REALSERVE

LOD SPECIFICATION

START CONFIDENT.

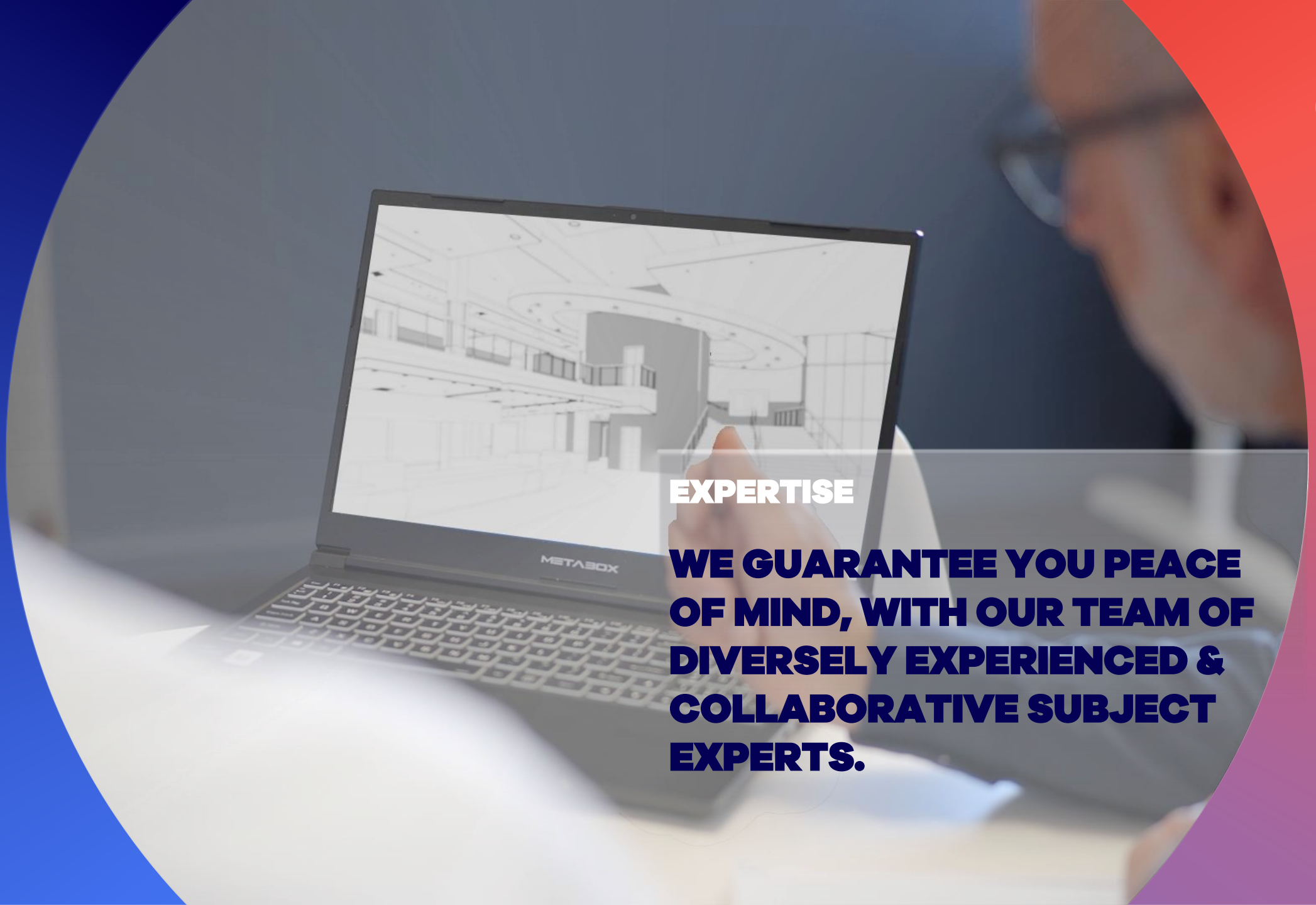
LOD 200 VS. LOD 300 GUIDE

JAN 2025

3D Scanning
& Modelling

Realserve captures and delivers comprehensive point clouds & detailed 3D BIM Revit models to support architectural refurbishments and engineering projects.

With the latest technology and advanced 3D modelling skills, Realserve are increasingly supporting AEC professionals with their transition to 3D workflows.



EXPERTISE

WE GUARANTEE YOU PEACE OF MIND, WITH OUR TEAM OF DIVERSELY EXPERIENCED & COLLABORATIVE SUBJECT EXPERTS.

3D MODEL LOD SPECIFICATIONS

This document clearly describes the level of development (LOD), or detail, that Realserve will typically provide in the deliverable Revit file. Compare LOD200 and LOD300 inclusions so that you can make an informed decision and move forward with confidence.

TYPICAL SCOPE NOTES

Revit Version: As Revit is not backwards compatible Realserve Revit models will be produced in Revit 2022 unless specified by the client to ensure compatibility with all current releases of Revit.

Template and Families: Realserve template and family library will be utilised unless templates or families are provided by the client. In the case client will be supplying templates or families Realserve may need to add elements from their library to complete the project.

Accuracy: Unless otherwise requested Revit models will be produced where all building elements/structure will be modelled with no deflection, distortion or warping. With items typically modelled within +/-15mm of real world captured data, floors may be modelled within +/-30mm where there is significant distortion or severe displacement across the site. This is suitable for as-builts, architectural design and fit-out purposes, not for detailed fabrication. If detailed fabrication or greater accuracy is required this can be achieved for particular items where accuracy is especially critical.

Co-ordinates: Models will be located to an assumed datum (arbitrary coordinates) or MGA2020 and AHD (Australian Height Datum) if required. In the case of MGA/AHD coordinated models the Project Base Point will be set to the survey mark used for coordinates or a known point on site if no survey mark available.

Levels: Models will contain levels aligned to the main floor area of each building level included in the scope, all model elements will be referenced to their relevant floor level. No levels will be produced for ceilings.

