SCOTTISH GLIDING CENTRE

SAFETY NEWSLETTER

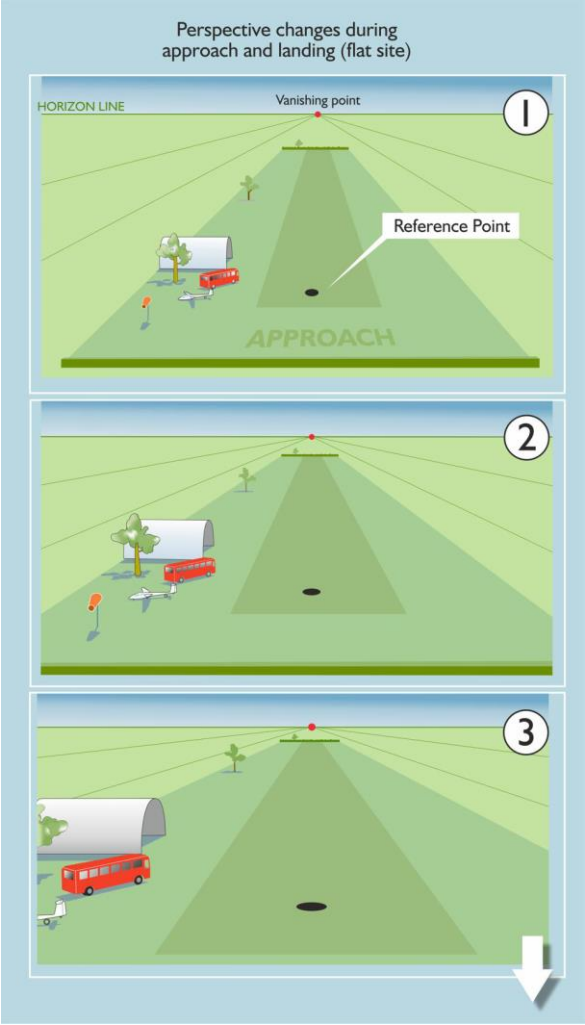
Topic of the month: May 2023

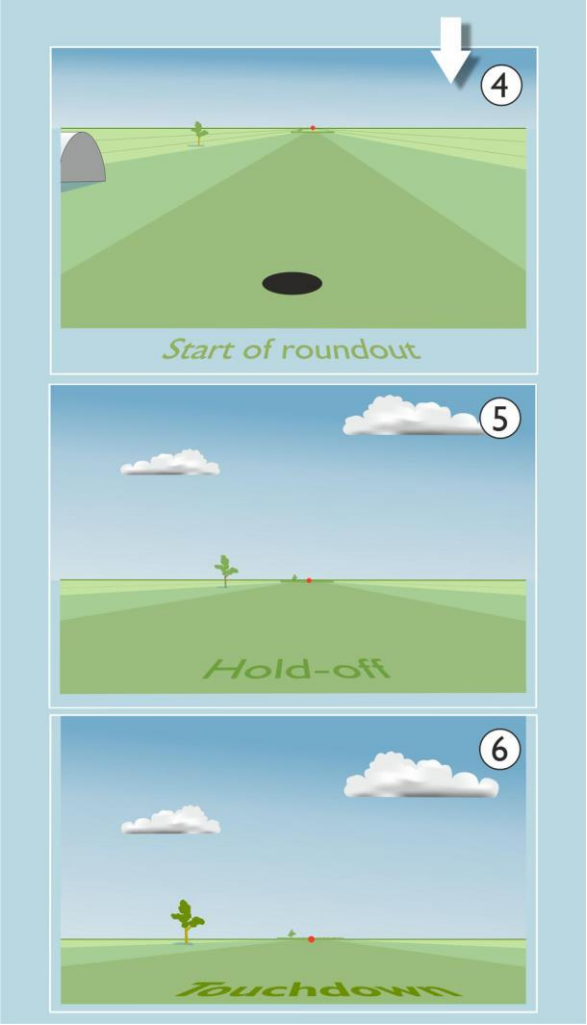
Foreword

As the new summer season has started with already a few good and busy days, we still need to stay focussed on all operational possibilities and the associated risks. In aftermath of the last hard landing Bruce and I had a look at all FlySafe entries regarding amongst others “Landing”. Within the last 12 month there were nine (9) reported or suspected hard landings. With some more by instructors verbally reported “taken over control” incidents avoiding a hard landing, the next topic sprang to our attention.

Topic of the Month, May 2023:
“Fully held-off landings”

Let´s have a look at some figures from the “BGA Instructors´ Manual”
A good landing starts with good circuit planning and a stable approach. As we´re focussing on the last bit of a successful landing, we will start with the figure of a stable approach and it´s change in perspective





After your final turn the combination of airspeed, nose attitude and air brake setting should lead to a stable approach. Bear in mind the selection of your airspeed should correspond to glider type, wind direction/speed and turbulence.

