted when none of these conditions is present regardless of any on-going club flying.

Pilots should also be aware of sunrise & sunset times particularly when wave flying.

5.4.1 Turbulence

Because much worthwhile soaring is carried out in high wind conditions, it follows that turbulence can be moderate to very severe. The degree of turbulence is a product of many factors such as wind strength and direction, upwind obstructions (trees etc.), the wind gradient and lapse rate.

Wind strength and direction are rather obvious and a scan upwind can sometimes give a fair idea of what to expect at low level (at launch and circuit height). Critical conditions to watch for at Portmoak are 010 to 070 deg (N to ENE) and 180 to 240 deg (S to SW).

In Southwesterly winds, winch launching is rough in the mid band between clearing the top of the trees bordering the ash runway and approximately 500 feet. In North and South winds turbulence is generally experienced during the initial part of the climb out on aerotows, a result of curl-over from either Bishop Hill or Benarty.

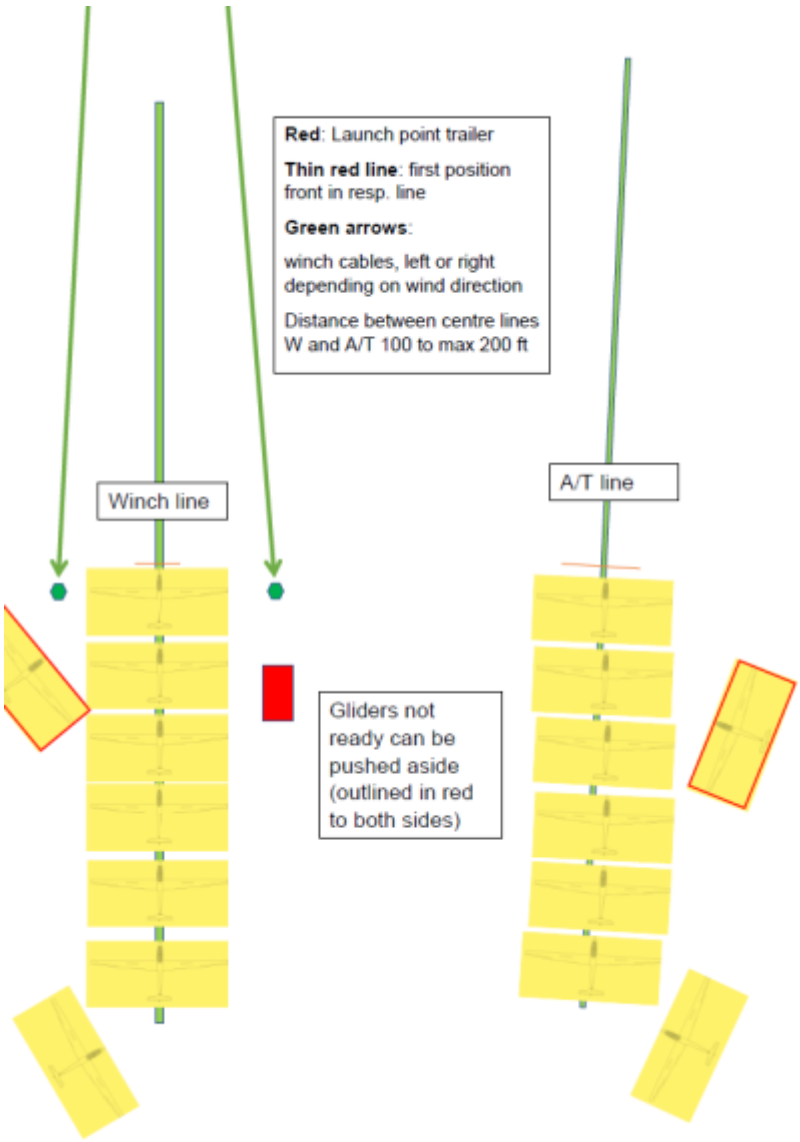
In wave conditions the fun may continue after the launch with rotor producing severe turbulence and wave producing heavy sink to surprisingly low levels. Needless to say continuous monitoring of height and position in the circuit is vital and be prepared to turn in early with sufficient speed to fly through the sink and turbulence. If height permits, careful use of full airbrake on approach will help settle the glider down in the turbulence.

5.5 Field Set-up and Launch Point(s)

> The launch point can be a busy place and safety is paramount. All members should exercise a duty of care for one another and any member may call a stop to a launch or other activity if they believe there is an unsafe situation.

In order to facilitate adequate supervision the winch and aerotow launch points will be placed

together.



The key to a good day's flying is for the launch point(s) to be run efficiently and safely. The Duty Team should take the lead with the Lead Duty Pilot being the main coordinator of activity. Please note that all members and visiting pilots are required to help at the launch point, not just the duty team. If you're not sure how to help out, just ask!