3D MODEL LOD SPECIFICATIONS (CONTINUED)

LOD Levels: Categories not covered in the following document will be to LOD200 minimum where items may be shown as indicative overall box indicating length, width and height.

Materials/Texture: As noted in the following tables, LOD300 includes materials for specific elements. Materials and Textures will be Realserve generic materials unless otherwise specified.

Inaccessible areas or Uncaptured Data: Areas inaccessible at time of survey will be marked as inaccessible or outside of scope. In areas where data is not captured for all sides of an element such as a wall where only one side is captured elements will be modelled with an indicative thickness and labelled "Indicative". See Figure 1 and Figure 2 below:

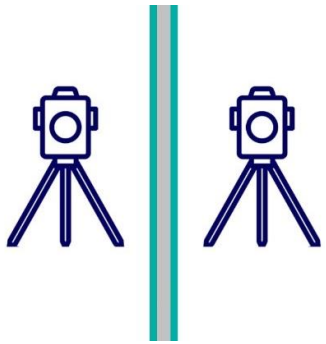


Figure 1: Data has been captured on both sides of the element and true size can be modelled

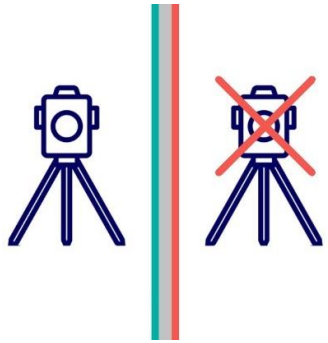


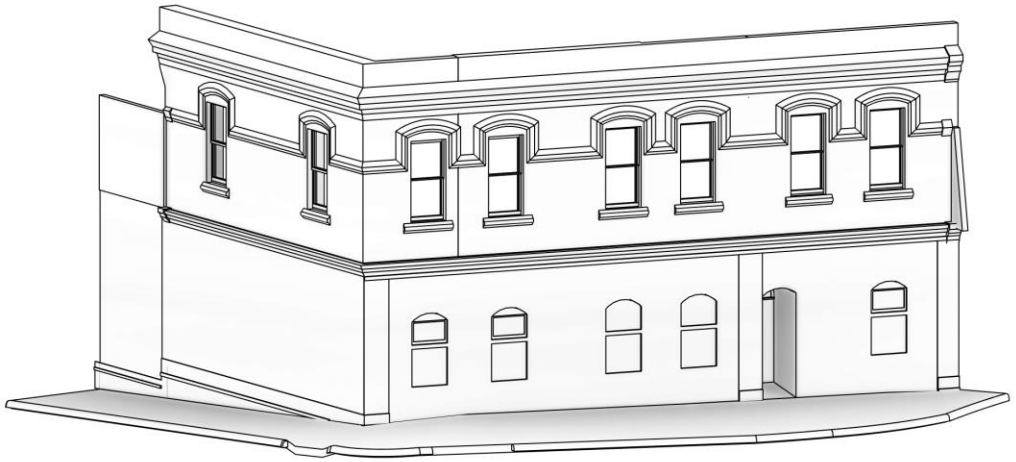
Figure 2: Data has only been captured on one side (left) and that side will be shown in accurate position, element will be nominated as indicative type with nominal indicative size.

REVIT MODELS

LOD200 VS LOD300

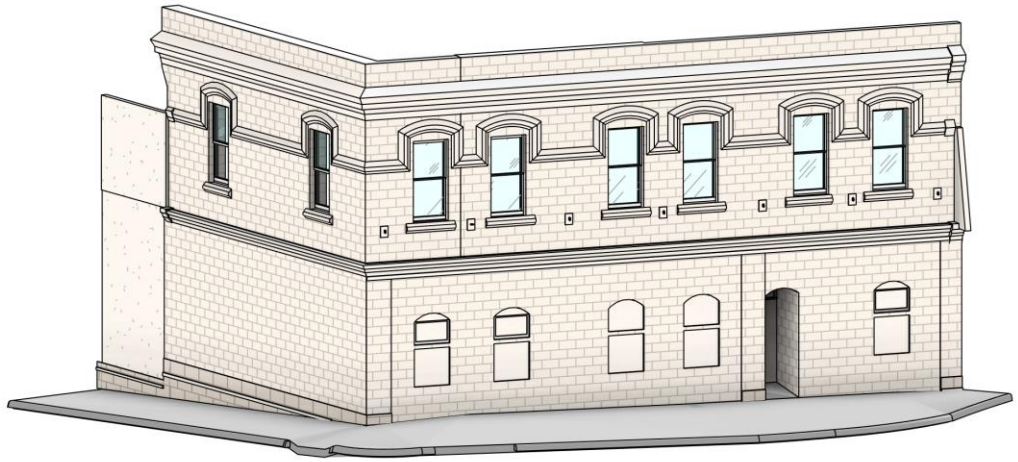
Use our guide to compare and understand 3D Revit model inclusions to help you determine the Level of Development you require for your next project.

EXTERNAL - LOD200



Floors	Accurate to +/- 30mm Floors split between different materials showing separation between footpaths and nature strip
Walls	Basic ornate details as wall mass modelled showing overall general design style. Wall steps of less than 50mm not shown.

