

# MOBILE CAD

Surveying Solutions



SOUTHWEST ELEVATION



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## About Us

MobileCAD Surveying Solutions are committed to producing high quality data and surveys using technology-driven surveying equipment. Our surveying solutions use the full range of technologies available to produce accurate information to help inform and advise our clients and end-users on their property plans.

'Can do' is our guiding philosophy and passion. Across all parts of the business, our focus is to ensure our clients get a great service without having to expend their own valuable time and effort to achieve it. In other words – *"give us the remit and we'll give you the result!"*

MobileCAD Surveying Solutions combines our technical knowledge and expertise with the latest technologies to serve a broad client base that includes architects, contractors, engineers, project managers, developers, private individuals, commercial agents, fund and estate managers, investors and government departments.

Our directors come from architectural and construction backgrounds and therefore understand & empathise with the needs of the end users of our surveys. We can produce surveys to our client's own layering system, thereby saving time in post survey editing. Similarly, 3D models are set up with an agreed family structure. All drawings come fully co-ordinated and in mm form to allow the end user to start work immediately when they receive a survey from MobileCAD Surveying Solutions.



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## Measured Building Surveys

MobileCAD Surveying Solutions produce Measured Building Surveys to give an accurate representation of your property showing all of the buildings structural elements and architectural features. Using our Leica Total Stations paired with Tablet PC's and handheld laser measures MobileCAD produce highly accurate and detailed floor plans to give an accurate representation of the building. A topographical survey, elevations and cross sections help to complete the full building picture and provide the end-user with a complete Measured Building Survey Package.

Our typical Measured Building Surveys will collect information on plans such as walls, columns and other structural elements as well as door and window openings. This will include a fully detailed data set including all 3D information (i.e sill & head heights, stair riser and going details, door heights, ceiling heights, levels, spot heights, beam details etc.). If desired our surveyors can also pick up and highlight other information such as electrical and data points, sanitary fittings, incoming mains positions, plant, firefighting and detection equipment, security equipment and signage, reflected ceiling plans and the like or anything else that you might require.



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## Laser Scanning

MobileCAD has invested in the latest surveying technologies from Leica to help broaden the offer of surveying solutions to our clients.

We have produce fully connected measured building surveys using both the Leica RTC. Both pieces of hardware have their place to produce high quality point clouds for our office team.

The office team use the point clouds to produce detailed plans, elevations and sections with Revit Models becoming an increasing popular choice of output.

- Point Clouds ensure all detailed information is picked up on site.
- Full internal point cloud data helps with all types of design outputs.
- Produce normal 2D or 3D drawings packages.
- The overlayed images enable very detailed elevations to be produced ideal for listed buildings.
- Perfect for as-built survey applications.

A laser scanner is a highly accurate measuring tool that uses laser light and imagery to capture data in the built environment. When the laser hits a solid surface, a record of a point in 3-dimensional space is generated. Collectively over multiple laser points per scan and multiple scan locations per inspection, a spatially accurate 3D point cloud is generated.

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## Mobile Laser Scanning

Using the latest in Mobile Laser Scanning technology from Geoslam and Leica, **MobileCAD** can produce floor plans and sections quicker on site than traditional surveying methods. **MobileCAD** then use distos to act as a check for data produced by the scanner. The equipment measures to the usual RICS tolerances with the relative accuracy in a building of less than 5mm and total building accuracy of less than 20mm.

All external dimensions and surveys are recorded using Total Station with all information tied together using common points of reference.

The on-site survey times for this technology means we can survey a large five bedroomed house in under 1 hour and produce up to 10,000sq m of commercial space in 1 day. These pieces of hardware have become invaluable with the outbreak of Covid and clients becoming increasing reluctant to have teams of surveyors in occupied buildings.

Mobile scans can be used for feasibility studies where keeping costs low are important. We can leave reference targets in place and then provide more detailed revisions of the above where required for planning / construction packs.

**MobileCAD** are a class leader and early adopter of the GeoSLAM technology and have supplemented our hardware with the latest BLK2GO scanners.