If you are new member then the launch point is a great place to start getting your ground operations progress card filled out.

5.5.1 At the Winch Launch Point

The cable run needs to take into account the wind direction and strength, parallel aerotow operations if any, and the state of the airfield in order to minimise damage to the surface.

It should be expected that an efficient winch launch point will not use the winch driver as the cable retrieve driver. Towing cables requires some practice and clearance initialled on your ground handling card.

5.5.2 At the Aerotow Launch Point

- Ensure the fire vehicle is out and parked in a position where it can be rapidly deployed, and logsheets are available.
- Parallel aerotow and winch launching off the centre strip needs clear coordination between the tug pilot, winch driver, duty team and Lead Instructor.
- Detailed operating procedures and guidelines are contained within A. Duty Pilot Briefing Notes.

5.6 Pre-Flight Preparation

Please pass your details (name, membership number, glider ID and type) to the launch point controller before getting in; the launch point controllers have been briefed that **“no details = no launch”.**

A quick inspection of the glider using the “ABCDE” check may be appropriate when first using the glider and before getting in:

A	Airframe checked via a brief walk-around of the glider. Ice/rain? Tyres ok? Canopy clear & clean?
B	Ballast? In the cockpit and the fin?
C	Controls all moving smoothly and in correct sense?
D	Tail dolly (and wing walker) off?
E	Eventualities/Environment (consider airfield layout and other operations before getting in, not a replacement for pre-flight eventualities check!)

- The club reminds all pilots of BGA recommendations on the use of ballast, particularly for pilots of low hours or experience. Generally, the minimum placard weight plus 15kg.
- Most SGC gliders are fitted with shock absorbing cushions. Soft cushions must not be used.
- Most SGC gliders have no storage behind the wing roots. **Nothing** may be placed on or behind the wing root in a K21 or Perkoz since there is a risk of fouling the controls.
- The available combination of parachute/seat-back should meet most needs but if anyone has a special need please see the safety officer.
- Please guard canopies when getting in or out of aircraft especially on windy days – canopy repairs cost the club a depressing amount of your money each year. Always latch canopies when you close them, even if closing them temporarily while you step away to put your parachute on.
- To ensure an efficient launch rate pilots must be ready when a winch cable or tow plane is available with all pre-flight checks completed including cable release checks! Pilots not ready will be moved offline.

> The person attaching the cable should note, visually and by listening, that the canopy and airbrakes are closed and locked, and should query it with the pilot if not certain.

5.7 Launching

> The BGA has published guides to Safe Winch Launching and Safe Aerotowing. All pilots must read and follow the advice contained in these guides.

The key guidance for a safe winch launch is;

- Start with your hand on the release
- If you can't keep the wings level on the ground release immediately (and before the wing touches the ground)
- Maintain a shallow climb until there is adequate speed/acceleration, then rotate to the climb attitude
- Following a launch failure, adopt the recovery attitude, wait until the selected approach speed has been attained, and then land ahead if possible.

Refer Circuits, regarding the possibility of winch launched gliders being close to gliders starting a downwind leg on their circuit.

5.8 Circuits

It is good airmanship to fly a complete circuit which gives you an opportunity to anticipate and cope with any potential difficulties and lets everybody else see what your intentions are. If, for whatever reason, there is insufficient height to fly a complete circuit then an (extended) base leg and final is a minimum.

It is inevitable that the top of the winch launch is quite close to the circuit high key position, whatever the wind direction. This is a high traffic area and pilots starting circuits or coming off the winch launch must be especially careful to maintain an effective scan of the whole field of view. Launch calls and downwind calls on the radio aid situational awareness, as does Flarm. On West wind days, winch launched gliders are likely to turn towards Bishop Hill, and there is a risk of their crossing the path of a glider starting a right-hand circuit.

Unless there is no alternative in an emergency such as a launch failure, pilots must avoid overflying the winch line (unless above 2000' aal).

Portmoak airfield has three principal landing areas (N, Centre, and S) with all three in use on occasions. We typically fly circuits to the North into the North Field, left- or right-hand (N or S) circuits into the Centre Field, and circuits to the South into the South Field.

> The circuit orientation is not fixed and pilots must be particularly careful to maintain a lookout for other circuit traffic.

A call on the radio will help situational awareness.