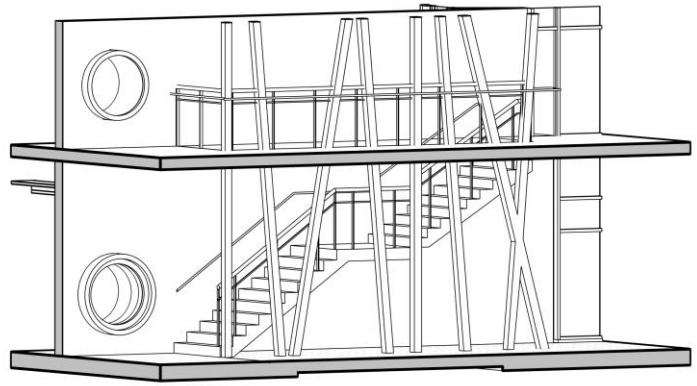
EXTERNAL – LOD300

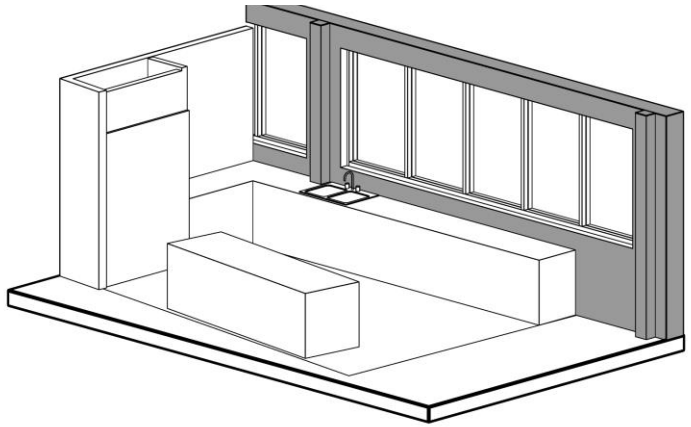


Floors	Accurate to +/- 30mm Floors modelled to show different materials, and split between change in materials
Walls	Materials and ornate details modelled showing overall design style. Wall steps of less than 30mm not shown. Heritage detailing detailed over 30mm.

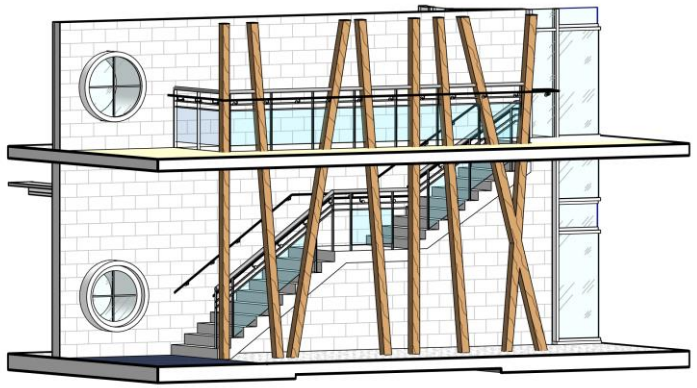
EXTERNAL - LOD200		EXTERNAL – LOD300	
Columns	Columns to correct size and location, basic ornate details shown as column mass	**Columns**	Columns to correct size and location, ornate details larger than 30mm included as column mass
Roofs	If visible from ground level roof shown to correct pitch within 2 degrees showing ridges, gables, eaves and chimneys.	**Roofs**	If visible from ground level roof shown to correct pitch within 2 degrees showing ridges, gables, eaves and chimneys. Gutters and Fascia's included where visible
Doors & Windows	Opening to correct size, basic frame detail around door and windows. Generic door panel and generic glazing shown. Window mullions shown as correct size. Door swing indicated in plan and elevation.	**Doors & Windows**	Opening to correct size, basic frame detail around door and windows. Decorative Door and Window panel details included. Window mullions shown as correct size. Door swing indicated in plan and elevation.
Stairs	Stairs shown with individual steps	**Stairs**	Stairs shown with individual steps and construction type where determinable.
Handrails	Generic Balusters with accurate rail height	**Handrails**	Generic Balusters with accurate rail height, secondary handrails shown to accurate height

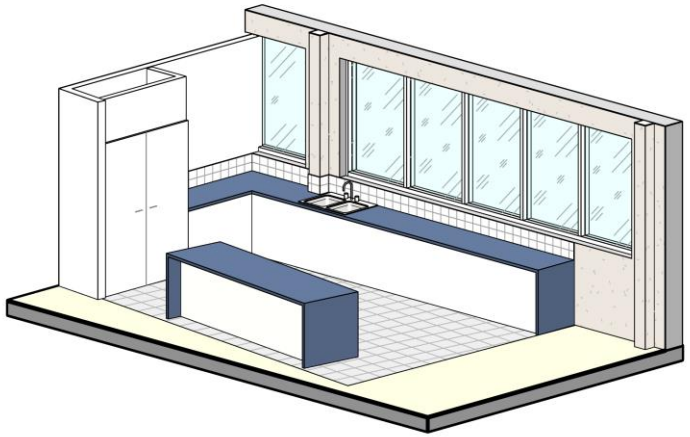
INTERNAL - LOD200





INTERNAL – LOD300



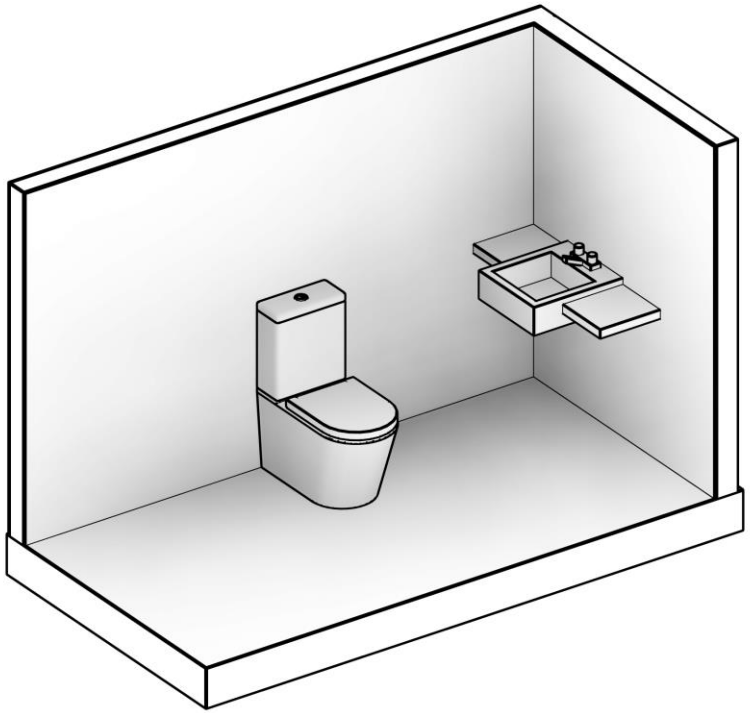


Floors	Height changes of less than 30mm not shown. Change of floor finish indicated by model line.