### The main benefits of mobile laser scanning

- ✓ Vastly reduced 'on site survey times' means less disruption to clients homes and offices.
- ✓ Full internal point cloud data helps with all types of design outputs.
- ✓ Produce normal 2D or 3D drawings packages.
- ✓ The most cost effective way of producing RICS compliant surveys.
- ✓ Cost competitive lease plan survey tool.
- ✓ Perfect for as-built survey applications.
- ✓ Ideal for difficult to access areas where traditional equipment would struggle to access.
- ✓ Excellent tool for difficult survey environments such as Hospitals, Schools, Hotels etc.

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## Topographical Surveys

A topographical survey provides levels and gradients of the land on site, they identify and map the contours of the ground and existing features on the surface of the earth or slightly above or below the earth's surface (i.e. trees, buildings, streets, walkways, manholes, utility poles, retaining walls, etc.).

MobileCAD with the use of its Laser scanners, Total Stations and GPS equipment will carry out surveys of various land areas and landscapes including large open fields and large leisure complex's. We are able with our equipment to setup any survey to OSBM Levels and World Co-ordinates and can also combine this with ariel footage and data with the use of Drones.

Depending on the size of the project, MobileCAD will advise on the technologies required to give the best result within budget.

Linking to the Drone can be a cost effective way to record large areas. The mobile scanner can be an excellent way of keeping costs low on heavily wooded areas.

Please let us know your requirements - MobileCAD will offer the best survey solutions to meet the brief.



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## Drone Solutions

MobileCAD use the latest unmanned technology to provide survey grade accuracy from Aerial Data Acquisition with an inventory of the latest high-tech UAV's.

Our equipment includes the latest DJI M300 with the ability to add multiple payloads from Thermal Imagery Sensors, High resolution 4K Photography and Video to the leading sensors for use within Photogrammetry.

The benefits of emerging UAV technology allow for data to be delivered in ways that were only feasible before by commissioning expensive aircraft or helicopters. The capabilities are endless, and our inventory of UAV's range from micro-drones for use in tight spaces to heavy lift platforms for use with Aerial Light Detection & Ranging (LIDAR).

Whatever your requirements our team of highly adept UAV pilots/operators twinned with in-house data processing with the latest suite of Geographic Information System (GIS) software alongside our highly experienced team of CAD technicians, Mobile CAD ensure we capture, process and deliver high quality survey grade accuracy data.

There is no limit on the reach of our inventory of UAV's to carry out roof or asset inspection and reporting. Our team of industry experts & software engineers have developed a unique online platform that allows us to showcase, deliver, distribute and annotate all our data without the need for software or technical training.



