

BIM Level of Detail - Definitions

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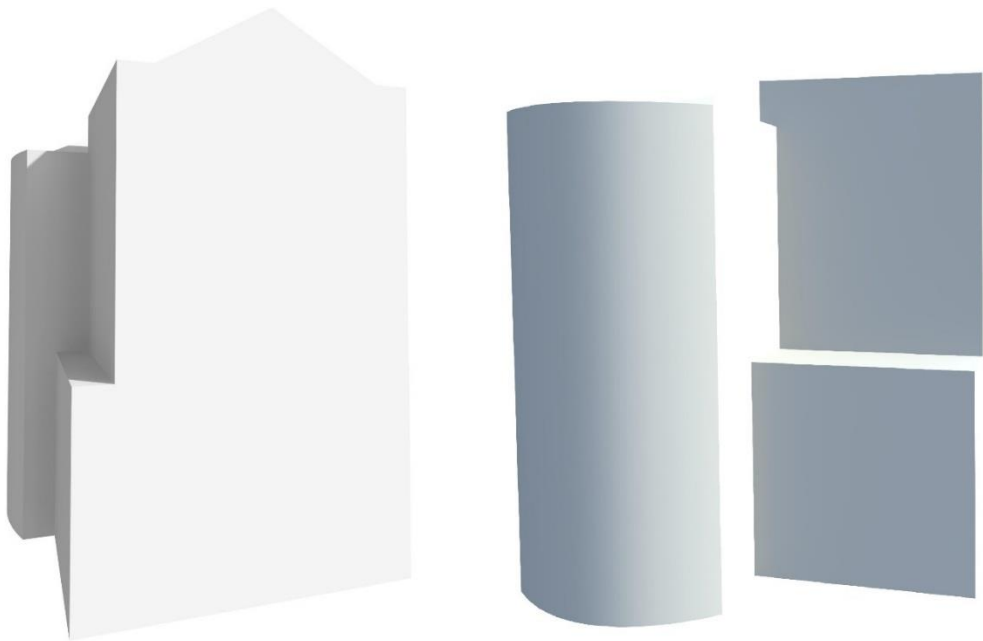
Introduction

This document defines what is usually included in a model when it comes to different type of LOD definitions.

Customise LOD

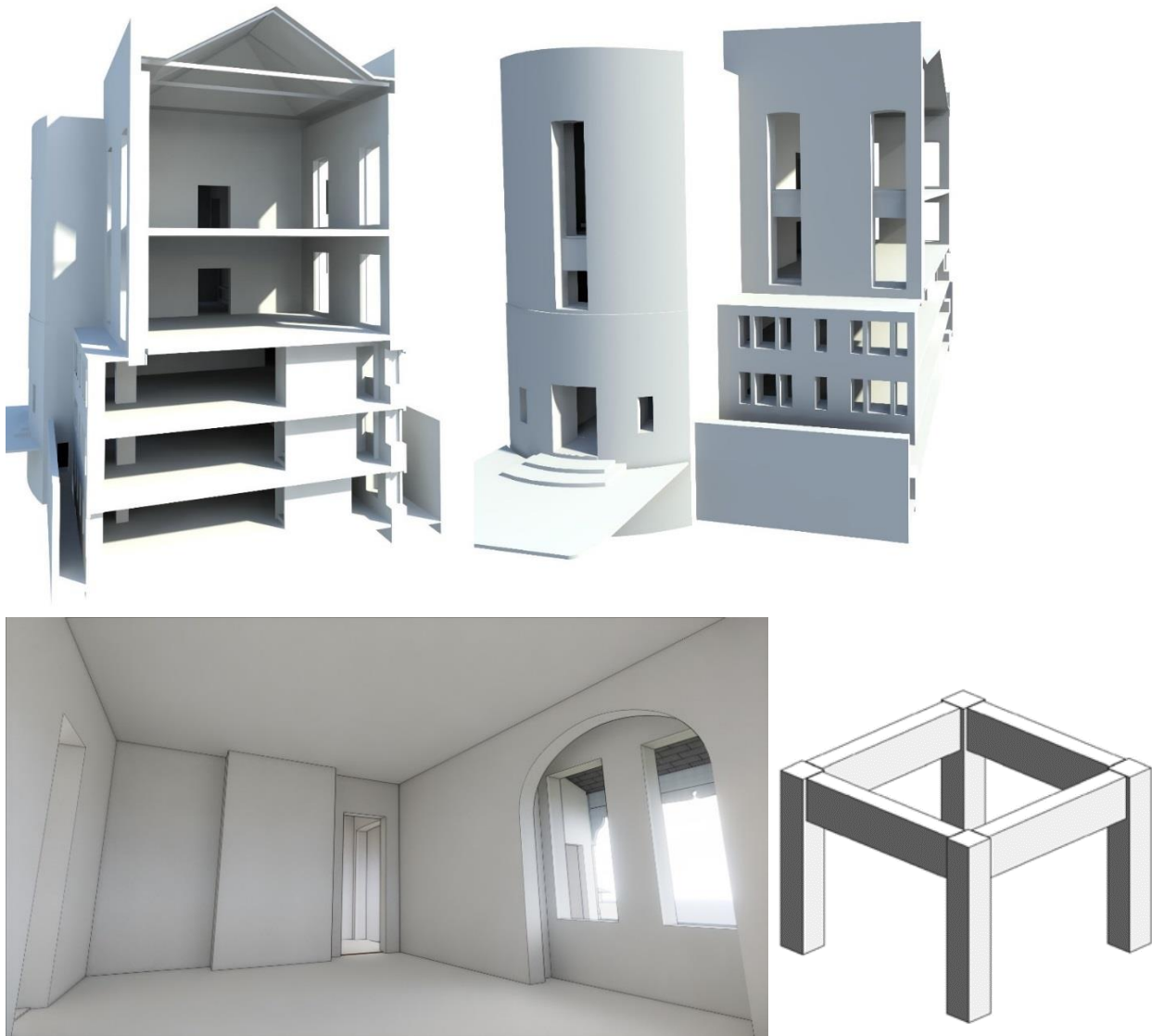
You don't have to be fixed in a LOD type of model when it comes to your project, for example, you can choose LOD 300 for internals and LOD 400 for Externals if you need high definition for visuals or planning, or you may want an LOD 300 but you want lighting in the model. So if you let us know of your requirements, and we can customise to suit.