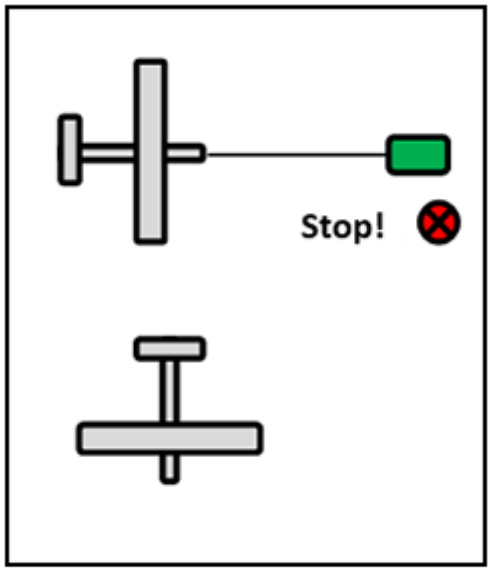
Pilots may change the circuits indicated above if airmanship considerations dictate though be very careful if you fly an opposing circuit to the established one. Aircraft flying opposing base legs at the same time into a landing area present the possibility of collision.

5.9 Landing

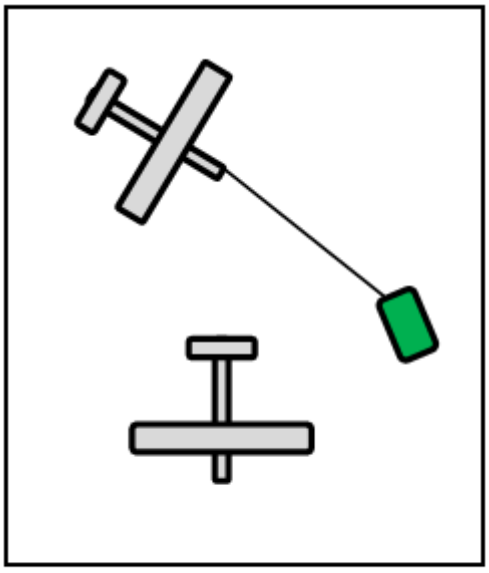
- Wind gradients are a common phenomenon at Portmoak and should be anticipated in launch failures and approaching to land.
- Fully held off landings, where the tailwheel/skid touches down just before the main wheel, should be the norm every pilot strives for.
- Do not land across the ash tracks as this will damage the tailwheel, or worse.
- Do not land across the winch cables. Dyneema is very light and can easily be picked up by a main wheel, damaging both the cable and the aircraft.
- If you are comfortable taxiing the glider, gently angle away from the launch line. Be particularly aware that there may be another aircraft on approach behind you.
- Use the wheel brake **only** if necessary and avoid using it on soft ground as this can increase any damage caused to the airfield (and if the ground is soft it should not really be necessary to use the brake).
- All aircraft should be retrieved quickly from the airfield to keep landing areas clear (particularly the South Field and the aerotow strip) and increase launch efficiency; the retrieve team and vehicle should be ready to go as soon as a glider lands or even better, in anticipation of its landing. The PIC remains responsible for the glider until it is handed over to the next PIC or parked up on- or off-line. Private owners should recover their gliders promptly.

5.10 Ground operations

Gliders should be towed back to the launch point according to the diagrams below – do not try and tow the glider directly into the launch queue with a buggy. Please use the tail dolly when towing the DG505 (or any other heavy-tailed glider) to avoid putting unnecessary stress on the glider when turning. Please push the nose down slightly on a K21 when turning to unload the tailwheel.



Yes Please!



No Thanks!

Please avoid rotating gliders on their main wheels in soft ground. A metal plate is kept in the launch caravan to put under the mainwheel in these conditions.

When parking up gliders place them well to the rear of the launch point keeping a through-route for other gliders and aircraft. Turn them so they get a quartering tailwind. In strong winds all gliders should be parked with the into-wind wing securely weighted with one or more tyres, a tyre wedging the nose and another on the downwind side by the tail. In lighter winds two seaters (which are heavier) may be parked with the into-wind wing up and tyres at nose and tail. Switch off the electrics, lock the canopy and close the vents. Watch for control surfaces gybeing and slamming onto the stops in strong winds.

5.11 End of the Flying Day

Gliders can be progressively put away as they are no longer needed. The gliders will need cleaning to remove mud from the underside, insects, and the like – use either the cleaning station adjacent to Clubhouse or the one by the club hangar. If the gliders are wet from rain, etc. then please squeegee them dry especially in winter as the water may end up freezing on the wings overnight.

Ensure that all gliders are down and safe before the Duty team stands down. Check the powered aircraft movements log to see if all self-launchers and motor gliders are back. It is the responsibility of the Lead Instructor to ensure all aircraft are accounted for.

Batteries removed and put on charge. Parachutes in the warm room. Vehicles parked up. All hangar doors closed and locked. Logsheets in the office.

Last person out should ensure the clubhouse windows are securely closed, lights off and then shut and lock all doors. Be sure to lock the main gate please!

5.12 Radio

It is recommended that aircraft have a serviceable radio, fixed or hand-held. All SGC club aircraft have radios fitted which have been pre-programmed with the commonly used channels.

