Access to Airfields

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Introduction

Before going to any airfield - private, civil or military permission must be obtained from the appropriate controlling body. The only exceptions to this are the spectators enclosure when visiting a civil airport, or on an open day at a military airfield.

Before attending scouts should have instruction on:

- The general layout of the airfield with special reference to runways in use, taxiing areas and safe areas for spectators.
- The hazards of jet intakes and exhausts, propellers, ejection seats, explosive canopies,
- glider and paraglider launching cables and aviation fuels.

The airfield

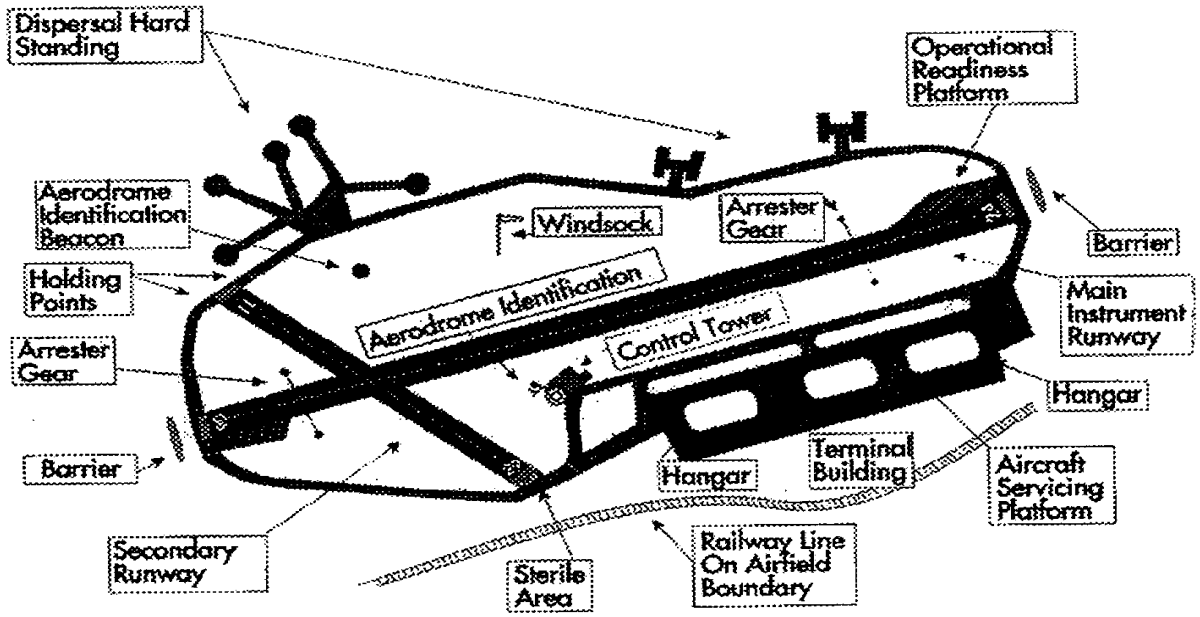
Many Scouts will have the opportunity to visit airfields and it may help to clarify the meanings of the words **Airfield, Aerodrome** and **Airport.**

An **Airfield** is the term used to refer to an area of land used for the take-off and landing of aircraft, excluding buildings and installations.

An **Aerodrome** is a defined area of land or water, including buildings and installations, used for the takeoff and landing of aircraft.

An **Airport** is an aerodrome which may handle scheduled air traffic and often has Customs and other travel facilities.

The plan below illustrates the main features in the layout of a typical airfield.



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When airfields were first built it was thought best to have a triangular pattern of runways to cut down the need for landings to be made in a cross wind, but as aircraft developed and landings speeds increased, the length of the runway became more important than the wind direction. Modern airfields confine operations to one or two runways which are 50 m wide and 1500 m long. In some cases where large, heavy aircraft operate, main runways can be as wide as 75 m, and as long as 3500 m.

The approach and overrun areas must be kept free of obstruction to allow for landing or departing aircraft over-running the runway. The runway threshold is marked by a broad white line across its full width. White chevrons prior to the threshold indicate a sterile area, not to be used for touchdown. A broken white line is used to indicate the runway centreline, and two numbers painted at each end will show the magnetic direction of the runway to the nearest 10 degrees.

The Airfield Controller works from a glass control cabin at the top of the Control Tower giving a clear view of the airfield, while the Approach Controller operates from another part of the Tower assisted by radio and radar equipment. In some instances the Ground Controller occupies a caravan sited to the left of the touch-down of the runway being used. The caravan, painted in red and white checks bears the elevation of the airfield above sea level in black figures on its side. A white letter ‘T' is displayed close by and indicates the landing direction being used.

Airfield terms

When talking about airfields certain terms are used which it is important are known and kept clear in the mind. Here are the most important.

Runway

The area of the airfield used for take off and landing. Not every runway has a tarmac surface; grass is often used for gliders and light aircraft.

