

— CHECKLIST

Scan to BIM execution plan and checklist

From laser scan to an as-built Revit model you can design against.

Scan to BIM goes wrong when scanning and modeling are treated as separate jobs. Use this plan to agree the purpose, the level of detail and accuracy, and the checks at each step, so the model is reliable where it matters.

PROJECT

PREPARED BY

DATE

1. Purpose and scope

- ☐ What will the model be used for: renovation design, heritage record, facility management, clash checking
- ☐ Areas to be scanned and modeled, floor by floor, plus roof and exterior if needed
- ☐ Level of Development required for each element category
- ☐ Level of Accuracy required, ideally stated with the USIBD LOA scale
- ☐ What is out of scope: unseen services, inaccessible areas, furniture

2. Before the scan

- ☐ Site access, occupancy and safe working arrangements agreed
- ☐ Survey control points or targets planned, with a known coordinate system
- ☐ Scanner type and resolution suited to the required accuracy
- ☐ Plan for overlap between setups so scans can be registered reliably
- ☐ Lighting, reflective surfaces, glass and moving objects considered
- ☐ Existing drawings gathered, even if they are unreliable

3. Data delivery

- ☐ Registered point cloud delivered in an agreed format: RCP, RCS, PTS or E57
- ☐ Registration report including residual error
- ☐ Units, origin and coordinate system stated
- ☐ Coverage check: every floor, the ceilings and the roof where required
- ☐ Panoramic photographs supplied, if available, to help interpret the cloud
- ☐ Noise, gaps and shadow areas listed by the surveyor

4. Model set-up

- ☐ Revit template and standards agreed
- ☐ Cloud linked at the correct position, levels and grids derived from it
- ☐ Element naming, worksets and parameters agreed
- ☐ Rules for irregular geometry: model true to the cloud or to design intent
- ☐ Assumptions log opened before modeling starts

5. Architecture

- ☐ Walls modeled at the agreed face, with thickness and out-of-plumb treatment stated
- ☐ Floors, ceilings and roofs, including steps and falls
- ☐ Openings: doors, windows and their heights and widths
- ☐ Stairs, ramps and level changes
- ☐ Facade features and exterior elements if in scope

6. Structure

- ☐ Columns, beams and slabs that are visible in the cloud, with measured section sizes
- ☐ Foundations only where exposed or documented
- ☐ Concealed structure marked as assumed, never drawn as verified

7. MEP

- ☐ Visible ducts, pipes, trays and equipment modeled at the agreed LOD
- ☐ System types and sizes taken from the cloud or from labels
- ☐ Services above ceilings or in walls marked as assumed or unknown
- ☐ Connectivity between equipment and mains checked where visible

8. Checks and quality control

- ☐ Cloud-to-model deviation analysis run, with the tolerance stated
- ☐ Deviation report shows where the model and cloud agree and where they do not
- ☐ Model health reviewed: warnings, duplicates, naming
- ☐ Second person reviews section cuts against the cloud
- ☐ Open questions and unresolved items logged

☐	Revit model and IFC export delivered		
☐	Deviation report and assumptions log delivered		
☐	Sheets and schedules delivered if in scope		
☐	Point cloud retained and its location recorded		
☐	Handover call held; revision process for later changes agreed		

NOTES