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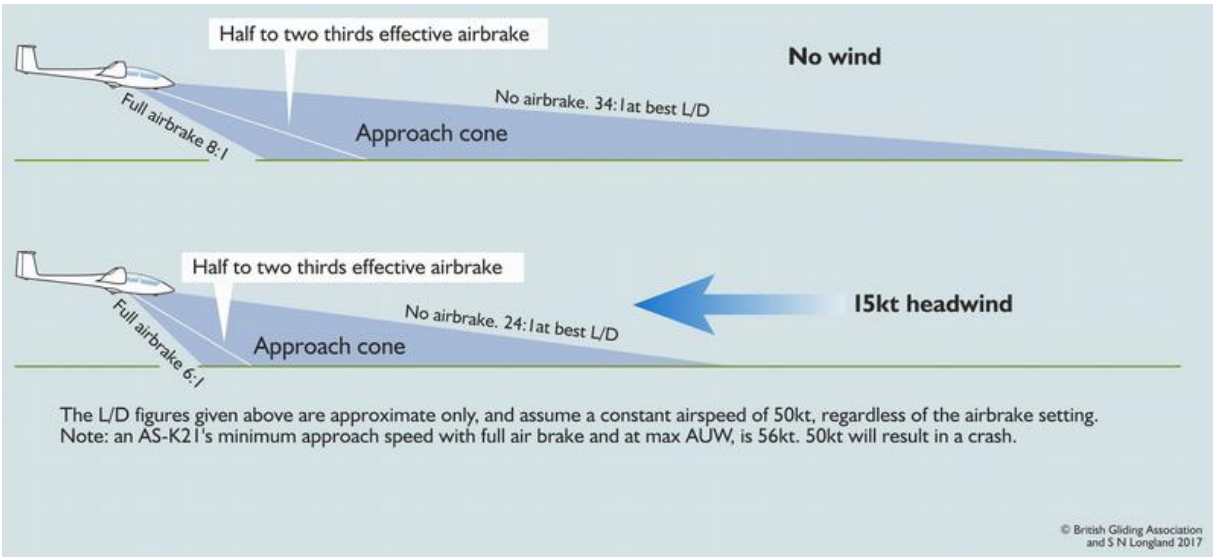
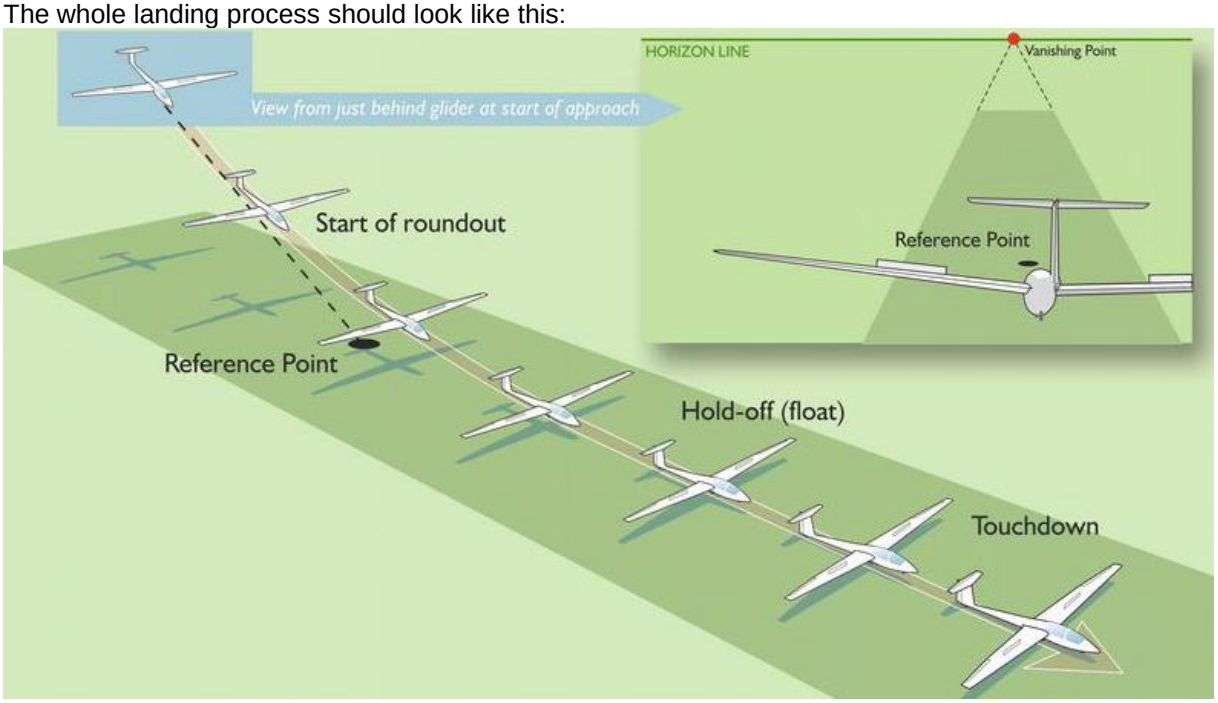


