Setting up an Unlicensed Helicopter Site

In view of the large number of enquiries received by the BHA, basic advice on this subject is provided in these notes.
For further information please consult 'Helicopter Site Keepers' which is available for download from The BHA web site. This document was produced and updated with the assistance of the Civil Aviation Authority gives more detail on this, along with other "must have" information.

General

Any owner of a piece of ground may use it as a helicopter landing facility without any kind of permission, provided the following conditions are met:-

- It is not in a congested area, defined in Article 118 of the Air Navigation Order 1995 as amended; that is, any area in relation to a city, town or settlement which is substantially used for residential, industrial, commercial or recreational purpose. (Note: If there is any doubt as to whether an area is congested or not, it is advisable to apply to the CAA for a "Rule 5 Permission").
- No structure is erected in connection with its use as a helicopter landing area eg concrete landing pad, hangar, etc. other than a temporary structure such as a windsleeve.
- Its use is confined to the private or business use of the owner, his own employees or anyone specifically visiting him for social or business purposes.
- A pilot using the site will be able to conform with Rule 5 of the Rules of the Air Regulations 1996, as amended.

Sites in Congested Areas

If the intended site is in a congested area and is to be used by a single engined helicopter, then it must have at least one approach and take-off lane in which there are sufficient cleared areas such that, in the event of an engine failure, the helicopter could make a safe emergency landing in the access lane without injury to a third party. In the early stages of the climb out and in the later stages of the approach, when the helicopter is at low speed and low altitude, the choice of landing area following engine failure is minimal and therefore it is important that these cleared areas should be larger and more frequently spaced as one gets nearer to the landing site. To provide such areas it is considered necessary that the access lane should quickly expand to a width of about 50 metres either side of the intended flight path but, provided sufficient cleared areas can be provided in the further reaches of the lane, up to a distance of one and half miles from the landing area, this width could be gradually reduced. Whilst the access lanes might encompass a large car park or river, such features should be discounted as emergency landing areas if there are likely to be cars, pedestrians or boats there at the time of intended use of the site.

Planning Permission

Establishment of a site for general use by helicopters will normally require planning permission unless it is only used for no more than 28 days in any calendar year. However, if it is in a congested area, flight to and from the site may require the written permission of the Civil Aviation Authority under the provision of Rule 5 of the Rules of the Air Regulations 1996, as amended. The Authority reserves the right to inspect the site, or to see aerial photographs of the site before granting such permission.

Siting

The first requirement is to find a suitable site. This should be a level piece of well drained ground, either good grass or solid surface, but not a surface containing gravel or which is sparsely grassed so that it will create dust when very dry. Loose stones, debris and dust will be picked up by the circulating air flow of the helicopter rotors and, for this reason, even a solid surface such as concrete should, if possible, be swept and, during periods of dry weather, dampened down to avoid dust clouds.

The touchdown and lift-off area should be obstruction free and large enough to contain a circle whose diameter is at least twice the overall length, including main and tail rotors, of the largest helicopter intending to use the site. An area for acceleration on take-off and deceleration on approach equal to one third of the take-off/landing distance required should be available at, or in close proximity to, the site. This area should be free from obstacles. The remaining two thirds of the distance required, where the helicopter will be further away from the ground, may contain insignificant or frangible objects only. The size of this whole area will vary with the type of helicopter intended to use the site but, for the smaller types, dimensions of about 200 metres in length by 30 metres wide should suffice. The take-off, climb/approach surfaces of the access lanes should be regarded as originating at the ends of the acceleration/deceleration area and these surfaces, rising at a slope of not less than 1:12.5 (8 percent) for the first 245 metres of the climb/approach and thereafter 1:8 (12.5 percent), up to 1000 feet, should not be penetrated by obstacles. It is not always possible to have such unobstructed take-off approach paths from all sides, but at least they should be free in the upwind and downwind directions of the local prevailing wind direction.

If there is an active aerodrome within 10 miles of the proposed helicopter site, it is essential to check with the Air Traffic Control Unit to avoid possible conflictions of traffic in the airspace.

Marking

The aiming point for the helicopter landing should be designated with a white 'H' painted in the middle of a square of, preferably, 30 metre sides. The legs of the 'H' should be 3 metres in length and 0.4 metres wide. The crossbar should be of the same width and separate the legs so that the overall width of the 'H' is 1.8 metres. The perimeter of the square should be delineated with white rectangular markers 3 metres long by 0.9 metres wide, spaced at intervals not exceeding 6 metres and with corner markers. However this requirement may be dispensed with if all the area in the vicinity of the 'H' has the required load bearing surface and is clearly distinguishable and is obstruction free. A windsleeve on a 10 feet high pole should be positioned adjacent to the landing area but clear of the operating area.

Licensing

It is not necessary to license a helicopter site unless it is to be used by a scheduled helicopter service or for flying instruction, including testing. Providing it is not anticipated that a temporary landing site will be used for the purpose of public transport of passengers by more than 10 movements in any one day, rescue and fire fighting services are not specifically required.

Recommended Landing Area

- 1 - Calculate the overall length of the largest helicopter expected to use the site ("D" equals tip of main rotor to tip of tail rotor).

- 2 - Multiply by 1.5 and divide by 2.

- 3 - Add 3 metres or 25% of "D" (whichever is the greater) = Radius of the landing area. There should be no obstructions within this area.

i.e. 1.5 x "D" + 3 metres or 25% of D (whichever is the greater) = Radius
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Helipad Marking and Lighting

Marking

- FATO Perimeter - A white line, 0.3 metres wide
- Aiming Point - Multiply the largest undercarriage dimension by 2; yellow painted circle 0.5 metres wide.
- "H" - Positioned at the centre of the aiming point, with crossbar aligned with the main take-off/approach path. 3.0 metres x 1.8 metres with 0.4 metre painted white.

Lighting

- FATO Perimeter - White lights not more than 250mm. high with an output of 15-25 candelas: maximum spacing 50 metres, not less than 4 lights per side.
- Aiming Point - Yellow lights, not more than 250mm. high at 5 metre spacing for ground level helipad: output 25 candelas.

NOTE: For elevated helipads always seek professional advice.