



## Shell Aircraft Safety Moment

### RPAS Hard Landing Incident – Falcon Pipeline Right of Way

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Shell Aircraft



# Incident Overview

- During automated flight on an aerial patrol support SPLC, the PIC of the Harris Aerial H6 aircraft lost command link(C2) to the RPA.
- The aircraft continued on it's programmed flight path and remained in a hover until fuel starvation. The back-up batteries quickly lost power and the aircraft enter a rapid descent.
- Damage occurred to the aircraft carbon fiber structure and the FLIR ball dislodged from the mounting bracket. A power line was contacted during the descent, but no damage occurred to the line.

## Operators Investigation Findings:

- The RPAS Operator's investigation found that there was no back-up C2 link and the low-voltage override switch had been disconnected among others. The switch commands the aircraft to begin a gradual descent at a minimum voltage level. The link was initially disabled as a result of earlier missions with high winds and a heavy payload initiating un-commanded descents during.
- The RPAS C2 Link was disabled due to the back-up radio not being installed after maintenance. Perceived pressures from a COVID related delay and mission timeliness requirements resulted in operator making decision to operate without the redundancy in C2.

## Learning:

- Unintended consequences from aircraft alterations made to the RPAS without consultation with OEM resulted in the hard landing.
- RPAS OEM airworthiness and reliability processes and procedures are often in-mature and underdeveloped when compared with traditional aviation OEMs.

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