



Helicopter Precautionary Landings

Helicopter flight into conditions of deteriorating visibility and weather is a hazard that may be encountered at any time of the year in the UK. The dangers of deteriorating visibility are never more acute than when they degrade to the point of actual IMC.

The Civil Aviation Authority Aeronautical Information Circular (AIC) P146/2012 provides useful advice, analysis and further references regarding helicopter precautionary landings. This summary of the AIC is supported by the UK CAA.

The European Helicopter Safety Analysis Team (EHSAT) has conducted extensive research into helicopter accidents and incidents in the UK over the period 2000 – 2010 and preliminary analysis of this data has identified that of the recorded accidents or incidents that occurred in IMC, 88% resulted in a fatal accident. Across Europe as a whole 66% of accidents/incidents that occurred in IMC led to a fatal outcome.

Although encountering actual IMC poses the greatest hazard, it is the loss of sufficient visual cues for safe VFR flight that is the predominant causal factor. The loss of visual cues had many causes including bad weather, dust or snow obscuration, night flight without ground illumination, flight over calm seas, etc. Flight into degraded visual conditions is in many cases a gradual process that the pilot may find hard to recognise until the visibility deteriorates to a near-critical level.

Gaining the ability to recognise the onset of degrading visibility is an airmanship skill that every pilot must work to develop. Obtaining this skill requires time, study, practice, learning from the experiences of others, dealing with the expectations of passengers and recognising one's own personality traits.

Clearly, for the typical VFR-only pilot who is flying a helicopter neither certified nor equipped for flight in IMC, the best choice is to avoid flight into worsening visual conditions. To achieve this, the pilot has several options including returning to base, diverting, routing around the weather or making a precautionary landing.

When is it appropriate to make a Precautionary Landing?

A precautionary landing can be defined as a landing made in order to prevent a perceived hazard from seriously affecting the continued safety of the flight. In many cases such a landing may have to be a suitable non-aerodrome site in close proximity to the track of the aircraft.

Making a precautionary landing should be regarded as a legitimate choice for a helicopter pilot, in much the same way an aeroplane pilot considers a go-around a standard procedure when the situation dictates.

However, analysis of fatal accidents resulting from VFR-certified helicopters continuing to fly into worsening visibility shows there is a reluctance by some helicopter pilots to land in good time. Accident reports continue to feature instances where an early decision to land would most likely have prevented the accident occurring at all.

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faced with dealing with mundane issues on the ground, than to lose your life, or that of others, by not making the right decision to land in time.

Flight into degraded visual conditions ultimately presents two major hazards to all pilots:

- Loss or degradation of visual references – leading to disorientation and Loss of Control.
- Loss of situational awareness – the pilot remains in control of the aircraft but has a false mental picture of the aircraft flight path and the position of surrounding terrain - leading to Controlled Flight Into Terrain (CFIT).

Both of these hazards are known killers.

The legal position: UK aviation legislation

The ability to carry out a precautionary landing does not provide helicopter pilots with the freedom to land wherever and whenever they like in a non-urgent situation. Nevertheless, carrying out a precautionary landing should be seen as a part of normal aviation practice when circumstances dictate.

If, whilst making a precautionary landing, pilots can avoid congested areas then it is unlikely there would be any conflict with the Rules of the Air Regulations. Even when there is a danger of breaching the regulations, the Air Navigation Order does make exceptions for certain circumstances where the safety of navigation takes precedence.

"It is lawful for the Rules of the Air to be departed from to the extent necessary...(a) for avoiding immediate danger:"

Civil law of trespass

This summary sheet cannot cover all of the circumstances that may be encountered when making a precautionary landing. However, within the United Kingdom, land trespass is generally not regarded as a criminal offence unless it occurs with specific aggravating conditions. Ultimately whatever the legal situation it is better to avoid a fatal accident and be

Training and Information

The new European pilot licensing regulation (Part-FCL) has introduced enhanced training requirements for the PPL(H) syllabus at Exercise 25(b) and (c).

Advice and guidance on conducting off airfield landing operations together with airmanship, decision making and safety considerations has been developed by the European Helicopter Safety Team (EHEST) and their pamphlets are available at www.easa.europa.eu/essi/ehest/. Additionally, the CAA publishes many Safety Sense Leaflets and these can be accessed at www.caa.co.uk/safetysense.

Summary

Precautionary landings are a legitimate and justifiable response to a realistically perceived flight safety hazard.

- Plan ahead thoroughly, including a realistic assessment of the weather, to avoid getting caught.
- Before flight, brief your passengers that in the event of bad weather you may have to make a precautionary landing.
- Make a decision to carry out a precautionary landing earlier rather than later; Try to avoid landing close to livestock.
- Respect the countryside code and the landowner's property.
- Contact the landowner whenever possible. Treat the landowner with courtesy and respect. A good attitude and a co-operative manner will go a long way to establishing good relations.
- Report the occurrence to the CAA within 10 days via the MOR Scheme described in CAP 382.

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