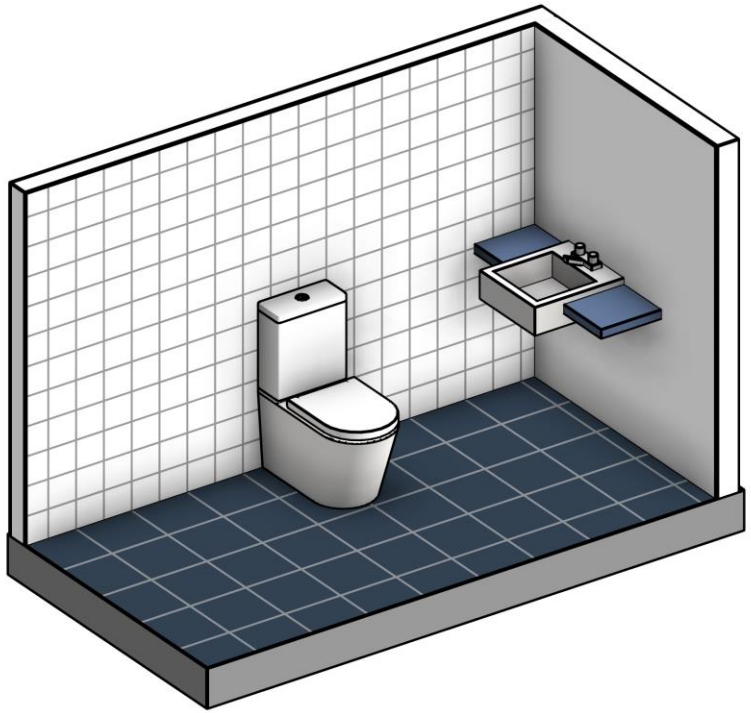
Floors	Height changes of less than 30mm not shown. Change of floor finish modelled, showing finishes where determinable

	INTERNAL - LOD200		INTERNAL – LOD300
Walls	Steps of less than 30mm not shown. Ornate details such as cornice, skirting, dado rails, architraves not shown. Walls modelled as solid or partition to indicate construction type, generic type used if not determinable. Solid wall type includes any finishes (plasterboard, MDF, tile, etc) in overall thickness.	**Walls**	Steps of less than 30mm not shown. Ornate details such as cornice, skirting, dado rails, architraves not shown. Walls modelled to indicate construction type where determinable, generic type used if not determinable. Wall finishes shown with materials where determinable.
Columns	Shown as Columns with accurate shape and size. Model will differentiate between concrete, steel or timber column/post	**Columns**	Shown as Columns with accurate shape and size. Model will differentiate between concrete, steel or timber column/post
Ceilings	Basic ceiling type shown (ceiling grid, set plasterboard ceiling or decorative) with indicative thickness, no above ceiling structure modelled. Ornate detailing not included.	**Ceilings**	Basic ceiling type shown (ceiling grid, set plasterboard ceiling or decorative) with indicative thickness, no above ceiling structure modelled. Ornate detailing not included.
Doors & Windows	Opening to correct size, basic frame detail around door and windows. Generic door panel and generic glazing shown. Window mullions shown as correct size. Door swing indicated in plan and elevation.	**Doors & Windows**	Opening to correct size, basic frame detail around door and windows. Decorative Door and Window panel details included. Window mullions shown as correct size. Door swing indicated in plan and elevation.
Stairs	Stairs shown with individual steps. Escalators and Travelators shown using generic Realserve family to indicate location and overall size.	**Stairs**	Stairs shown with individual steps and construction type where determinable. Escalators and Travelators shown using generic Realserve family to indicate location and overall size.
Handrails	Generic Balusters with accurate rail height	**Handrails**	Generic Balusters with accurate rail height, secondary handrails shown to accurate height

