

## Standard 4.3 - Medical Helipads



### Principles

The Australian Civil Aviation Safety Authority (CASA) provides only general guidelines for the installation and/or upgrading of helicopter landing sites. It is the responsibility of the pilot in command and aircraft operating company to ensure the landing area is adequate for safe operations.

For all hospitals making use of medical helicopters, a medical helipad is required. This should preferably be a "[hospital helipad](#)", defined as "*a helicopter landing area within easy, trolley access to and from the hospital's critical care areas*". At some locations, a hospital helipad may not be practical because, for instance, of existing construction or lack of space. If this is the case, an "[off-site helipad](#)" may be the only alternative. All tertiary hospital facilities should be equipped with a "[hospital helipad](#)".

A hospital helipad offers a number of operational and clinical advantages. These include time savings, reduction in patient transfers and multiple handling, improved travel conditions for critical patients, improved security/crowd control, freeing up of first response ambulance vehicles otherwise less available for casualty cases, more appropriate use of ambulance personnel and reduced cost.

Well planned hospital helipads are served by level or near-level smooth pathways leading from the helipad to the hospital building. Where a vehicle is used, the ambulance trolley will often traverse unprepared surfaces from the ambulance to the helicopter. Such surfaces are often uneven, boggy, poorly lit or sloping. When within the ambulance vehicle and despite careful driving, riding over gutters or ridges into and out of an off-site location such as a sports oval can cause gross movement of the stretcher and patient. Deteriorations in patient condition have been observed in this situation.

### 4.3.1 Hospital Helipad

**Definition:** "*a helicopter landing area with easy, trolley access to and from the hospital's critical care areas*"

**Obligatory requirements:**

**4.3.1.1 Touchdown area - A hard stand, minimum dimensions 9m x 9m**

- **Ground pad:** Reinforced concrete slab (120mm thick)
- **Roof top:** Engineered to carry loadings of 14,000kg (based on double max. gross weight). Conform with CASA regulations [CAAP 92-2(0)]

**4.3.1.2 FATO (Final approach & Takeoff Area).** An obstacle-free manoeuvring area of 30m x 30m (minimum).

**4.3.1.3 Non-concreted areas within 50m of touchdown area to be well grassed to avoid dust.**

**4.3.1.4 Pathway to touchdown area: Construction concrete or asphalt**

<b>Minimum width</b>	<b>1.2 metres</b>
<b>Maximum slope</b>	<b>1 : 10</b>
<b>Maximum camber</b>	<b>nil</b>
<b>No steps</b>	

**4.3.1.5 Lighting: 1 flood light (e.g. Type MNF307 2000 watt. from Philips Lighting). Wind indicator lighting (250w domestic floodlight).**

**4.3.1.6 Beacon: Red rotating beacon mounted on top of windsock or flagpole. 100 watt, mains operated type (without transformer).**

**4.3.1.7 Wind indicator: Windsock or flag. Mounted on building or pole within 25m of touchdown area but not in a designated flight path to the helipad.**

**4.3.1.8 Access: 24 hour availability. Shortest practical route to hospital. Not dependent on using a vehicle. Pathway should extend from touchdown area to hospital entrance.**

**4.3.1.9 Security: Designated person to keep touchdown area free of obstacles, maintain safety of onlookers, switch on lights and provide trolley.**

**4.3.1.10 Approach and departure paths:**

- **Two approach and departure paths at least 150° apart with a minimum obstacle free clearance of 7.5° from the horizontal, measured from the edge of the manoeuvring (FATO) area. These paths should be a minimum of 56m wide.**
- **Approach and Departure paths may be curved to take advantage of best corridors.**

**4.3.1.11 Comments:**

- **Single control point for lighting (flood, beacon, wind indicator and edge lighting).**
- **The designated flight paths to and from helipad should be developed by medical helicopter operator(s) using the facility.**
- **A noise abatement procedure should be developed for the helipad.**
- **A weather-proof sign should be displayed such that it can be read by the pilot of a helicopter parked on the touchdown area. Details of the approach and departure paths (using bearings or geographical landmark references) and the noise abatement procedure should be given.**

**Preferred additional features**

**4.3.1.12 In ground helipad lighting:** A ring of aviation marker lights as specified in AIP. Operated by separate switch to that operating floodlight, beacon and windsock lighting.

**4.3.1.13 Pathway:** Covered from hospital to within 20m of helipad. Lit with edge or flood lighting.

**4.3.1.14 Windsock:** Windsock on CASA-approved pole.

**4.3.1.15 Perimeter fencing:** Touchdown area fencing (child-safe) at least 10 metres from edge of touchdown area.

**4.3.1.16 Noise abatement:** At frequently used helipads (e.g. tertiary hospital helipads), windows of occupied hospital buildings within 50m of the helipad to be double-glazed.

**4.3.1.17 Access:** Any lifts between helipad and hospital entrance to be fitted with key control.

## **4.3.2 Off-site helipad**

**Definition:** *"a helicopter landing area designated for medical helicopter use which requires the use of a vehicle to convey a patient between the hospital and landing area."*

**4.3.2.1 Requirements of an off-site helipad:** The closest site as determined by medical helicopter operators to meet operational, aviation safety, access and medical team requirements, in consultation with local authorities. This may be a nearby sports ground, park, golf course, open area or airport.

**4.3.2.2 The following should be considered:**

- **Ground surface** - should be flat, grassed and well drained.
- **Security & safety** - may require police attendance.
- **Transport** - will require ambulance vehicle transport
- **Lighting** - may require portable lighting
- **Vehicle access** - requires a smooth surface, with minimum slope
- **In the case of sporting areas**, potential for disruption of sporting events
- **Ground ambulance support** incurs additional costs to hospitals

**4.3.2.3** Wherever possible, upgrading to "hospital helipad" should be the goal.