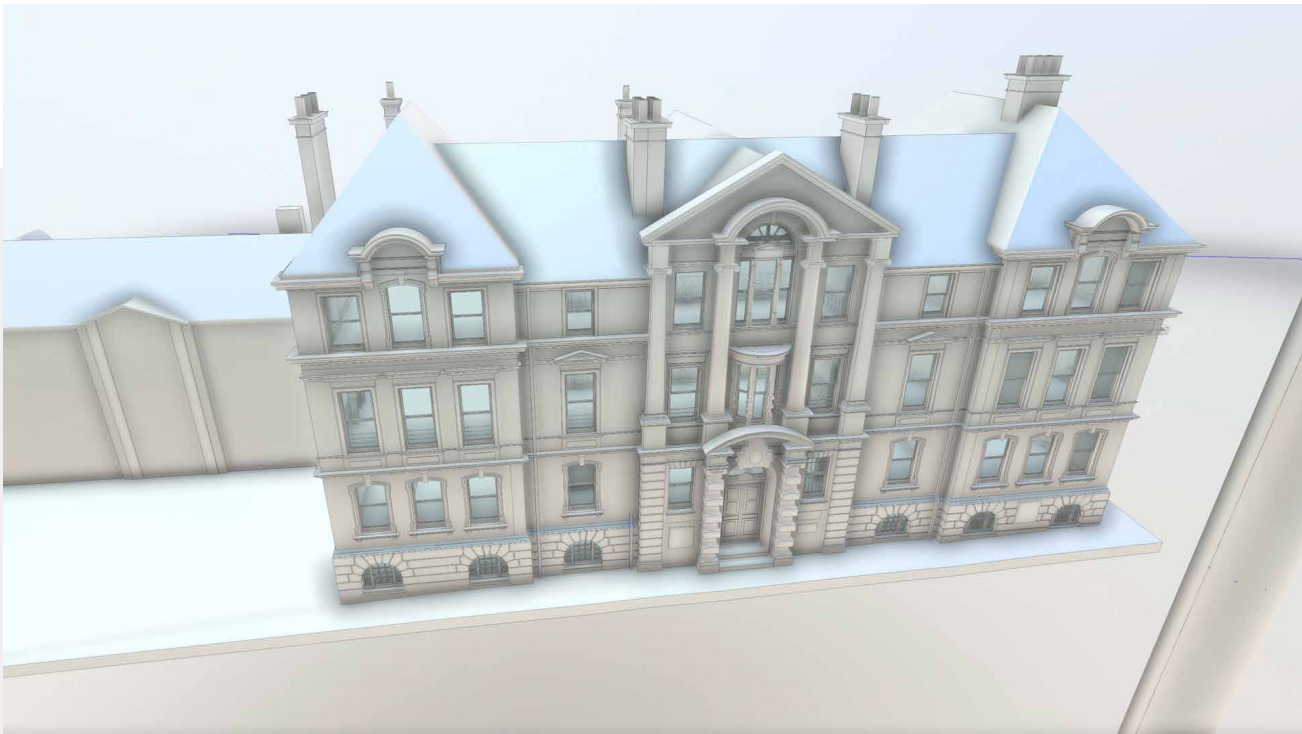


Laser survey for Bury St. Edmunds' Grade II listed Magistrates' Court

Our survey team at CADS has successfully assisted a retrofit project for Rees Pryer by providing a comprehensive package including a measured laser survey, point cloud file, 2D drawings, and a 3D Revit model for the esteemed Grade II listed former Magistrates' Court and Old Shire Hall in Bury St. Edmunds



Survey case study by
Mark Johnson
National accounts manager
■ 22/06/2023



Repurposing an unused historic building

Previously used to hear criminal court cases, Bury St. Edmunds Magistrates' Court closed in October 2016 following the government's cost-cutting measures.

With the Grade II listed building sitting empty and unused, it was sold to a buyer with the intention of submitting a proposal to convert the building into seven residential dwellings via a comprehensive retrofit project.

Since it shut in 2016, the court at Old Shire Hall, Honey Hill, stood empty due to Government cutbacks, until May 2020 when it was sold to Bury Developments Ltd.