AMENITIES - LOD200



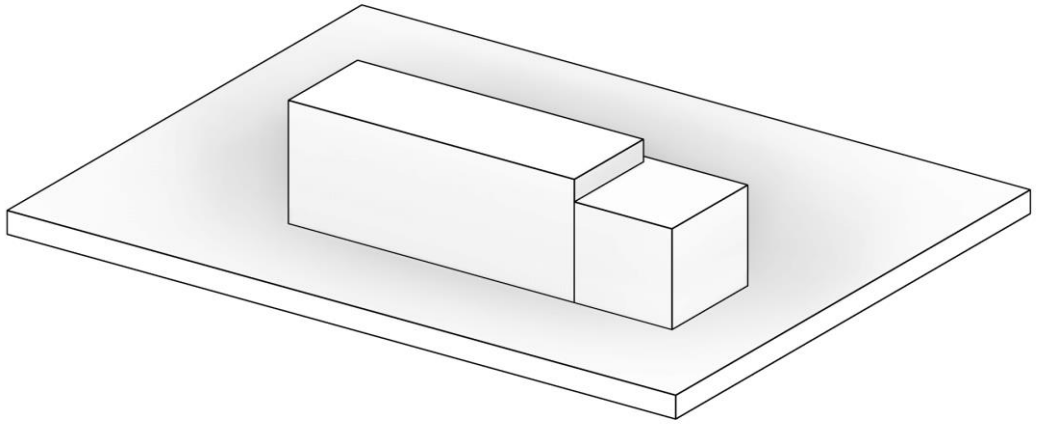
AMENITIES – LOD300



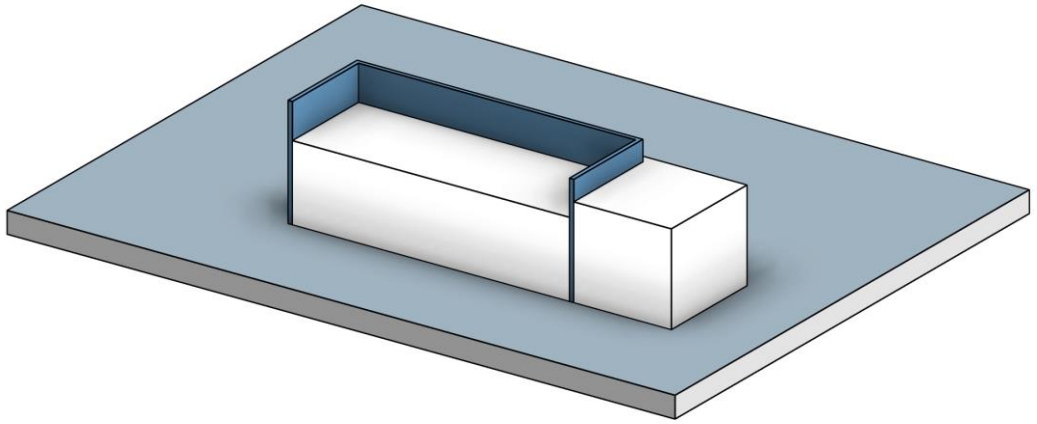
Amenities	Generic Realserve families showing representation of amenity, fixed joinery for benches/counters included as mass. No materials.

Amenities	Realserve families showing amenity, basic shape and size of amenity indicated, fixed joinery for benches/counters includes. Materials for walls and floors included

FIXED JOINERY - LOD200

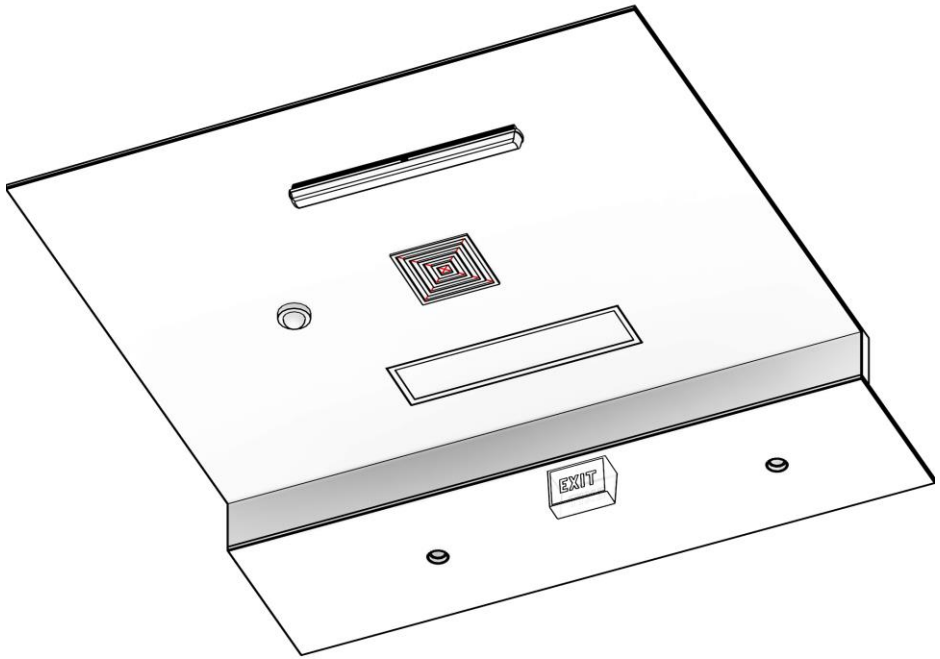


FIXED JOINERY – LOD300

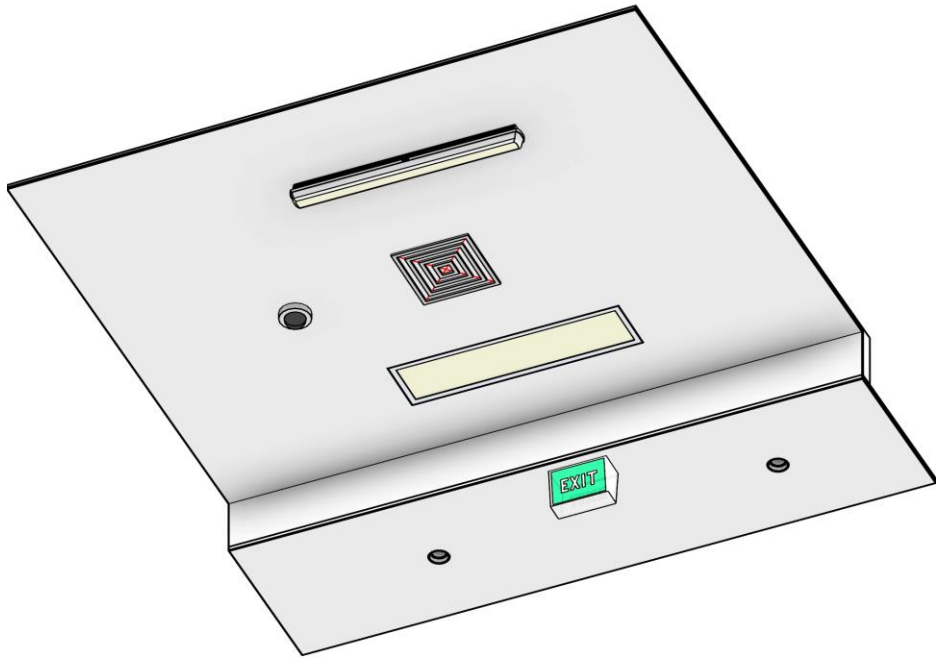


Fixed Joinery	General indicative shape showing overall size and location as mass	**Fixed Joinery**	Indicative shape showing overall size and location and changes in shape of greater than 50mm

CEILING SERVICES - LOD200



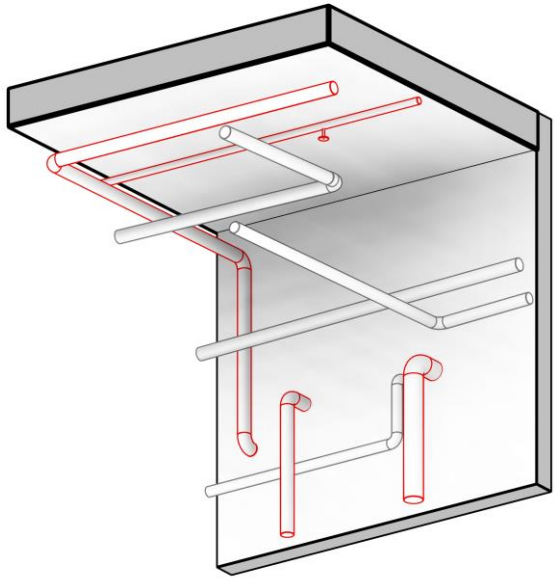
CEILING SERVICES – LOD300



Ceiling Services	Generic Realserve families including basic shape and location of visible services. Power outlets, data outlets, light switches, small control panels and keypads excluded.

