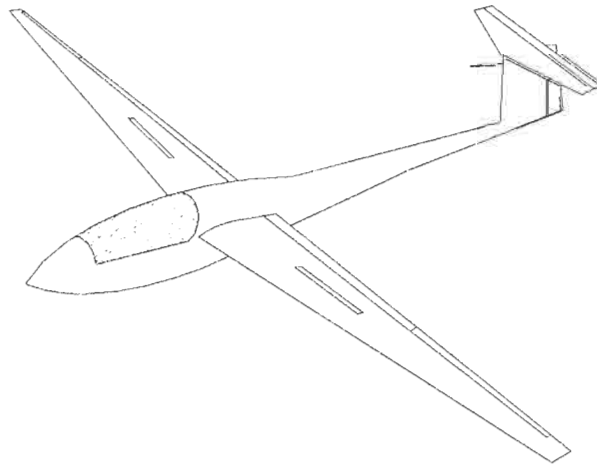


# **Scottish Gliding Union**

## **Hill Soaring**



## **7.0. Hill Soaring.**

### **7.1 Introduction**

- 7.1.1. Hill soaring uses one of the most basic forms of lift but we appreciate that many pilots may have little opportunity to become proficient in its' use and a few hints therefore will not come amiss.
- 7.1.2. Basically air rises when it blows at approximately right angles to a hill but bear in mind that high ground is not necessarily uniform in shape and that the wind can escape round corners and gullies. This causes the strength of the lift to vary and can give inexplicable "downs". The lift strength is a product of wind strength, direction, ground contours and lapse rate. It must be remembered that a wave formation on thermals can cancel out hill lift altogether if the phasing is right and the fact that you experienced lift during one beat along the hill is no guarantee that it will be there on the next. The following paragraph details a few basic rules.

### **7.2. Basic Rules**

- 7.2.1 Do not go hill soaring without authorisation. Bishop hill and Benarty require separate authorisation - permission for one is not automatic permission for the other.
- 7.2.3 Ask the duty supervisor for advice on the best approach for the launch in question, i.e.. winch or aerotow.
- 7.2.4 Having contacted lift it is not necessary to fly excessively close to the hillside.
- 7.2.5 Maintain an extra safe airspeed below hilltop height, recommended 5 - 10 knots above normal.
- 7.2.6 **Aircraft density at the site can be very high and the need for a good lookout cannot be overemphasised, particularly if it is remembered that hill soaring confines you to a relatively small area of sky.**
- 7.2.7 Hill approach heights are critical at this site. If lift is not contacted by 700 feet, turn away from the hill and return to the airfield. Benarty will require more height for a safe return. 800' - 900'. These heights will vary according to aircraft performance but should be used as a safe guideline for pilots inexperienced in hill soaring.
- 7.2.8 Pilots should not go around the corner of Bishop into the "bowl" below hilltop height because of the blind corner at this spot. Hang gliders and parapenters also launch from this bowl at hilltop height or less. The safe way is to soar the SW face to hilltop height before proceeding: if this isn't possible an aerotow is recommended.
- 7.2.9 Hill discipline must be strict at all times.

**7.2.10 Right of way. It is essential that pilots understand that the pilot who has the hill on his left must give way and be seen to be doing so in plenty of time. Remember that aircraft will have pilots of varying experience in command.**

7.2.11 Ridge soaring rules are:-

7.2.12 All turns must be away from the hill.

7.2.13 If approaching head on, both gliders should turn right, but since the glider with the hill on his right probably can't do this, the onus is with the pilot with the hill on his left to give way.

7.2.14 Please report any inconsiderate or poor hill discipline to the instructor in charge, with details of the occurrence, the aircraft and the time.

7.2.15 It is acceptable to use thermals on the hill provided you do not interfere with the normal hill soaring pattern and you are well above the hilltop. Don't drift back behind the crest unless you have an adequate height reserve: there is usually turbulence and sink behind the crest, and probably a stronger wind due to venturi effect.

7.2.16 Never rely on the hill lift being there. The hills often don't work below a certain height, and in wave or strong thermal conditions the hill lift has been known to be cancelled out in a matter of minutes.

7.2.17 Do not fly close to hang gliders or parapenters as they can be distressed by the turbulent wake of a glider. They can also turn very rapidly, much faster than a glider can take evasive action. They have blind spots upwards and backwards. Their low airspeed makes their manoeuvres rather peculiar in comparison with conventional gliders. Best practice is to pass well in front of them - contrary to normal overtaking procedure.

7.2.18 Low sun, especially in winter time, can make hill soaring, particularly on Benarty extremely dangerous. When approaching the hill, glare can be excessive so if you are blinded by the sun abandon any attempt to hill soar.

### **7.3. Orographic Cloud.**

7.3.1. Keep clear of orographic cloud at all times as it can spread forward from the hill in a matter of seconds and envelope any aircraft flying too close in. Watch out for tell tale signs such as wisps of cloud forward of the main cloud. These indicate that the cloud may be about to spread out rapidly.

7.3.2. The number of gliders allowed to soar with orographic cloud present is limited as decided by the duty supervisor. When flying with this cloud present do not fly through any wisps which may conceal another glider, or in the haze near cloudbase. If flying above or in front of such a cloud, be very careful not to drift back into it.

**7.4. Lookout.**

7.4.1. When hill soaring, a very good and continuously vigilant lookout is required. Look well ahead when cruising the hill, and make appropriate manoeuvres well before you get close to other gliders. Never fly in another glider's blind spot. **Keep looking all the time - your life and someone else's depends on it.** If you feel the hill is uncomfortably crowded then try to move to a less busy height band or area, or land and fly again later.

**Fig 15. Ridge Soaring Rules**