A measured laser survey to inform design and planning

Rees Pryer Architects commissioned CADS to deliver a measured laser survey to gain insight into the existing architectural elements of the building, as well as collect details for historic record purposes. To capture the data and detail required, we completed a measured laser survey of Bury St. Edmunds Magistrates' Court and delivered the point cloud data file, a 3D BIM Revit model and 2D drawings of the building.

The survey data and subsequent deliverables informed the design and planning process of retrofitting the building from a disused court into new residential accommodation.

Laser survey for Bury St. Edmunds' Grade II listed Magistrates' Court

Conducting the survey efficiently and effectively

The Magistrates' Court site features two connected buildings – the court building and the main building – with a number of complex internal levels in between, plus two court rooms, a basement cell area, a roof void and more.

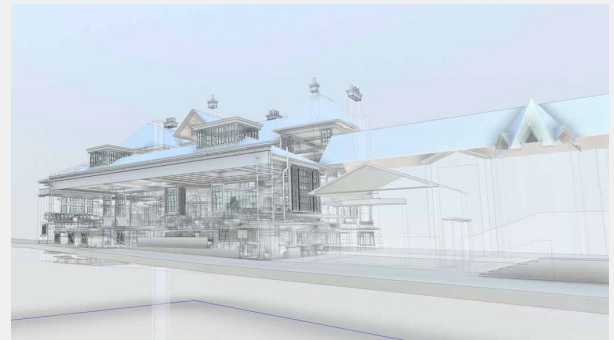
We used 3D HD laser scanners which allowed us to efficiently and effectively collect a vast amount of measured data of the structure during our eight days on site.

A 3D BIM model detailing architectural elements

To enable our clients to work on the design and planning of the redevelopment project, we delivered the point cloud file, then used the data to create a 3D BIM Revit model of the main building to LoD (Level of Detail) 3. As a high level of record information was not required

for the main building, the model we created provided details of the building's major architectural elements and features, as well as structural elements, in basic form. This included walls, ceilings, panelling, cornices, windows, columns, beams and more.

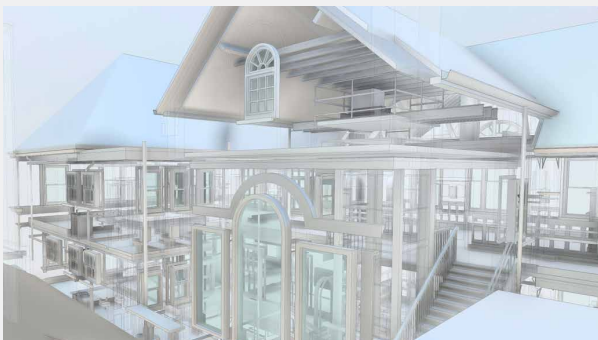
We then extracted 2D drawings from the BIM Revit model, providing details on external elevations, floor plans, roof plans, sections and more.



This provided our clients with a better understanding of the existing building, changes in level and spatial relationships – which are all vital in the design and planning of a retrofit project.

A high level of detail for historic records

Due to the historic nature of the Grade II listed building, a high level of record information was required for the two main courtrooms. So, the model we created included a more detailed LoD 4 specification of the interiors of the courtrooms.



Laser survey for Bury St. Edmunds' Grade II listed Magistrates' Court

This included architectural, structural and MEP (Mechanical, Engineering and Plumbing) elements like windows, panelling and cornices, as well as major permanent internal fixtures such as lighting and built-in furniture. In addition to the black and white laser scan data, we delivered digital colour photographs of key individual architectural elements. This provided our clients with a depiction of the building prior to the commencement of any works for historic record purposes.

Retrofitting over rebuilding

The survey data and subsequent deliverables we provided will help our clients design and plan their retrofit project – bringing an unused and empty building back into viable use for the future whilst reducing carbon emissions. The conservation officer for West Suffolk Council said the scheme works well with the building and any harm to the site would be less than substantial and outweighed by the public benefit of bringing the whole building back into a viable use, securing its future survival.

Not only does it offer new accommodation for Bury St Edmunds residents, but it benefits the environment and as such helps us on our journey to Net Zero too.



“ Our laser scan survey of Bury St. Edmunds' Grade II listed Magistrates' Court for Rees Pryer provided valuable data and a detailed 3D BIM Revit model for the design and planning of the retrofit project. ”

Iain Tubby - Survey services manager at CADS

Ready to get your project started?

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