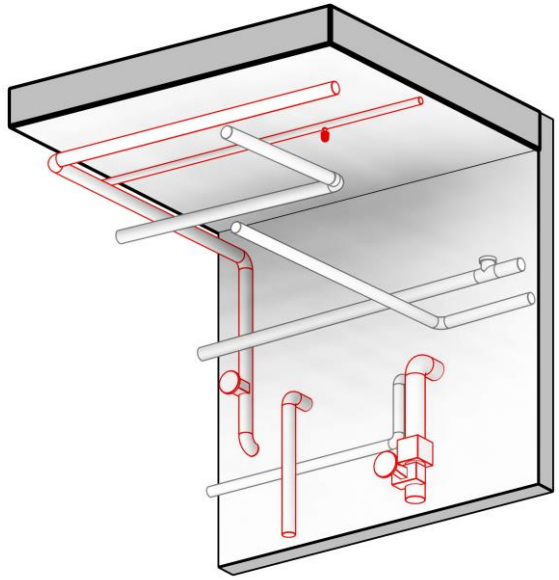
Ceiling Services	Realserve families including basic shape and location of visible services. Power outlets, data outlets, light switches, small control panels and keypads excluded.

PIPES - LOD200



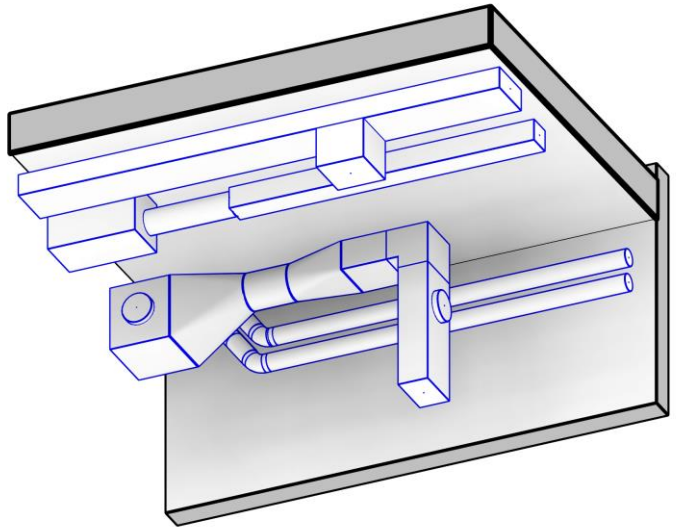
Pipes	Where determinable type of pipe shown to outer diameter for pipes above 100mm diameter.
Tees & Elbows	Included as part of pipe run
Flanges & Valves	Not included
Sprinklers	Realserve generic family to indicate location
Supports & Hangers	Not included

PIPES – LOD300



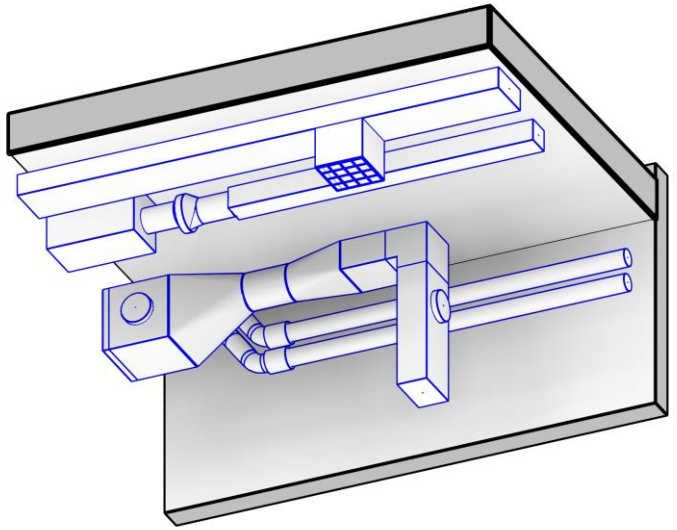
Pipes	Where determinable type of pipe shown to outer diameter for pipes above 100mm diameter.
Tees & Elbows	Included as part of pipe run
Flanges & Valves	For main fire pipes shown as generic overall mass, indicating location and overall size. Bolts or Gaskets not included.
Sprinklers	Realserve family to indicate location
Supports & Hangers	Not included

MECHANICAL & DUCTS – LOD200



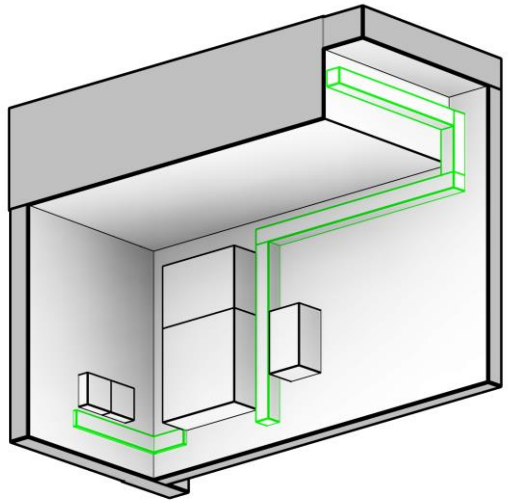
Ducting	Rigid ducts modelled to overall dimensions and shapes. Changes in size less than 30mm not shown. Flexible duct not shown. Flanges not shown
Inlets/ Outlets	Approximate shape
Supports & Hangers	Not included