Level 1 (LOD 100) – Mass Model



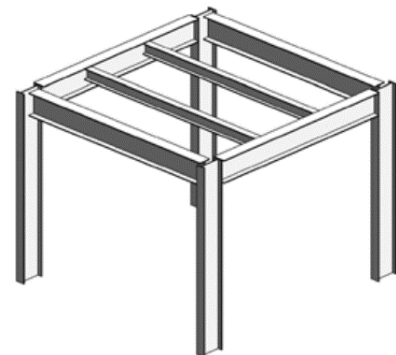
A Level 1 model will be an outline overall mass model of the building, site or structure. It will contain no window or door openings, services or architectural detailing.

Level 2 (LOD 200) – Basic Structural model



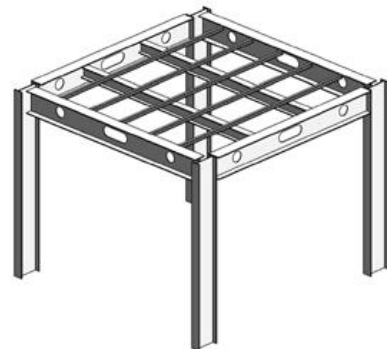
A Level 2 model will contain only major structural components and openings in the building, including floor slabs, columns, beams and structural openings of doors and windows in a basic form. No services, architectural detailing or furnishings will be modelled. Primary structural components (columns, beams) modelled to show basic overall mass. Secondary structure is not included.

Level 3 (LOD 300) – Standard Architectural model



A Level 3 model will additionally contain primary basic architectural details. Basic families can be created for doors and windows, but no surface finishes will be defined. Major services can be modelled in outline form, and fixed furnishings can be modelled in simplified form if requested. Primary structural components (columns, beams) modelled to define form such as steel RSJ, channel, angle, etc. Secondary structure is not included.

