BUSH TECH #52

Bush airstrips for daytime use

Centre for Appropriate Technology

OVERVIEW

Many remote areas of Australia are reliant on air transportation for many services, including mail services, emergency medical provision and evacuation, delivery of food and personal travel options. Air travel is sometimes the only transportation option for small remote communities. It is therefore essential that airstrips are inspected routinely. Some of the main problems with community airstrips relate to their design, placement, ease of access and lack of maintenance. Communities with airstrips have a duty of c are to ensure that the airstrip is maintained to a safe standard and inspected on a regular basis. This BUSH TECH can help you keep your airstrip functional for daytime use.

STANDARD LANDING AREA DIMENSIONS

The **Runway** is the 15 metre wide central portion of the landing area used by planes for landings and take-offs. For RFDS (Royal Flying Doctor Service) emergency evacuations, it typically needs to be a minimum of 1140 metres long. The runway should be free from rocks, ant mounds, vegetation and surface irregularities.

The **Runway Strip** is a 15 metre wide cleared area between the runway and the flyover area and 30 metres long at its end. It is designed to prevent damage if the aircraft leaves the runway.

The **Fly Over Area** is the ground adjacent to the runway strip and must be free of above ground level obstacles.

MAINTAINING YOUR BUSH AIRSTRIP

Here are some steps you can take to maintain your airstrip:

1. Periodic dragging of runway. This will help keep the airstrip smooth.

2. Regular inspection of plants and foliage. Remove any overgrown plants or foliage that are too close to the runway strip or flyover area.

3. Regular inspection of wind sock and runway markers. Check that these are not damaged, ripped or broken. Fix and replace them, if needed.

4. Daily (or for scheduled flights) inspection of strip surface and checking the strip is free from stock. Check to make sure cattle, horses, sheep and camels are not roaming around near the airstrip. Repair any broken fencing, if needed.

