

Building an Air Ambulance Heliport for Your Community

General Guidance - Building an Air Ambulance Heliport for Your Community

The following information is provided as a guide for planning purposes should your emergency management program or community planners determine that a requirement exists to establish a dedicated helipad or heliport to support rotary wing air ambulance operations. The decision to construct a heliport can be an expensive and lengthy endeavour made challenging by complex regulatory requirements. Registered helipads are usually established by the community they will serve rather than by a medical facility and are usually funded by the community. It is important to note that BCEHS does not provide funding for community heliports, helipads or airports. One possible source of funds is the BC Air Access Program (BCAAP) which provides capital funding for improvements to aviation infrastructure. For more information contact the BCAAP program office at BCAAP@gov.bc.ca.

The regulation and certification of heliports is the responsibility of Transport Canada and is governed by the Canadian Aviation Regulations, part III, [sub-part 305](#) and [sub-part 325](#). Building a helipad is an important undertaking for a community's emergency management program. Before making any financial commitments, it is highly recommended that community planners engage the services of a heliport design consultant to conduct an exploratory site assessment and develop a detailed design plan. A heliport consultant will also be able to assist communities through the Transport Canada regulatory requirements.

Outside of built-up areas, helicopters can land outside of a heliport or helipad in a temporary landing zone with the land owners' permission and when the pilot deems it safe to do so. General considerations for establishing a helicopter landing zone are found at the end of this document.

The decision to land at a heliport, helipad or other area is at the discretion of the pilot and can vary depending on several factors (e.g. visibility, cloud base, wind, temperature, aircraft weight, etc.). The ultimate goal of the federal regulations and the landing zone check list is to provide a safe environment for the take-off and landing of a helicopter.

General planning considerations for establishing a heliport:

1. How large of a landing area is required for the heliport and where should it be located?

The size of the helicopter's primary approach area, departure area, landing area, and obstructions to flight operations must be taken into consideration before determining the location. An area clear of obstructions and with a diameter of 115 feet (35 metres) is generally sufficient for BCEHS-contracted helicopters. If possible, the heliport should be located in close proximity to the health centre. An approach and departure flight path that is clear of all obstacles must be available to safely access the heliport site.

2. What is the size of the heliport surface and how much weight should it support?

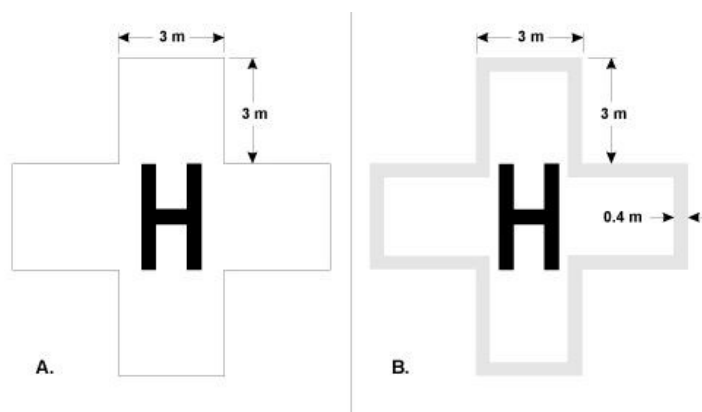
The heliport/helipad touch-down surface should be a minimum of 25 feet (8 metres) diameter and

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constructed of concrete, steel, asphalt or compacted turf. The helipad surface should be level and able to support at least a weight of 14,000 pounds (6,350 kilograms).

3. How should a heliport be marked?

The centre of the helipad should be marked with an aiming point and heliport identification marking orientated to magnetic North. The letter “H” placed within a cross signifies a hospital helipad. Marking colour will vary, but white lettering outlined in a red border provides good visibility to an approaching helicopter. The perimeter of the helipad surface should also be marked with a painted white-coloured line.



