



UAV's IN PROPERTY & CONSTRUCTION

Drones for Property
Measurement &
Inspection Surveys



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The use of drones (UAV's) is now increasingly common in the property and construction sector. It is a very adaptable technology which can provide everything from video and images through to survey-grade geospatial data. The technology allows a level of monitoring and asset collection not previously attainable. The key benefits are: reduced risk, less cost, greater coverage, reduced interruption, improved data & flexibility.

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Peter Folwell BSc (Hons) MRICS - Director at Plowman Craven



HOW DISRUPTIVE ARE DRONES AND WHY ARE THEY USED?

There is always a lot of interest when a drone is in the air. It is important that we provide clear communication to all the relevant stakeholders, which could involve the Police, Local Authorities, Tenants and other third parties. The drones themselves are specially designed to operate at low noise levels to reduce disruption.

UAV's are quicker, safer and more efficient for collecting large amounts of data or for inaccessible and hard-to-reach areas. Using UAV's is more cost-effective and produces a greater depth of information such as high-resolution photography. Crucially, the data produced achieves an accuracy that is comparable to traditional laser scanning.

WHERE CAN PLOWMAN CRAVEN FLY, HOW FAR AND FOR HOW LONG?

As one of the limited number of companies in the UK to have Operational Safety Case (OSC) approval from the Civil Aviation Authority (CAA), Plowman Craven is authorised to use drones in even the most congested areas, including city centres. With our exemptions we are permitted to fly over areas, take-off and land in locations restricted to other operators. Our exemptions enable us to safely reduce take-off distances down to 5m in certain circumstances. As a Network Rail UAV Framework holder we are also permitted to fly over and within 50m of the rail infrastructure.

Restricted zones in place around airports and central London require additional permission from Air Traffic Control before flying. All projects are rigorously risk-assessed and conducted in strict observation of all required public safety standards.

Some of our drones can operate at longer flight intervals than others but the teams have the required power to complete the specified task. The flight-time on our multi-rotor drones can vary between 8-30 minutes. Our fixed wing drone can fly for up to 55 minutes. All our drones currently operate within line of sight of the pilot, but we are working towards exemptions to enable flights beyond line of sight.

HOW QUICKLY CAN WE START FLYING?

Where no specific flight zone restrictions are in place, a suitable and safe take-off site is found and relevant stakeholders are informed. Then flying can take place. Where there are zone restrictions then permissions are required and in normal situations, permissions can vary between 3 to 10 working days to obtain.

HOW EXPERIENCED ARE OUR PILOTS?

All our pilots have completed external training and obtained their Remote Pilot Qualification from a CAA-approved training provider. Pilots also complete our own internal training programme and hold an EASA Class 2 medical certificate. Our pilots require a minimum of 40 hours flight experience before undertaking projects and many have over 300 hours experience. We always operate with a minimum of two personnel on site at any given time.

WHAT CONDITIONS RESTRICT FLYING AND HOW SAFE ARE DRONES?

Before any flight takes place, strict protocols are in place to identify weather anomalies, specifically rain and high winds, that would restrict or stop flying. Local conditions and activities are important and need to be assessed – adjacent construction projects, people/transport movements. Our pilots understand where certain restricted flight zones are in force plus will receive a NOTAM (Notice to Airman), informing them of any specific or emergency no fly zones.

There are risks when flying drones as there would be flying any aircraft. We ensure we operate in strict conformation with CAA regulations and our own flight planning and risk assessment protocols.

All our drones have high redundancy autopilot, resistance to interference and an ability to fly on limited rotor operation.



HOW SECURE IS OUR DATA AND HOW IS THE DATA DELIVERED?

Plowman Craven has been awarded the ISO27001 certification by the British Standards Institution (BSI). This standard covers the provision of data management and security. All data captured is held securely and in accordance with current legislation, including the General Data Protection Regulations (GDPR).

There are various ways to deliver the data to you – either as a deliverable in the basic recognised file formats, such as JPG's, PDF, DWG – or it could be through our client portal. Our portal allows not only large file sizes to be downloaded, but will also provide you with the capability to view the files in their different formats without the need to have the software on your computer. The portal can be set up to reflect an individual project or portfolio and customised accordingly.

ABOUT US

Consult. Trust. Innovate.

Combining technical expertise with the latest equipment, Plowman Craven is one of the largest surveying companies in the UK, serving a broad client base that includes developers, architects, contractors, engineers, project managers, commercial agents, estate management, investors and government bodies. Our access to skilled and specialist resource allows us to respond effectively, no matter the size of the project or how challenging.

PC Monitoring is fully integrated into Plowman Craven's broader surveying and measurement services and is at the forefront of many major tunnelling and construction developments in the UK, working with clients to advise on and manage all structural, monitoring and engineering services requirements through a project lifecycle.

Plowman Craven

PC Monitoring

Part of the **Plowman Craven** group



Contact our expert today!

FOR QUESTIONS, QUOTATIONS, AND MORE

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