Level 4 (LOD 400) – Detailed Architectural model

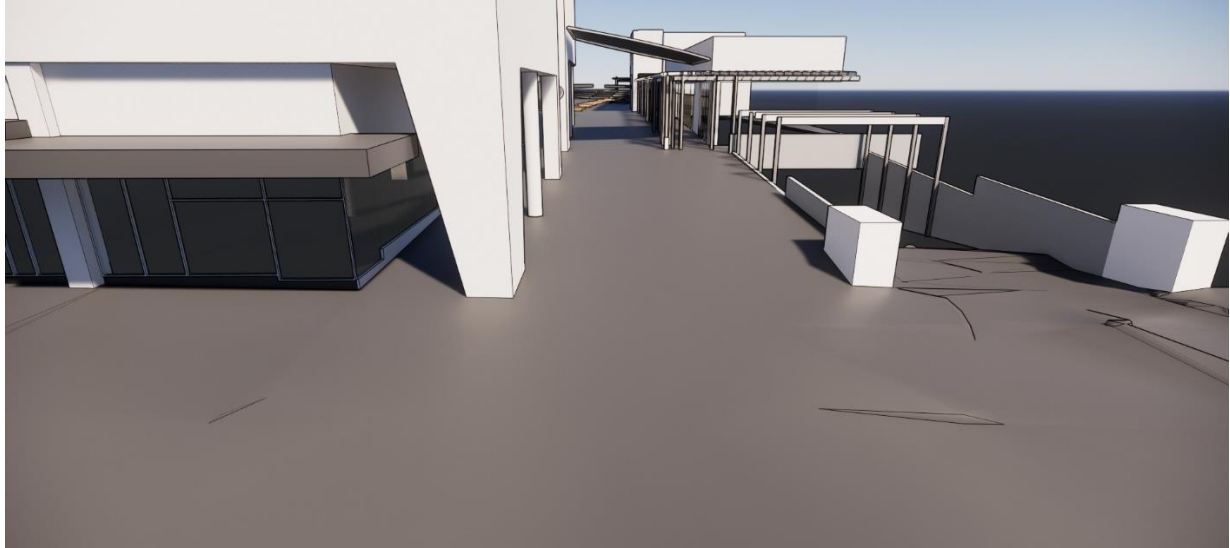


A Level 4 model will additionally contain detailed architectural and structural elements. There can be a higher level of detail in families and fixed furnishings. Skirting, architraves, rails and cornices can be modelled. Significant surface finishes can be shown. If required, an investigative survey may be carried out above false ceilings. **Secondary Structure** included such as, cross/diagonal bracing, purlins, Steel stud framing, joists, rafters, ridge boards.

Note: Lighting, radiators, switches, plug sockets are an additional request and comes under the MEP section.

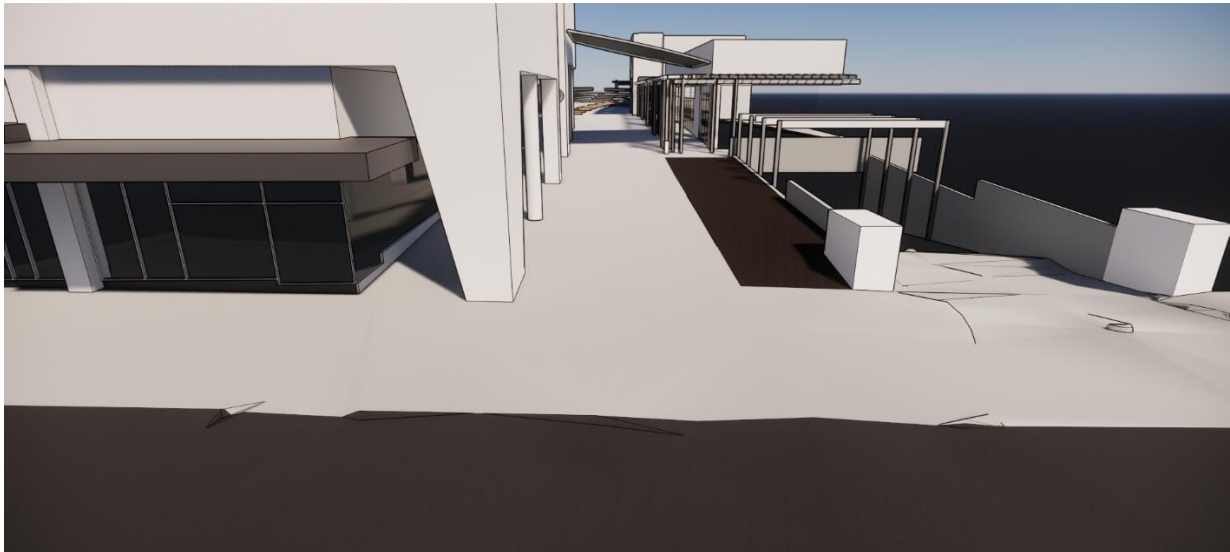
SITE LEVEL OF DETAIL

Level 1 (LOD 100) – Basic site surface



A simple toposurface or imported CAD DTM (digital terrain model) to illustrate basic surface. Edging of kerbs are not defined.

Level 2 (LOD 200) – Basic Site with split surfaces



As LOD 100, but with addition of splitting surfaces to represent surface material.

