

# Comprehensive UAV-Based Scaffolding Site Documentation: Protecting Contractors Through Digital Evidence

In today's construction industry, scaffolding contractors face frequent disputes regarding property damage during projects. Without proper documentation, these contractors often shoulder the responsibility for damages caused by other trades. This white paper presents CreoPlan's innovative solution, combining advanced UAV technology with our CreoViewer platform to provide comprehensive site condition evidence at crucial project stages.



## The Challenge

Scaffolding contractors regularly encounter accusations of property damage after other trades have accessed their structures. Traditional photography methods prove insufficient for documenting pre-existing conditions, leading to difficult and costly dispute resolution processes. The financial implications of accepting responsibility for others' damages significantly impact contractors' profitability and reputation.

Manual inspection processes consume valuable time and often miss crucial details that could protect contractors from false claims. The lack of detailed, accessible documentation creates an environment where scaffolding companies become easy targets for unwarranted damage claims.



## Benefits For Scaffolding Contractors

Comprehensive digital documentation provides ironclad protection against false damage claims. Through CreoViewer, contractors can demonstrate professional installation practices and site conditions at every project stage. This detailed record-keeping often leads to reduced insurance premiums through better risk management.

The system streamlines dispute resolution by providing clear, accessible evidence of site conditions. Time previously spent dealing with damage claims can now focus on core business operations.

# The Solution: CreoPlan's Digital Documentation System

## Advanced UAV Technology

Our solution harnesses the precision of the DJI M300 RTK platform, combining high-resolution imaging with LiDAR scanning capabilities. This advanced system captures every detail of the site condition with unprecedented accuracy. The addition of thermal imaging technology reveals pre-existing structural issues that might otherwise go unnoticed.

## CreoViewer Integration

CreoViewer transforms complex survey data into accessible, interactive 3D visualisations available through any standard web browser. This innovative platform processes and optimises high-density point clouds for smooth web-based rendering, enabling seamless navigation and analysis of complex 3D environments.

The platform offers comprehensive measurement tools for precise distance, area, and volume calculations, alongside powerful cross-section analysis capabilities for detailed inspection. Users can add annotations directly within the 3D environment, facilitating collaboration across teams without requiring specialised software installation.



## Three-Stage Documentation Process

The pre-installation survey creates a comprehensive baseline of site conditions. Our UAV system captures detailed aerial photography of all surfaces, while LiDAR scanning provides precise structural measurements. This data is immediately processed and uploaded to CreoViewer, establishing the foundation for all future comparisons.

Post-installation documentation verifies proper setup and creates a detailed record of interface points between scaffolding and the structure. Through CreoViewer, stakeholders can examine installation quality from any angle, ensuring professional standards are met and documented.

The post-removal survey completes the documentation cycle. This final assessment compares current conditions with pre-installation data through CreoViewer's side-by-side comparison tools, providing clear evidence of site restoration and any changes that occurred during the project.