The Portmoak (CGFF) channel is 129.980 which should only be used within 10nm and 3000’ of the site – please note that this is a shared channel and any excessive “chat” may affect communications at other operational sites. Outside of these limits the other gliding channels should be used e.g. 130.105; these channels are again shared so brevity is the key.

A downwind call indicating circuit pattern and designated landing area (and direction if not obvious) is recommended. Calls on the radio do not give priority and pilots must maintain the highest levels of lookout and airmanship in the circuit patterns. Aircraft may approach from a variety of directions and may have radio failure, no radio or have not made a downwind call.

A typical downwind call at Portmoak is as follows: ***Portmoak traffic, Lima Oscar Victor downwind, right hand, centre strip (28)***.

Please note that “Portmoak Base” is an unofficial station and cannot issue clearances or specific aeronautical information such as QFE/QNH. Airfield information that can be given to passing aircraft or joining gliders is purely for situational awareness, e.g. “winch launching to the West from the Centre

Strip, multiple gliders active in the area". A plain English wind direction and strength can also be given to joining aircraft if requested. The predominant circuit direction and runway in use may be a useful aid to safety.

5.13 Flarm

Fitting of Flarm to SGC-based aircraft is recommended. Please be familiar with the operation of the unit and the various levels of alarm presented by the device.

Flarm can be a very effective supplement to a good look-out; it helps improve situational awareness of gliders particularly in blind spots. The key point is that Flarm is a supplement to your visual scan and not a substitute for it. Furthermore do not assume that all gliders have Flarm.

Note that Flarm works on track, not heading, and may give confusing indications of direction for hill-soaring gliders crabbing along the ridge or a wave bar. If you get a Flarm alert the key thing to do is **look out**, especially ahead and either side of the nose, and not to look at the instrument.

Be aware that with multiple gliders in close proximity e.g. when ridge soaring, the number of Flarm indications and alerts can become a distraction.

5.14 Aerobatics

The BGA Laws and Rules current recommendations regarding aerobatics and aerobatic instruction apply in this club.

Solo pilots and PIC's can only perform aerobatic manoeuvres for which they have the appropriate aerobatic rating.

The minimum height for starting aerobatics is 2,000 feet. All aerobatics must be completed by a minimum of 1,500 feet AGL, unless the pilot has "unlimited" aerobatic clearance and has discussed his or her intentions with the Duty Instructor. All aerobatic flights should be advised to the Duty

Instructor so that they may advise other traffic.

5.14.1 Aerobatic boxes

Two aerobatic boxes are designated and are as shown above.

> Particular attention should be given to avoiding any possibility of conflict with high circuit traffic.

5.15 Turbo/FES/Jet Units

If you need to start your turbo or jet to climb away from the airfield or to test it, please be aware of the noise impact on the nearby communities of Scotlandwell and Kinnesswood, and on the Vane Farm Bird Reserve on the Southern side of Loch Leven. Gliders fitted with turbo sustainers should make every effort to avoid engine starts in the vicinity of local villages however the pilot must bear in mind the necessity of being in a position to land safely in the event the engine fails to start. Furthermore climbing away from low down and into wind with a low ground speed may cause a sustained noise nuisance for local residents so routeing following local engine starts should be away from the airfield and villages.

For jet turbos, the noise is concentrated in a rearwards cone so again, please be conscious of the impact and ensure the exhaust nozzle points away from any settlements.

Pilots with FES equipped gliders should follow the BGA and manufacturer’s guidelines on operating FES units on an airfield in order to safeguard people on the ground near their glider.

5.16 Competition finishes

Competition finishes at the end of racing tasks are permitted however pilots must exercise due care. Call ahead on the radio (129.980) if doing a finish at PCS or POR; good airmanship with regard to circuit traffic must be paramount.

> Where possible high speed task finishes should use BGA turnpoints PO1 or PO2 rather than PCS or POR. Refer Aerobatic Boxes.

Exceptions *may* be made during organised competitions such as the Inter Club League.

All approaches towards the airfield should follow a descending profile (other than to go-around where necessary), the landing area should be in the pilot’s sight, and the airfield boundary must be crossed at a height which cannot endanger persons (seen or unseen), vessels or property.

‘Beat ups’ (and practice competition finishes at low level) are prohibited over Portmoak airfield. Fast, low passes are prohibited over neighbouring houses (and on the ridges – refer B. Ridge Soaring). Members of the public may perceive low, fast flying as dangerous or obtrusive. Pilots must of course comply with the law, particularly in this case SERA.3101 (Negligent or Reckless Operation of Aircraft), which includes “aircraft must not be flown closer than 150 metres (500 feet) to any person, vessel, vehicle or structure except...[limited exceptions, see the legislation]”.

4. Flying Authorisation | Contents | 6. Local Airspace for Glider Pilots

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