



## CASE STUDY

# CURTIN UNIVERSITY

## B105 TL ROBERTSON LIBRARY

### PROJECT SCOPE

DUE TO THE MAJOR MAINTENANCE OF THE LIBRARY BUILDING AND THE PLAN TO ADD THE 7TH FLOOR (EXISTING MECHANICAL ROOM) TO THE USABLE AREA FOR STUDENTS, OUR CLIENT REQUIRED US TO CAPTURE AN EXISTING AS-BUILT ENVIRONMENT AS A 3D POINT CLOUD, AND EXTRACT A 3D BIM MODEL USING THE AUTODESK REVIT SOFTWARE.

To minimise time required onsite and disruption to library working hours, Terrestrial Laser Scanning (TLS) has been utilised to capture the existing environment. Our surveyor used the Leica P40, BLK360 and Z+F 5016 laser scanners for realising the accuracies needed.

Laser scan data has been uploaded to Pointerra to help architects and designers transfer data between team members and to be able to collaborate quicker and easier.

The 3D model has been extracted from the laser scan data and delivered as architectural, mechanical, and structural Revit models with level of development up to LOD300.

To capture underground services, Land Surveys used a non-disruptive Utility Mapping (UM) survey method. The 3D model has been generated from UM survey data and delivered as part of a Revit model.

Needing to work flexible hours around the library's day-to-day operation did not affect our capability to provide high quality survey services, and deliver survey scope safely, on-time, on-budget and to our client's expectations.

Our project managers planned each task considering available resources and provided updates on the project's progress and quality to the client, to minimise project risks and help architects and project managers run planned tasks as smooth as possible.

For the first time we utilised a hybrid data collection approach using scanning equipment with different capabilities, to maintain the required quality and accuracy for the laser scan data and reduce time of capture.

Land Surveys received exceptional feedback from the client by delivering manageable laser scan data and the 3D Revit model which met BIM standards.

### CLIENT

HAMES SHARLEY

### DURATION

3 months

### PROJECT VALUE

\$80M

### LOCATION

B105 Curtin University  
Perth, WA