RUNWAY STRIP

RUNWAY

G →

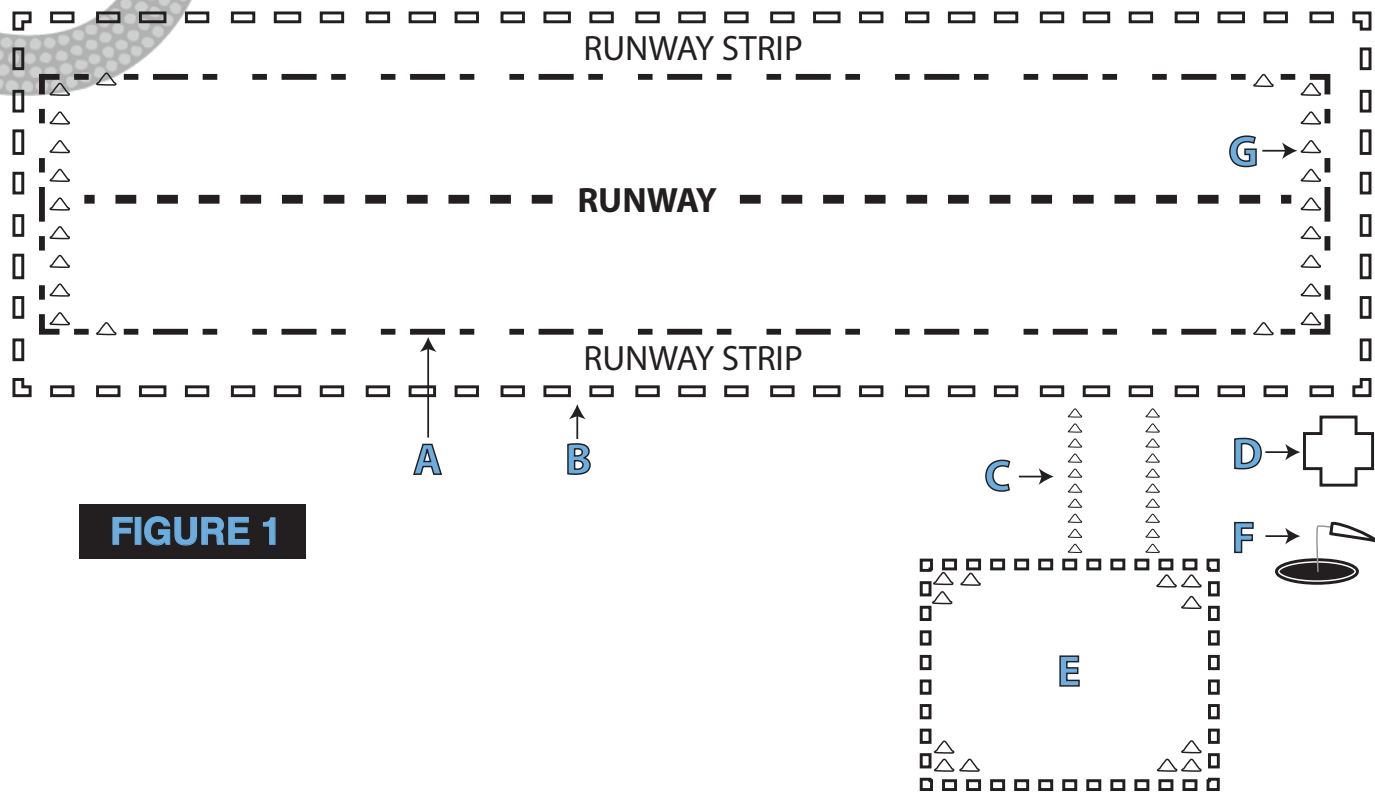**RUNWAY STRIP**

A   B

C →   D →

F →

E
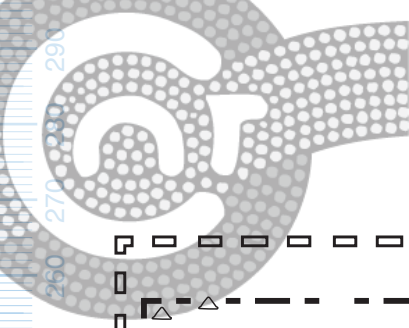
FIGURE 1

FEATURES OF A BUSH AIRSTRIP

REFER TO FIGURE 1 FOR A–G BELOW:

A The **Runway** is normally defined by its contrasting surface when compared with the surrounding area. If it is not distinct from the surrounding area it should be marked by small white rectangular flush mount plate markers or small white cones placed 90 centimetres apart. These markers should be made of a material that will not cause damage to aircraft contacting them.

B The **Runway Strip** markers should be located at 90 metre intervals if using large white cones or tyres painted white. If white gable markers are being used they need to be placed at no more than 180 metres apart. Gable markers are often made from 44 gallon drums cut in half through the vertical plane. Gable markers help pilots plan their landing.

C The **Taxi-way** from runway to Apron should be marked by small yellow cones.

D If the Airstrip is unserviceable due to flooding or a damaged surface then a large **white cross** should be made between the windsock and runway strip to warn pilots not to land. It should be removed once conditions improve or the airstrip has been repaired.

E The **Apron** (aircraft parking area) should be 30 metres x 50 metres and marked by small yellow cones.

F The **Windsock** is shaped like a cone or tube and is designed to indicate wind speed and direction. The fabric cone of a windsock should be 900 millimetres in diameter tapering to 250 millimetres. It should be 3.6 metres long and secured 6.5 metres off the ground. It must be clearly visible, in good condition and free of obstructions. It should have a 15 metre diameter circle of white stones or tyres around it and the ground within the circle should be blackened with old sump oil. The dark area under the windsock will help pilots assess the wind direction correctly.

G The **Runway End** should be defined by white plastic buckets, small cones or rectangular flush markers.

Any fences crossing near the runway ends must be marked with large, white squares or circles. Powerlines in the area should be marked with cable balls to warn aircraft of their presences. An obstacle free area leading outward from the runway strip for up to 2500 metres is needed for the aircraft to manoeuvre for take-off and landing.