4. What kind of lighting should the heliport have for night missions?

There are a number of options ranging from permanent fixed perimeter and approach lighting to temporary solar/battery powered lighting. It is important to illuminate and/or mark obstructions in close proximity to the heliport such as wind sock, antennas, power lines, poles and fences.

5. What should be taken into consideration regarding obstructions to the helicopter?

The takeoff and landing sequences present the highest risk in helicopter operations. Obstructions such as wires, antenna poles, fences and buildings create potential safety-of-flight hazards. Marking or removing these hazards is an important consideration when selecting a heliport location.

Other requirements must be considered for more complex cases, for example:

In order to establish a health facility’s on-site, new-build certified heliport, or major upgrade of an existing health facility heliport:

- The request must be initiated by the health authority
- An engineering study must be undertaken with an engineering report to detail the construction requirements and evaluate the proposed flight paths that will be used. Current Canadian Aviation Regulations, Part III, sub-part 5 and section 325 of the Transport Canada Standards will be used to establish the heliport design, construction and flight path criteria

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In order to establish a registered helipad in a non-built up area:

- It is strongly recommended that subject matter experts be used to design and construct a registered helipad;
- As a registered helipad will require Transport Canada assessment prior to registration, it is suggested that all of the requirements of the Canadian Aviation Regulations, Part III, sub-parts 305 and 325; and
- When the helipad is accepted by Transport Canada and successfully registered with Nav Canada, the BCEHS Aviation Services office should be notified (aviationservicesmanagement@bcehs.ca) to include the site in the Provincial Patient Transport Coordination Centre's Information resources.

Establishing a non-registered helicopter landing site (Landing Zone) for patient transfer for accident scene response:

- Using the assistance of other First Responders, any unregistered landing site must be inspected prior to each landing, with safety in mind, for being suitable for landing a helicopter. The landing area must be clear of debris and have an acceptable, obstacle free approach and departure flight path. It must also be secured to restrict people or animals from entering the landing area (minimum 200' or 60 meters away).

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Quick Reference Guide

BCEHS | BC Emergency Health Services **Helicopter Landing Zone (LZ) Checklist**

Manager - Assign LZ safety manager from Fire, Police, BCEHS or SAR agency

Location

- Plan and set up for helicopter arrival at the scene whenever possible. Pilot has final authority over LZ suitability and will determine alternate site if necessary (most highways will accommodate the helicopter).
- Use your GPS to determine "where am I" location. Provide the street address and coordinates to BCEHS dispatch.

Site specifications

- 40 paces x 40 paces.
- Flat (less than 10 degree slope).
- No debris on ground (no barrier, flagging or scene tape).
- No overhead wires or other obstacles.
- If dusty, consider wetting down the area prior to the arrival of the aircraft.

Communications

- Air-to-Ground communications will occur on the following channels:
 - a) ECOMM – Lower Mainland (bounded by North/West Vancouver, White Rock, Maple Ridge, Abbotsford)
 - b) PEPCORD1 (simplex 148.655) – all other areas of the Province
- Aircraft will contact LZ safety manager inbound, approximately 5 minutes out. Advise of potential hazards at that time.

Safety and Security

- The LZ safety manager ensures that LZ is clear (as above) and that all bystanders are clear of the LZ.
- The LZ safety manager ensures that all traffic is fully stopped for landing(s) on/near roadway(s).
- Ensure all bystanders wear eye and ear protection. Advise bystanders that significant rotor wash with flying gravel/debris can be expected.

Patient Preparation

- Ensure trauma patient is on a clamshell.

NEVER APPROACH THE AIRCRAFT UNTIL AFTER THE HELICOPTER ROTORS HAVE COMPLETELY STOPPED TURNING AND YOU HAVE BEEN REQUESTED TO APPROACH BY THE PILOT/S OR THE MEDICAL CREW

Emergency: 911 / Toll free 1.800.461.9911 / Cell & Sat Phone 250.374.5937

Scene Card September 2019