The whole landing process should look like this:



A few bullet points to remember:

<u>Approach</u>:

- Selection of speed (glider type, wind, turbulence)
- Selection and use of reference point (stable approach indicator)
- Start of approach using just over half airbrake if possible (flexibility in approach angle control)

<u>Round-out</u>:

- look far ahead, relation of field boundary and vanishing point (see first figures above)
- peripheral vision providing proximity information (ground approaching into your field of vision)
- rate of change of attitude and/or perspective (provides clues to sink rate and deceleration)
- steepness of the initial approach (provides clues to start of round-out: the steeper, the earlier)
- avoid rapid stick movements close to the ground

Hold-off (or float):

- glider's tail wheel touches the ground fractionally before the main wheel
- move the stick gently backwards
- stick will be fully back, the glider is effectively stalled
- fully held-off landing gives the slowest possible touch down speed

After touch-down:

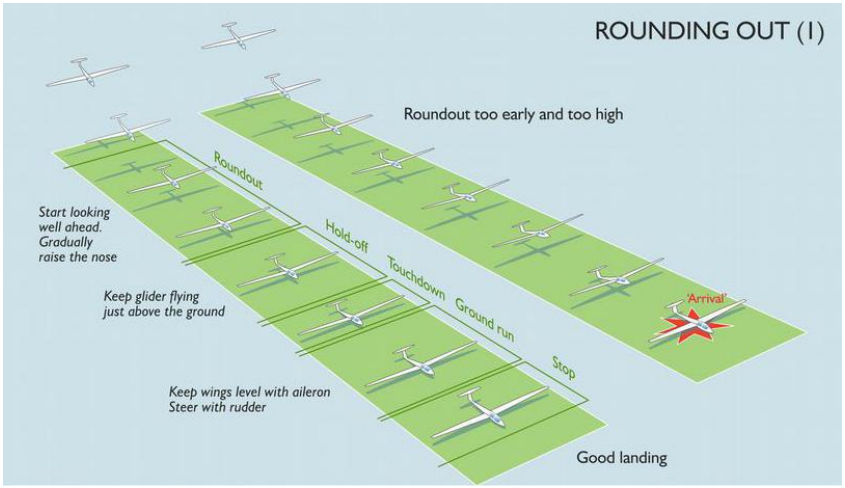
- open airbrakes fully (watch out: wheel-brake may come on!)
- bring the stick progressively back to the stop if it is not there already
- the rather high angle of attack produces more drag and slows the glider down
- tail wheel or skid keeps the glider straight
- the nose coming slowly down with deceleration reduces the angle of attack and therefore the lift

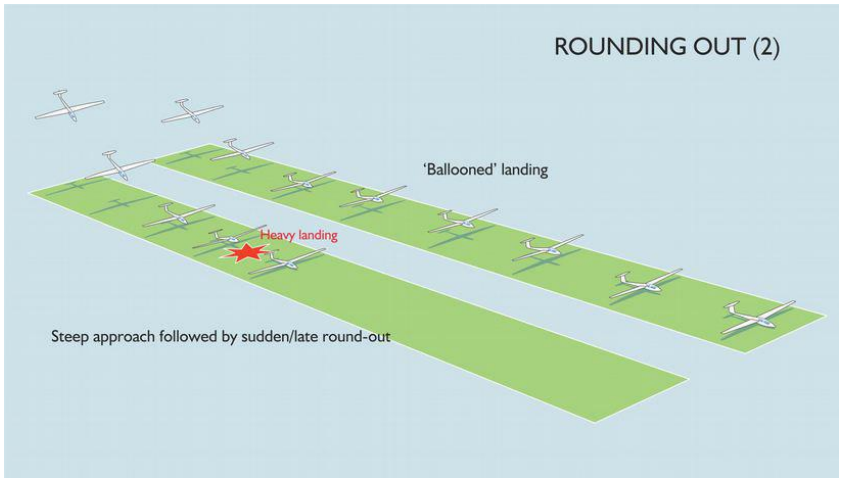
Rounding out too late will result in a hard landing, usually due to not looking far enough ahead, or 'target fixating' on the reference point.

Rounding out too high (ballooning): How to deal with it:

- with safe speed, a level attitude and moderate brake setting: *hold everything still, let the glider sink*
- with safe speed, a level attitude and large brake setting: *ease the brakes in*
- less than safe speed and/or nose-up attitude and with the brakes open: *close the air-brakes and gently lower the nose*

Finally, to support the bullet points, let´s look at the following figures:





Thanks to the BGA for the Instructors´ Manual figures!

Have a good flying season, keep the older "TotM"s in mind and stay safe!

Cheers,
Reiner