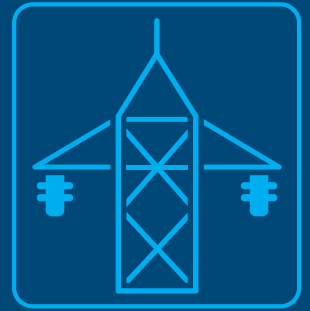


REMOTE INSPECTION GUIDES



# Transmission Towers and Powerlines



THE SMARTER WAY TO SURVEY



Sky Revolutions' Inspection Guides are intended to give an overview of the key aspects of conducting a variety of remote inspections. Each guide in the series outlines the basic steps in the inspection process and reflects our leading expertise in remote inspections using Unmanned Aircraft Systems (UAS).

The Falcon 8 UAS is currently the market-leading drone used in more than 11,500 transmission tower inspections around the world.

UAS are becoming established as a valuable tool in Transmission Tower and Powerline inspections for a variety of reasons:

**SAFETY**

UAS inspections eliminate exposure to manual 'at-height' working – greatly reducing risk.

**COST-EFFECTIVENESS**

UAS tower and pylon inspections offer a more cost-effective solution than traditional inspection methods.

**SPEED**

Drones can be deployed rapidly with reduced set-up time and no operational shut-downs.

**DATA QUALITY**

Defects are interrogated with close-up visual inspection using ultra high-definition footage and stills.

**DATA VOLUME**

UAS often provide fresh data on previously 'difficult-to-see' areas, boosting output and supporting better decision-making.





## PRE-BOOKING

Before employing an aerial surveying service, ask for:

- Type of UAS drone proposed.
- Proof of piloting company's knowledge of safety critical issues in the energy sector.
- CAA Permission number.
- ARPAS UK Membership number.
- Approach to pre-flight briefings, risk-assessment and site assessment.
- Examples of previously completed Transmission Tower and Pylon inspections.
- Details of any previous safety incidents.
- Proposed flight-crew composition.

## PRE-FLIGHT

On-site assessment must include satellite coverage checks and a range of other pre-flight checks, including:

- Assessment of potential signal distortion from surrounding buildings or other structures.
- Audio visual link assessment.

## INSPECTION-SPECIFIC

A range of additional safety measures and processes are required pre-flight:

- **Wind Assessment:** Wind is a significant factor in transmission tower inspections and needs careful consideration on the day.
- **Camera Selection:** A range of camera options is available to the operator depending on site, weather conditions, client requirements, powerline axis, position of sun and position of obstacles.
- **Optional Cordoning:** Cordon requirements depend on land-ownership and site conditions and can be any size but are normally set at least a 30m radius.
- **No Fly Zone:** Preparation of the No Fly Zone in Transmission Tower inspections ensures that the UAS maintains lateral and vertical separation from powerlines and tower infrastructure at all times.
- **Emergency Procedures:** Best practice dictates sharing of basic emergency procedures with all those present on site
- **Flight Battery Checks:** All battery packs should be charged and checked as part of the embarkation checklist.



KNOWLEDGE ⊕ COMPETENCY ⊕ PROCEDURE ⊕ ACCREDITATION = ASSURED INSPECTION

Sky Revolutions delivers  
exceptional data in  
exceptional environments

Sky Revolutions (UK) Ltd  
23 King Street Ind Est, Langtoft  
Peterborough PE6 9NF

**Call:** 01778 560929  
**Visit:** [skyrevolutions.co.uk](http://skyrevolutions.co.uk)  
**Email:** [hello@skyrevolutions.co.uk](mailto:hello@skyrevolutions.co.uk)



CAA Permission for Aerial Work, No.928

