

REMOTE INSPECTION GUIDES



# Roof Inspections



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 challenges relating to roof inspection accessibility and safety are eliminated by the use of UAS.

UAS are becoming established as the favoured tool in Roof inspections for a variety of reasons:

**SAFETY**

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

**COST-EFFECTIVENESS**

UAS roof inspections are a more cost-effective solution than traditional surveying methods; no more costly scaffolding, cranes or cherry pickers.

**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. Issues not visible to the naked eye - such as water leaks and gaps in insulation - can be identified using thermal imaging cameras.

**DATA VOLUME**

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





## PRE-BOOKING

Before employing an aerial surveying service, make sure you are clear on the type of output you can expect. Sky Revolutions offers a variety of service levels for roof inspections:

- Inspections with data provided in electronically labelled folders for each roof.
- Inspections and data with a report of findings and suggestions for remediation.
- RICS assured inspections.
- Inspections and repair work including full project management and H & S documentation.

In addition, ask for:

- Type of UAS drone proposed (Drone redundancy is paramount to safety)
- Proof of piloting company's knowledge of safety critical issues.
- CAA Permission number.
- Approach to pre-flight briefings, risk-assessment and site assessment.
- Examples of previously completed roof inspections.
- Details of any previous safety incidents.
- Proposed flight-crew composition.

## PRE-FLIGHT

Roof inspections using UAS require a high degree of technical expertise and relevant operating permissions. On-site assessment must include satellite coverage checks and a range of other pre-flight checks and preparations, including:

- Assessment of potential signal distortion from surrounding buildings or structures.
- Audio visual link assessment.
- Timing and image sequencing plan.

## INSPECTION-SPECIFIC

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

- **Wind Assessment:** Wind is a significant factor in all aerial inspections and needs careful consideration on the day.
- **Communication:** Two-way communication with the Site Manager is advised.
- **Emergency Procedures:** Best practice dictates sharing of basic emergency procedures with all those present on site and relevant emergency services in the surrounding area.
- **Flight Battery Checks:** All battery packs should be charged and checked as part of the embarkation checklist.

### BRIEF

Set-out specific requirements to include:

- Objectives
- Known and suspected defects
- Land ownership details
- Communications strategy
- Other site specific information

### QUALIFY

Pre-assess proposed operator:

- Skills
- Knowledge
- Accreditation
- Qualification
- Procedure
- Process

### PLAN

Be aware of pre-inspection routine and monitor:

- Pre-flight check process
- Preparedness to fly
- Crew competence

### MONITOR

Monitor flight set-up carefully and approve:

- Safety
- Communications plan
- Emergency procedures

### ASSESS

Assess quality of inspection and how closely it met original brief. Feed results back to operator where possible:

- Accuracy
- Safety
- Speed
- Cost-efficiency

**KNOWLEDGE (+) COMPETENCY (+) PROCEDURE (+) ACCREDITATION = ASSURED INSPECTION**

“The team from Sky Revolutions includes fully qualified, insured, time-served specialists who can carry out both survey and repair.”

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CAA Permission for Aerial Work, No.928

