

Landing Off Field

.....them that has, and them that will

Sooner or later, cross country or local glider pilots end up doing an off field landing. It is best to be prepared, so here are a few tips we hope will make your off field landing safe and uneventful.

Field Selection - Throughout your flight, you should keep in mind, which fields are within gliding range, and appear suitable for landing. As you get lower (though perhaps still intending to return to the airport), you should inspect, more and more closely, these fields and narrow down your choice of the best, until, upon reaching a normal pattern above that field; you have picked the best field. After that, stick with that field and don't change your mind (unless new and drastic information comes to bear).

Considerations for the field include..

- First choice would be an airport.
- Large enough to land and stop, with a safety margin (remember the landing area doesn't have to be big enough to land a 747, only your sailplane).
- Level or not. If the **slope** of the land is visible from the air, it is probably too steep for a safe landing.
- Field **surface**. Cultivated land is probably best, because the farmer has most likely cleared it of things which could damage farm equipment. A common saying is "you won't get hurt if you land in the dirt."
- Pastures are next best, but look for drainage ditches or creeks and finally, "wild" land. Consider direction of furrows, height of crops, and whether it is muddy or not.. anything that will affect the rollout.
- Obstructions. Such as fences, power lines, light standards, trees, etc., on the approach, with consideration for the direction of the approach due to wind conditions. A shorter field with no obstructions is better than a longer field with high obstructions.
- Slope of the field. If the choice is either landing uphill and downwind, or downhill and upwind, choose uphill and downwind.
- Wind. It is usually best to land into the wind, but it is not essential. If you are close to a landing and you realize the wind is different than you thought, do not change your mind at a low altitude. It is a lot safer to land downwind, if you are in charge. A low altitude change is dangerous (in this type of situation chance is in charge and luck is in the landing)

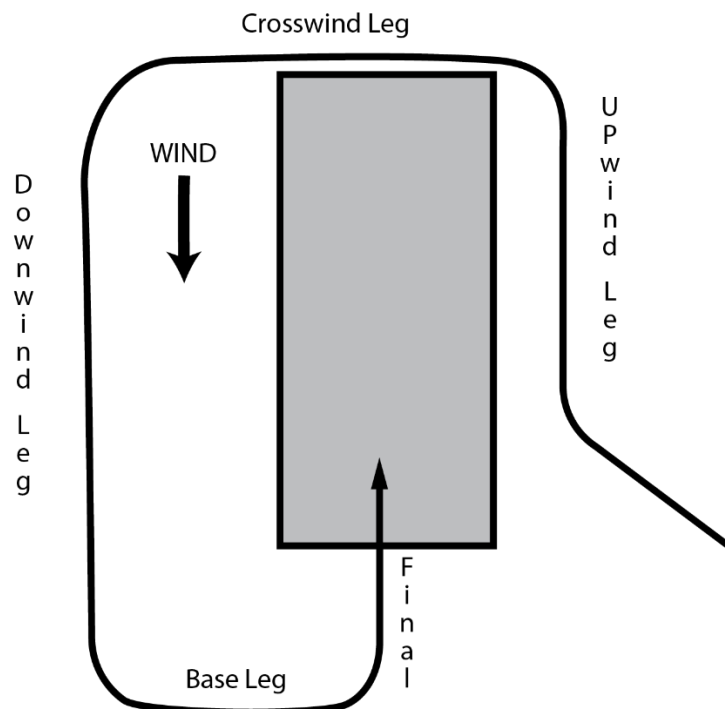
- Watch for livestock in the field. They may panic and run in front of the glider as you land, and they have shown an interest in eating gliders after the landing.
- Nearness of the field to a road or telephone.

A common acronym to remember these items is W W S S:

- o **W**ind - Generally land into the wind
- o **W**ires - Powerlines and fences are hard to see, look for clues.
- o **S**lope - If you see a slope, land uphill no matter what the wind.
- o **S**urface - Consider all other aspects.

Approach - Having chosen your field, fly a normal pattern around it. You have a choice of doing a 45 degree entry leg, or a 90 degree leg which will take you immediately over the field making a cross wind leg then a downwind, base, and final.

- A close upwind leg gives you a good opportunity to closely inspect the field.
- Decide which side of the field the downwind leg should be flown, considering the wind and obstruction factors. By the beginning of downwind, you should have completed your pre-landing checklist, and in this order, decide where you 1)roll out to 2)touchdown at and 3)begin the flare.
- Base and final legs are normal, at a normal airspeed and normal altitude (this means half spoilers on base & final).
- The **importance of the pattern is a paramount**. It allows you to approach for landing in a manner which is routine and which you have already become very good at and gives you time to consider the unique circumstances of this particular landing.



Make your downwind, base, and final legs as normal as possible. Keep the downwind wide enough for a normal base/final with ½ spoilers! If you must land on a slope, land up the slope, even with a tail wind.

Landing - The best off field landing will have the glider touching down with a minimum of airspeed and rate of sink. The roll out should be with the nose high and minimum weight on the wheel and the glider should be stopped as soon as possible.

- Flare. A normal flare is started, and the length of the flare is modulated by use of the dive brakes. By the time the glider is settling onto the ground, the nose should be high, the speed low, the tail low and in fact, the glider is "mushing" down. It is the traditional stall landing. This is so that the tendency for the glider to dig into the ground is minimized and also so that, if everything goes sour, despite all of this good planning, at least it happens in a minimum energy state. A "Soft Field Landing" is one that you touch down with the tail wheel slightly before the main wheel!
- Roll out. Keep the nose as high as possible (full back stick), keep the wings level and stop as quick as possible. Use as much wheel brakes as you can and still hold the nose up. The shorter the ground roll, the less chance of running into an unseen ditch, rock or other obstruction.
- If the field is very short or the landing was longer than planned, and the end of the field is coming up, then use the nose skid to stop. If that still isn't enough, then put a wing down, full rudder and push the stick forward to get the tail off the ground if it is not already forward and ground loop. This last maneuver is dangerous, but it may be better than hitting a tree, stone, or barbed wire fence.

After Things Have Calmed Down - if there's wind, hang onto the glider (if it is real strong, perhaps you should stay in the glider to hold the nose down, and wait for a passerby). If you can, find a way of tying the glider down if you leave it.

- Call the airport, or have someone phone in for you, as soon as possible and let us know where you are, how to get there, whether you think the field may be suitable to aero tow out of, and most importantly, that you are all right!
- Remember, that you are still responsible for the sailplane until relieved by a Sky Sailing employee. DO NOT HITCH A RIDE back to the airport!
- If and when you meet the owner of the field, be real nice to him, he's doing you a favor by maintaining such a good place to land and he probably has every right to be slightly annoyed with you. Remember the poor soul who may land in that field next time, and leave the owner with a smile and a handshake and maybe even a glider ride.
- Make sure that weather, livestock, and spectators don't damage the glider, also spectators wanting to see the glider may damage the field. Stand by, tie down and shoo-away as required.

And finally, congratulations on your successfully completed off field landing. If you were going cross-country, that's the breaks... In any case, now you have is a good story to tell.