MECHANICAL & DUCTS – LOD300



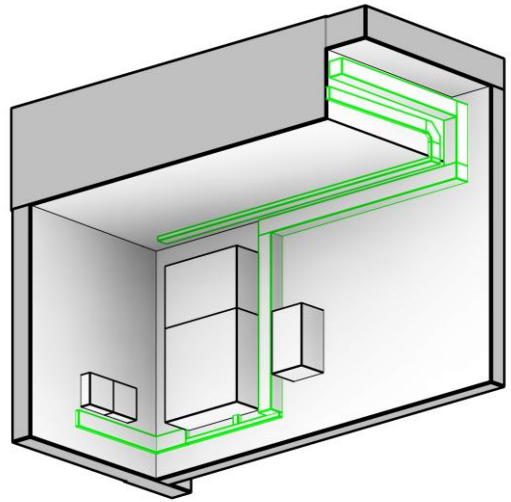
Ducting	Rigid ducts modelled to overall dimensions and shapes. Flexible duct not shown. Flanges not shown
Inlets/ Outlets	Approximate shape, correct size to 15mm tolerance
Supports & Hangers	Not included

CABLE TRAYS & ELECTRICAL - LOD200



Cable Trays	Over 100mm wide shown
Conduits	Rigid conduit over 100mm included. Flexible cables and conduits not included.
Electrical Boxes	Overall generic size showing width, height and length. Type of electrical box not indicated. Distribution boards will be nominated where known. Buttons, fuses, switches and other small details not included.
Supports & Hangers	Not included

CABLE TRAYS & ELECTRICAL - LOD300



Cable Trays	Over 30mm wide shown
Conduits	Rigid conduit over 30mm included. Flexible cables and conduits not included.
Electrical Boxes	Overall generic size showing width, height and length. Type of electrical box not indicated. Distribution boards will be nominated where known. Buttons, fuses, switches and other small details not included.
Supports & Hangers	Not included

RESPONSIVENESS

OUR DEDICATED TEAM WILL WORK WITH YOU TO TAILOR A SCOPE OF WORKS THAT SUITS YOUR PROJECT REQUIREMENTS.

WHICH LOD SHOULD YOU CHOOSE? REALSERVE'S QUICK GUIDE.

Choose LOD 200 if:

- You're in early-stage feasibility or concept design stages
- You need to quickly understand spatial relationships
- General room sizes and layouts are sufficient for now

Choose LOD 300 if:

- Services and trades will be coordinated in Revit
- You're preparing detailed design documentation
- You need to minimize risk of rework during construction
- Your project requires accurate, as-built data to base your design on

LOD 200 REVIT MODEL: ENHANCING OFFICE SPACE PLANNING AND MANAGEMENT

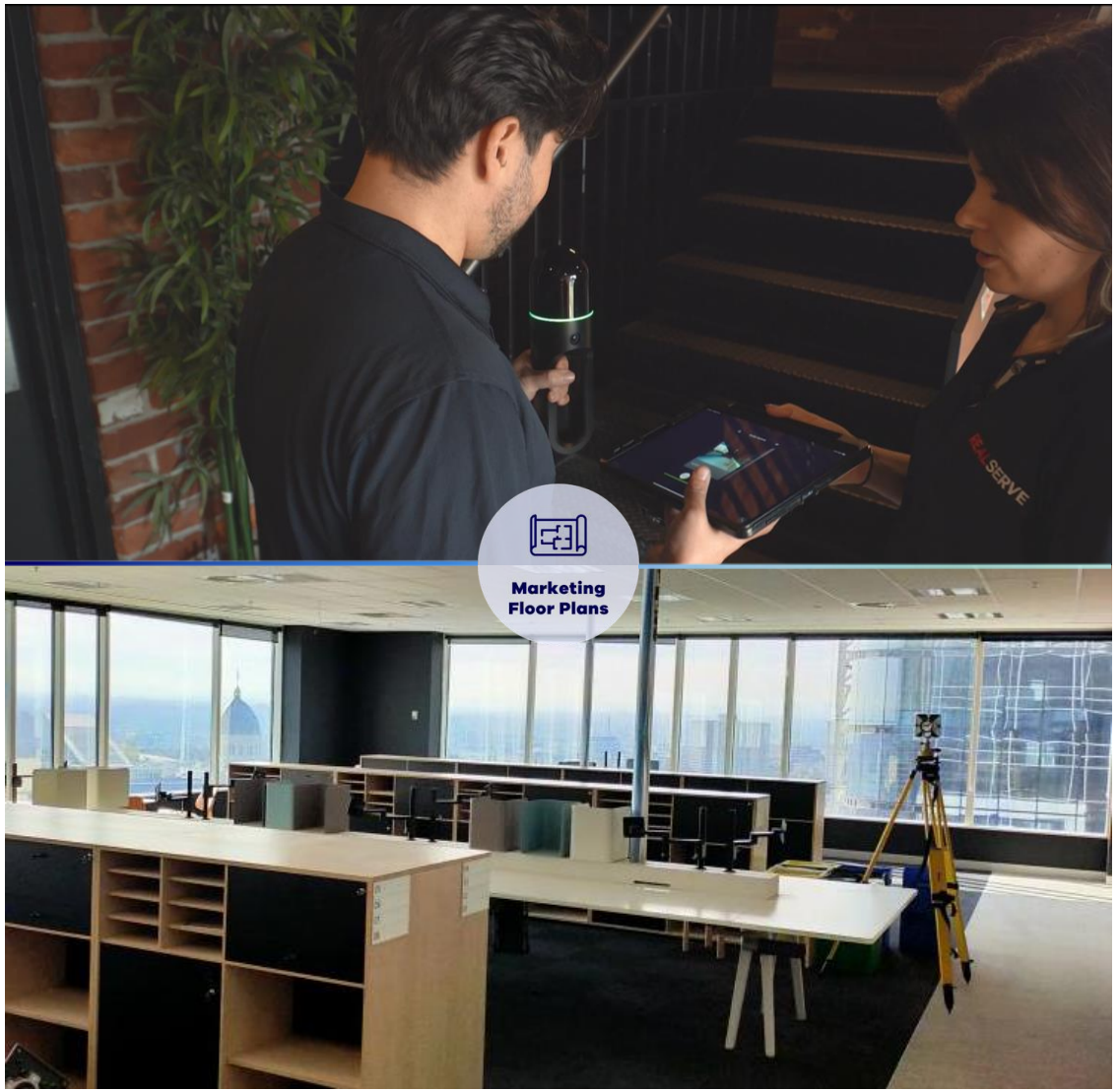
A large retailer utilised Realserve's spatial data to optimise space allocation, improve workplace efficiency, and enhance strategic decision-making in their Melbourne head office.