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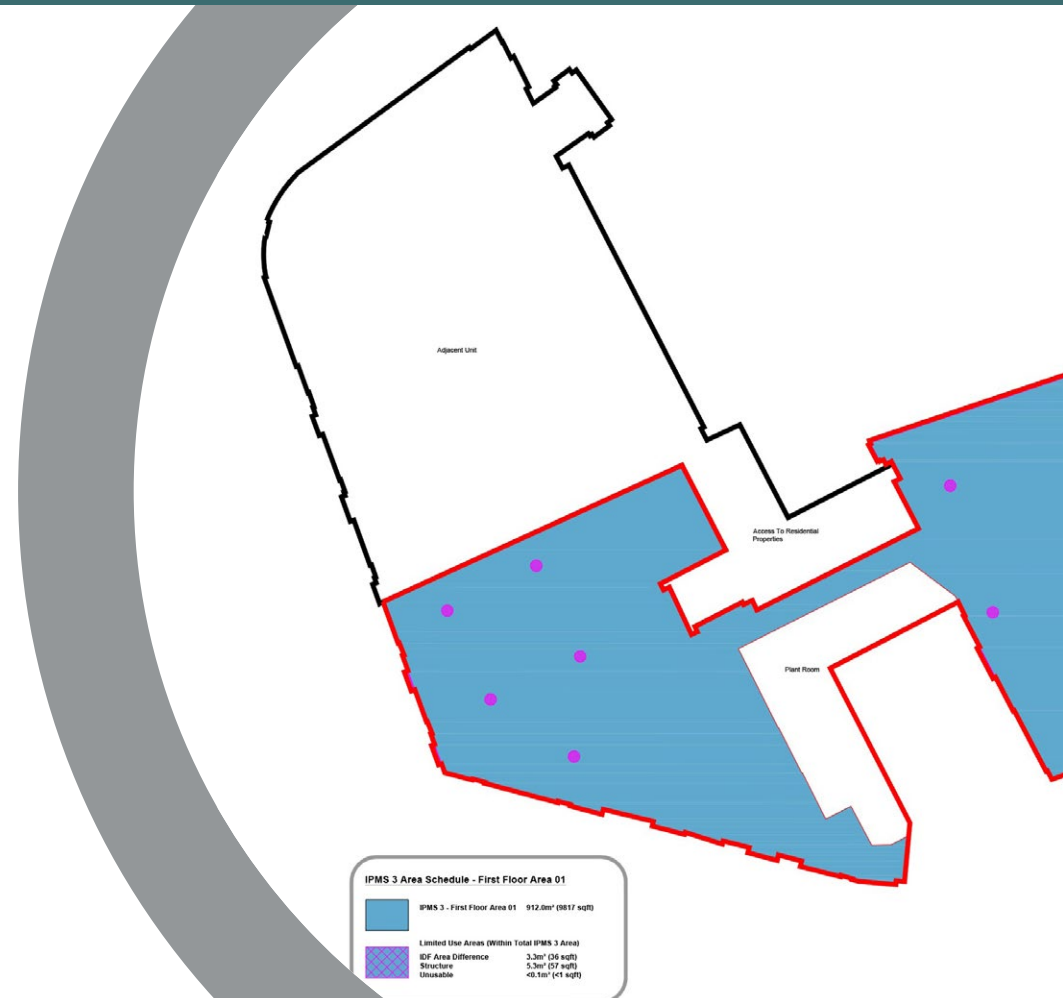


## Area Referencing

Using the most up-to-date technology, our surveying and measurement teams have a reputation for a professional and independent Measurement Service of high quality expertise, accuracy and timely delivery.

In accordance with the RICS Property Measurement 2nd Edition (and the International Property Measurement Standards (IPMS) we can undertake a detailed Measured Building Survey and produce Net Internal Area (NIA), Gross Internal Area, (GIA) and Gross External Area (GEA) assessments in line with specific clients requirements and timescales.

Our staff have undertaken the RICS Qualifications. The final drawing deliverables and report can be produced to meet the clients requirements with reports assignable to the final recipient.



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## Construction Verification Surveys

A Construction Verification Survey can be undertaken to verify that the as-built building matches that which has been designed and expected or contracted.

MobileCAD can assist in site setting out before and after construction. This can be derived from 2D drawn information using total stations or from 3D as described below.

Using high-definition Laser Scanning techniques our surveyors capture an exact representation of the area in question and will prepare a full-scale 3D model, which can then be used to compare to the initial design drawings or model, identifying and reporting upon any areas where there are differences between.

Please let us know your requirements - MobileCAD will offer the best survey solutions to meet the brief.



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## Progress Monitoring Surveys

Using traditional and digital surveying techniques we can record progression on a site development at regular intervals to allow either a visual overview or to quantify the progression and compare to the expected position at any given time.

Taking measurements and visual records at regular intervals monitors the progress of a development and allows assessments of how it is changing over time as well as evidence that can support payment applications, confirm if timescales are being met, project status, consistency with plans & drawings among other things.

Where high level of detail isn't necessary, a repeated drone survey can rapidly and still with reasonable accuracy record the state of a large site area and can be compared over time to monitor development progression.

Mobile scanners can produce the same process on internals, providing the client with informed updates whilst ensuring accuracy is maintained.

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