Perimeter track

The roadway around the outside of most military and some civil airfields. This is sometimes used as an aircraft taxiway.

Control tower

The air traffic control centre of an airfield marked on the outside by a yellow board showing a black ‘C’. If no air traffic control exists, get in touch with the senior instructor or member available.

Signal square

A square marked on the ground, usually near the control tower, containing details of operations and facilities at that airfield.

Hangar

A large 'shed' in which aircraft are kept.

Taxi-ways

Grass or tarmac route between operational areas.

Apron

Outside parking for aircraft when not in use.

Runway headings

The direction of the runway expressed in terms of degrees, to the nearest ten degrees without the final nought, e.g. an east-west runway would be 'runway 27' and have the figures ‘27’ marked on the eastern threshold; a west-east runway would be ‘runway 09’ and have the figures '09’ near the western threshold, so as to be visible to an approaching aircraft.

Cable dropping areas

The area where a glider and paragliding or parascending launching cable will fall to earth after being jettisoned by the glider at, or near the top of, its climb. This could be a wide area, not necessarily just over the runway strip.

Tow ropes

A length of nylon rope trailing from a light aircraft or winch which is used to tow a glider into the air. The pilot will either decide to land with this rope attached or will jettison it during a 'dummy’ approach prior to landing. In either case the rope

can be dangerous as it is not easily visible and has a heavy metal ring at the free end.

What precautions should be taken when walking to a point on the airfield?

You should:

- Follow access roads and signs if clearly marked.

or

- Ask the airfield controller for comprehensive directions to your intended destination and the methods and direction of launch or take-off.

If the airfield controller is not available, stick close to the perimeter wherever possible. Do not cross the airfield directly.

Be aware of the following:

- Aircraft approaching, landing or taking off (which may be from any direction).
- Glider launching cables and equipment; glider tugs trailing towing ropes.
- Parachutists or paragliders (if applicable) and cables.

What precautions should be taken when crossing launching and landing areas?

You should:

- Acquaint yourself with the position of all aircraft at or below circuit height (even if only starting or taxiing). It is a general rule that an aircraft's red 'anti-collision' flashing light is switched on prior to engine start, remaining on whilst the engines are running. Use this as a visible warning.
- Choose a route clear of all obstructions which might hamper your own or the pilot's view.
- Choose a route which would leave you in the takeoff or landing area for the minimum possible time.
- Do not cross while aircraft are taking off or landing (even if it appears that plenty of time is available).
- Keep together if you are in a group.

If a collision between yourself and the aircraft seems possible, remain stationary: only take avoiding action if absolutely necessary. The pilot should take the appropriate action and your moving could make the pilot's job more difficult. If avoiding action is necessary, remember that a prone body offers less target area and lay flat on the ground - sacrifice your dignity rather than your head!

Airfield hazards

An airfield is a potentially dangerous place. Before visiting you must be aware of all the dangers and hazards.

Jet engines - intakes and exhausts

The principle upon which a jet engine works is to suck in large quantities of air, heat it up and then expel it at a very high speed. Because of the large amount of air being sucked in and expelled, and the very high pressures attained, the jet engine is probably one of the most dangerous hazards on any airfield. The areas covered by the blast from the exhaust and the intake of the air are large.

The shaded area on the diagram should be avoided at **all times,** even if the engine is not running, except when Scouts are under the control of a responsible and qualified person.

Propellers

Another lethal device to be treated with extreme caution. Stay well clear of an aircraft which has the propeller running and never **ever** touch a propeller under any circumstances unless instructed in the correct procedures by a qualified flying instructor.

Note: A propeller should always be treated as 'live' as accidents have occurred while the switches were 'off'. is important to remember that a propeller may not be visible once running.

Ejection seats and explosive canopies, always treat as lethal and live.

On military aircraft the provision of these devices is notified by signs painted on the fuselage in red, usually just below the cockpit.

At no time should an untrained person attempt to operate any part of these systems except under the guide of a fully qualified technician.

Any person finding a crashed aircraft fitted with these devices should not attempt to effect any rescue unless:

I. The pilot is conscious and gives directions.

II. The life of the pilot is in extreme danger.

The correct action is to alert the emergency services who are trained to deal with this type of occurrence.

Cables used by gliders, paragliders and parascenders

In addition to what has previously been written, care should be taken along the landing area with cables laying on the grass as they tend to become hidden. Keep well clear of this area if takeoffs or landings are not in progress at the time.

Aviation fuels

The danger of naked lights near liquids of low flash point is obvious. Follow earthing procedures where necessary. Treat spilled or excess fluids with extreme caution and deal with them quickly and effectively. Remember that empty tanks are potentially more hazardous than full ones. Use the correct fuel for the engine.

Flying sensations

It is important that any person who intends flying knows in general terms what sensations to expect. It is accepted that no words can describe exactly these sensations, but the **Scout** should be warned beforehand so that any normal manoeuvre is not automatically classed as an emergency.