

## **Precautionary search, inspection and landing**

A precautionary landing may be required for the following reasons;

Fuel shortage, deteriorating weather resulting in IMC, approaching darkness, lost, sickness or a gyroplane system, engine, mechanical or fuel problem.

The landing may be required to be undertaken at an unfamiliar airstrip or in a suitable field.

### 1. Airmanship/human factors

Decide if a precautionary landing is the correct action and assess the time available to complete the landing. If applicable, brief the passenger on lookout for hazards and carefully monitor airspeed and bank angles. A slow airspeed allows greater inspection time, however you must ensure that the gyroplane is not flown behind the power curve when flying low (refer to the gyroplane POH, height velocity diagram).

### 2. Assessment of landing hazards

A precautionary inspection of an unfamiliar airstrip or field before landing is a logical and effective way to satisfy yourself that you have chosen a suitable landing area for your aircraft, and for your skill level.

On arrival in the vicinity of the landing location and before landing, conduct an airborne inspection with consideration given to the following factors:

- a) Wind velocity & direction.  
If there is no wind indicator at the landing location use the drift of your gyroplane to determine the wind direction. When available, make a comparison of ground speed vs airspeed using your GPS to determine the wind speed.  
Smoke, dust, windmills or wind lines on water including dams can indicate the direction of the wind.
- b) Obstacles – particularly power lines and trees in the undershoot, field and overshoot.  
Wires and towers are very difficult to see, even in ideal conditions and have been a contributing factor or the cause of a number of accidents.
- c) Minimum length for landing and take-off.
- d) Check suitable landing direction for current wind after completing the wind assessment.
- e) Assess the RWY slope in consideration of cross wind capability of the gyroplane.
- f) Assess the suitability of the RWY surface (cultivated? wet? rocky? erosion gullies or holes? tyre tracks? ant hills?)
- g) Terrain – will the terrain surrounding the airstrip affect the landing approach or go-around?
- h) If the strip is unfenced, livestock may be “hiding” in surrounding bushes. Make sure you check both sides of the strip for any sign of wildlife that may be startled onto the strip after your precautionary pass, just in time for your actual landing!
- i) Sun—landing into an early morning or late afternoon sun whilst also considering the wind direction.

One thing to remember is not to rush the inspection. Don't put yourself in the position where you are racing the clock to beat last light or deteriorating weather. What happens in that instance if you are unhappy with the landing area and must continue to locate another suitable field? All low flying is to be approached with the greatest respect for its inherent risks.

### 3. Landing at an unfamiliar airstrip

Flying into an unfamiliar airstrip will bring with it lots of unknowns. On arrival in the vicinity of the strip, conduct an airborne inspection with consideration for the hazards listed above.

Where required, phone the owner of the airstrip for permission to use the strip and make sure you take the opportunity of quizzing him/her for any helpful advice about landing there.

### 4. Precautionary landing in a suitable field (off-airport landing)

An off-airport landing maybe required due to an in-flight emergency where the circumstances immediately threaten the safety of the gyroplane occupants. The risk of injury to occupants and damage to the gyroplane is much higher when conducting an off-airport landing due to a higher likelihood of the presence of hazards that have usually been mitigated or minimised at airports. Consequently, even a higher level of detailed attention is required when considering all the above factors during the assessment of the selected off-airport landing field.

Another consideration will be the proximity of close assistance (civilisation) for any matters that arise as a consequence of the landing or after the landing has been completed.

### 5. Planning

Plan for three (3) inspection passes of the proposed landing area using 500 ft, 200 ft and 50ft AGL. Don't fly directly over the landing surface as you will be unable to see below. Fly to one side. Conditions will determine if all of the step height inspections can be completed. If the intended landing area is found not to be suitable in one of the passes, DO NOT continue with the next lower pass.

#### Pass 1 / 500 ft – Objective a wide-angle view of the plan.

Commence a circling approach of the area remaining at 500 ft and a safe slow speed to consider all the precautionary landing (hazards??)factors and check for under and overshoots including clearance of obstacles.

#### Pass 2/ 200 ft – Objective a more detailed look at the surface and all possible ground obstacles

Descend to 200 ft on short final and offset to the planned centre line to enable a detailed inspection of the proposed landing area, obstacles and confirm the under and overshoot areas. Climb to 500 ft and repeat the circling approach circuit.

#### Pass 3/ 50 ft – Final Surface Inspection

Descend to 50 ft on short final and if the decision is made that the area is suitable, climb to 500 ft AGL to conduct a circuit for landing.

**A Pan-Pan call** is used for urgent situations that are not immediately life threatening but require assistance from someone on the ground.

Aim to touch down in the first third of the field. Perform a soft field landing with minimum ground roll, as the surface will be unknown and may contain unknown roll over hazards.

An ASRA incident report is required to be submitted using the Incident/ Accident Register.