

CASE STUDY

TOPOGRAPHICAL & MEASURED BUILDING SURVEY



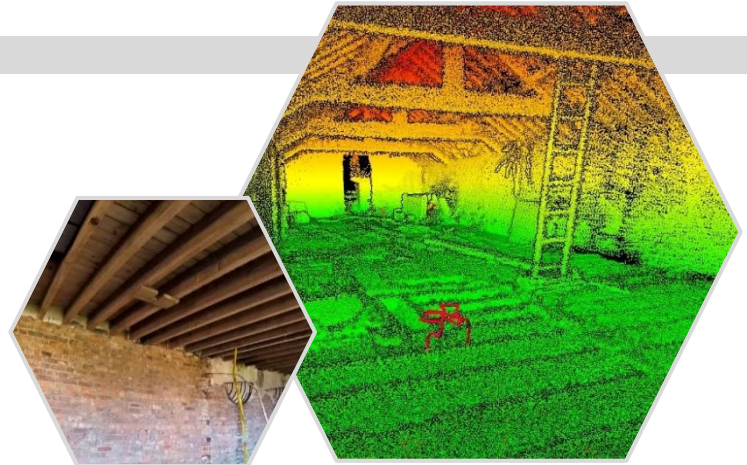
PROJECT AT A GLANCE

Project: Topographical & Measured Building Survey

Location: Hunmanby, United Kingdom

Year: 2019

Duration: 3 Days



PROJECT BRIEF

LSTC was approached by a UK based Architect to survey a brownfield site earmarked for redevelopment. We were tasked with producing a detailed Topographical Survey, as well as measured building surveys comprising of floor plans, cross sections, and elevation drawings for all buildings present on the site.

CHALLENGES

- 📍 To provide a comprehensive and accurate record of the pre-development site and building conditions in a time-sensitive, cost-effective, and safety-conscious manner.
- 📍 To overcome difficulties posed by restricted space and no access to the first floor of the buildings due to the removal of all stairways to prevent people walking on the unstable wooden floor.

OUR APPROACH

To provide the most accurate and detailed Topographical survey data possible, our survey team used a combination of the Leica MS60 Total Station Theodolite and Leica GS14 GPS antenna to collect millimetre accurate survey data and levels of all features, vegetation, and buildings present on site.

To gather the most accurate information in the shortest time possible, the measured building survey was conducted using a combination of a tripod-based High Definition Trimble TX8 3D laser scanner and a handheld Zeb REVO RT laser scanner. The data collected from a single short site visit was combined to produce a highly accurate and complete point cloud of the buildings, which served as the basis for the required plan/elevation drawings.

Furthermore, the Zeb REVO RT scanner was deployed in the restricted first floor environment by raising the unit through collapsed sections of the wooden floor with a 3-metre telescopic pole and all the inaccessible data was collected easily in a safe and cost effective manner. This can also be completed on other environments such as loft spaces, manhole inspection chambers and voids. The environment was scanned with sufficient detail to produce an accurate first-floor plan. The TX8 HD laser scan information was used for all the elevation drawings on this project.

PROJECT OUTCOME / DELIVERABLES

From the data collected during the survey phase, we were able to produce detailed site drawings and building plans and deliver the project to the client in a timely manner. Furthermore, if the client requires any further drawings these can be produced without the need to revisit the site.

Using these deliverables as a basis, the client can carry out their own design works with assurance of the fullness and accuracy of the information, and be confident in the feasibility and validity of their designs before construction commences.