SUMMARY

The pilot had earlier during the day made a number of flights in the local area. During the evening, the pilot was to perform cost-shared flights with other private individuals. These flights started from a cultivated field at Skogsfånget near Härnösand. The accident occurred during the second flight from the location.

After about 15 minutes of flight, an approach was made towards the take-off and landing site. After a landing attempt in which the pilot experienced disturbances from the wind, the pilot performed a go-around in order to land in a different direction on a plot next to a house. This location had limited obstacle clearance, which meant that the pilot had to do a final with a steep descent. During the end of the final, the helicopter had low speed and high power output. The relative wind came from the front left. The helicopter unanticipatedly began to yaw to the right and the pilot experienced that the control actions were not sufficient to counteract the yaw, which turned into an uncontrolled rotation to the right. The pilot turned the throttle to idle, which stopped the rotation, but it also caused the helicopter to descend. The helicopter collided with trees and hit the ground hard.

No serious injuries occurred, but the damage to the helicopter was substantial.

No technical fault that could have contributed to the occurrence has been found.

The investigation has shown that a factor in the occurrence was a phenomenon known as unanticipated yaw, also known as loss of tail rotor effectiveness (LTE).

Causes/Contributing factors

During the approach, the helicopter was flown at low airspeed, high power output, without ground effect and with the relative wind from the left side. This contributed to a reduction in tail rotor effectiveness resulting in an unanticipated right yaw that transitioned into an uncontrolled rotation.

Contributing factors have been that:

- the pilot had insufficient knowledge of the risk of unanticipated yaw,
- the intended landing site had limited obstacle clearance and a high degree of difficulty.

Safety recommendations

The Swedish Transport Agency is recommended to:

- inform concerned parties about the risks of unanticipated yaw in an appropriate way. *(SHK 2023:10e R1)*

The EASA is recommended to:

- inform concerned parties about the risks of unanticipated yaw in an appropriate way. *(SHK 2023:10e R2)*