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Setting Up

Winch Location

When deciding where to put the winch, we must take 4 key items into account.

NEVER ACCEPT A DANGEROUS AIRFIELD CONFIGURATION.

Whilst it may feel weird or unusual to challenge the duty instructing team and their proposals, you are ultimately responsible for the safety of winch launches. Do not feel compelled to accept the first airfield configuration you are offered. Continue to review the conditions throughout the day and request to reconfigure the airfield if required.

IF IN DOUBT, YOU SHOULD REFUSE TO LAUNCH.

Wind Direction and Speed

This is probably the most important factor as it is easy to miss or underestimate.

As pilots, we want to take-off into wind with the smallest crosswind component possible. With a straight headwind, we can expect the glider to not drift substantially. However, when we add a crosswind component, we need to consider that:

1. The glider may not adequately correct for drift (or in the case of early students, may correct too much or not at all).
2. Once released, the cable and its parachute will continue to be blown downwind.

With a crosswind component of 10 knots (and assuming that the wind does not increase with height, which is very rare), we can expect the cable to drift by about 5 metres every second it takes us to pull it in. If we were already close to the edge of the airfield or the glider fails to correct for drift, the cable could very well land outside of the airfield's perimeter or on-top of something.

We must ensure that, even when given the worst-case scenario, the cable will remain under control and will always land safely. If a glider drifts too far off course during the launch to the point where the

safe landing of the cable is not ensured:

1. Use your best judgement (e.g., in some cases it may not be advisable to immediately cut the power as you could give the pilot a challenging launch failure).
2. Cut the power if the glider is drifting way too far.

Airfield Condition

As Portmoak's runways are completely grass, we often have drainage issues which can cause soft patches. Whilst these soft patches shouldn't cause any safety-related problems, we should **avoid damaging the airfield** unnecessarily. The airfield is our largest and most valuable asset, and the condition of our landing strips should be one of our highest priorities.

Nearby Obstacles

There should be no obstacles or people working close to the winch or the cable. Whilst there isn't any defined distance on how far obstacles should be away from the cable, you should use your best judgment and not accept any situations where a cable breaking or being picked up could cause damage (be that to people or property).

Proximity to Landing and Aerotow Areas

Except in extraordinary circumstances where the number of gliders allowed in the air is restricted, the winch cables should never be placed in a configuration which could block landing areas or the aerotow's ground run.

The possibility of an aircraft unintentionally crossing the cables should be minimised as much as possible. An aircraft could pick up a cable during a landing which could damage the aircraft, its occupants, and our cable!

Aligning The Winch

The winch should be aligned so that it is pointing directly at the launch point. A small amount of error is allowed here but try to be as accurate as possible. If the winch is on the east end of the airfield, consider leaving space behind for motor gliders to pass through.

Siting The Winch

Handbrake

Apply the blue handbrake at the rear of the winch.

Detaching The Retrieve Vehicle

Place the piece of wood (stored in the winch's cabin) below the jockey. Lower the jockey and continue to do so until the tow ball is clear of the winch. Ensure that it is secure.

Earthing Stake

Press the earthing stake (found in the back compartment of the winch, where the fuel tanks are) into the ground and connect it to the winch.

Chocks

Lower both chocks and, using your foot, push them firmly into the ground.

Laying The Cables

Remove the cables and their parachutes from their storage compartment (on both sides at the front of the winch) and lay them on the ground in front of the winch. By hand, pull out some of the cable. Now is a good time to quickly inspect the parachutes, strops, and ropes.

Final Walkaround

Finally, perform a full walkaround the winch and ensure that it is fully setup. Double check that the chocks are down, and the handbrake is on.

Move the retrieve vehicle to the upwind side of the winch (or in the case of a direct headwind, on either side).

Starting The Winch

Flick the main power switch (which is under the control box) and turn on the radio.



Ensure that the winch is in Neutral, and the drum selector is in the middle. Then, whilst applying some above-idle power (this is only required when the winch is cold), turn the ignition. It may take several seconds for the winch to start whilst it is cold. Leave the winch running to allow it to heat up whilst you take the first set of cables down to the launch point.

Running The Cables

This section also applies to taking a new set of cables down to the launch point after a launch.

Move the retrieve vehicle to in front of the winch and attach both cables to the back (there is a loop made of thin rope for this purpose just above the parachute). Drive the cables down in a straight line directly towards the launch point at a steady and constant speed (between 20 to 25 mph).

You do not need to stop for landing aircraft unless they are landing across your path. Pilots know that you will continue straight ahead and should stay out of your way. However, as with everything else, use your best judgement!

When approaching the launch point, slowly start to slow down and do not brake harshly. Once you've come to a stop, reverse a little to bring the tension off the cables. **Ensure that both cables are detached before moving off.** Whilst moving off, double check that the cables haven't started moving! Do not pass between a glider and the launch point.

Requesting A Light Check

Once you have returned to the winch, ensure that the radio is powered on. You can now request a light and radio check from the launch point.

You can optionally choose to require lights and radio signals from the launch point. This is required when the conditions make it difficult to view the light signals. You may choose to require radio calls from the launch point at any time.

Winch — Base, Winch, radio and light check.

Base — Winch, Base, reading you 5.

(launch point gives STOP signal)

Winch — That is good. [Request lights and radio for launches.*]

* **This is at your discretion.** Whilst lights are the only thing required for 'TAKE UP SLACK' and 'ALL OUT' signals, the radio can be very helpful and provides better situational awareness to other aircraft. The 'STOP' signal is always over both the radio and lights; however, keep in mind that you may only see/hear one.

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