STRATEGY & METHODOLOGY

For this project, a 1,400sqm office space was captured using a combination of traditional surveying methods and mobile 3D scanners.

Mobile scanning technology was chosen for its ability to rapidly collect large amounts of fit for purpose data.

With this data, Realserve was able to support test fitting various layouts to optimise space.

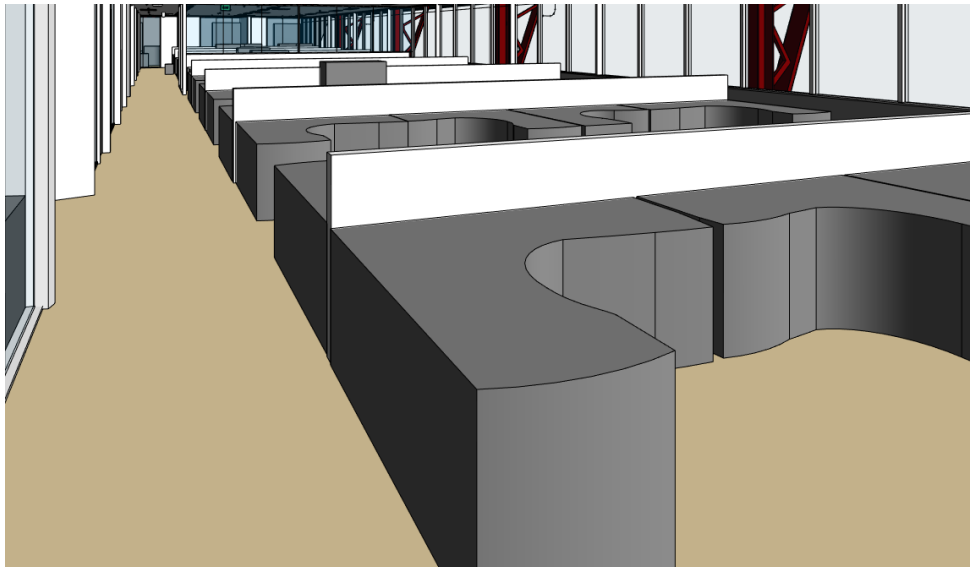


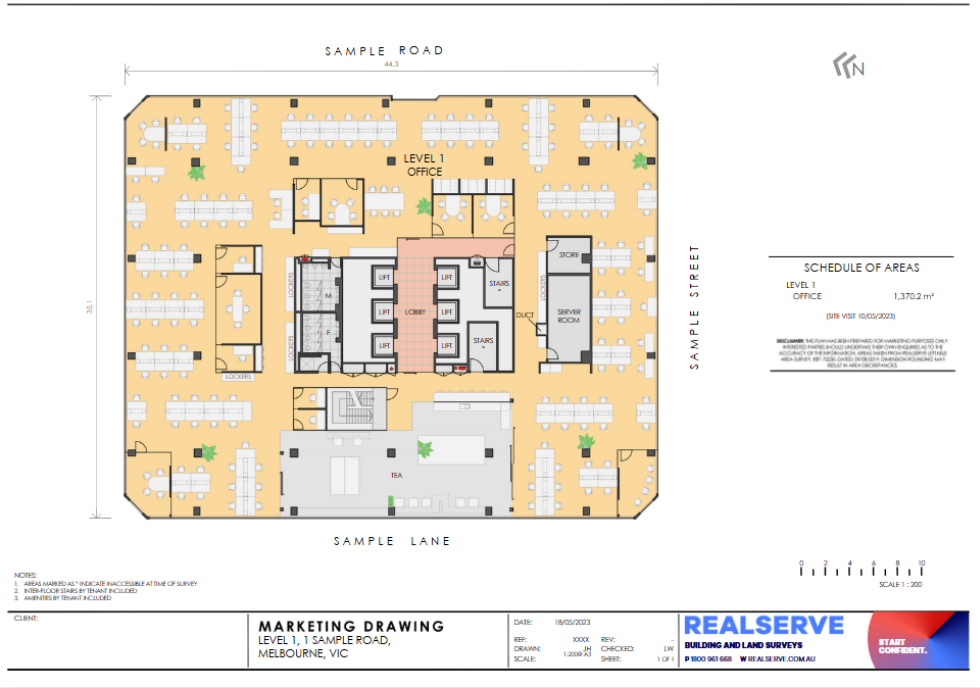
DELIVERABLES

- 3D REVIT MODEL – LOD 200 was built and used collaboratively to test fit designs
- MARKETING FLOOR PLAN – basic plan showing final desk locations and the approximate office area was provided, calculated in line with the PCA Guidelines was required.
- Revit 2022, DWG and PDF files were provided files for seamless integration with the client's workstation booking system.

In collaboration with the asset manager, Realserve delivered as-built data, facilitated test fitting various office configurations, and provided a final solution which was seamlessly integrated with an online booking platform.

REALSERVE





BUILDING AND LAND SURVEYS

WE GIVE YOU THE COMPLETE PICTURE SO YOU CAN MOVE FORWARD WITH CONFIDENCE.

IN 3D

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