Level 3 (LOD 300) – Hard surface definition



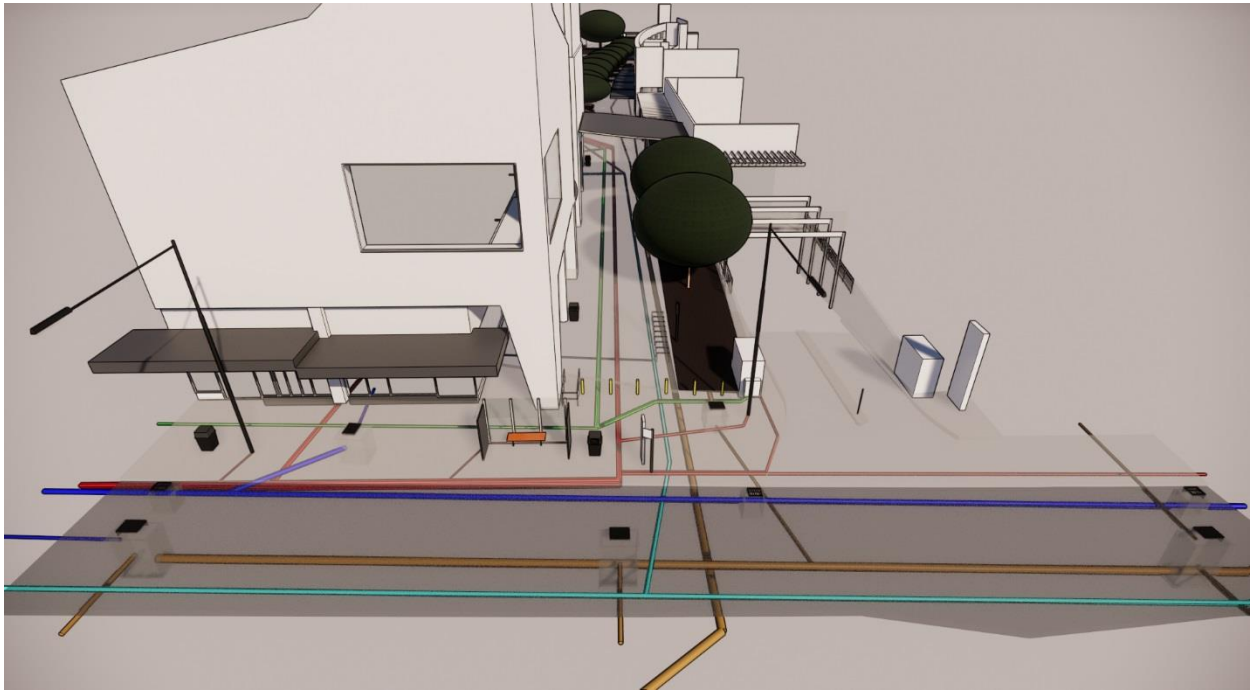
Hard surfaces are modelled with Floor families so that kerb edges are defined. Soft landscaping such as grass and earth are represented with toposurface. Basic trees are used to show trunk diameter and foliage spread and height.

Level 4 (LOD 400) – High definition



As LOD 300, but with addition of Manhole, Inspection Cover, and Gulley's. Also included are street furniture such as signs, posts, lighting, bollards, fixed bins, and structures such as bus shelters & canopies. Trees can be shown as an RPC family which means that the family shows leaves and branches in renderings, however this family does not accurately represent the tree.

Underground Service modelling (LOD 300 only)

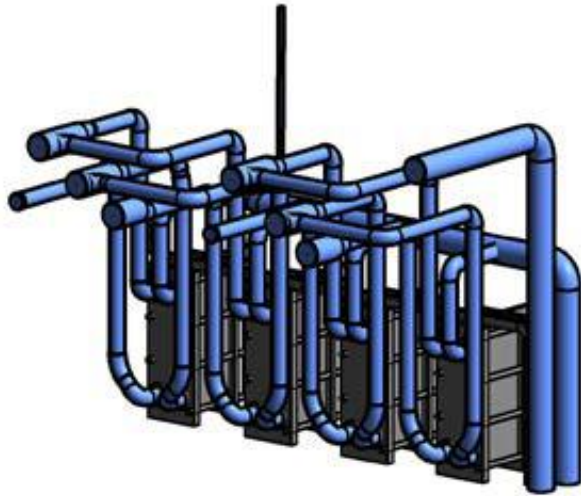


Modelling underground services is restricted by the information received from the utility service trace. So usually the model represents the pipes, cabling, as basic runs. If the Utility survey also has a request for manhole pit dimensions, then the model can also show this.

MEP

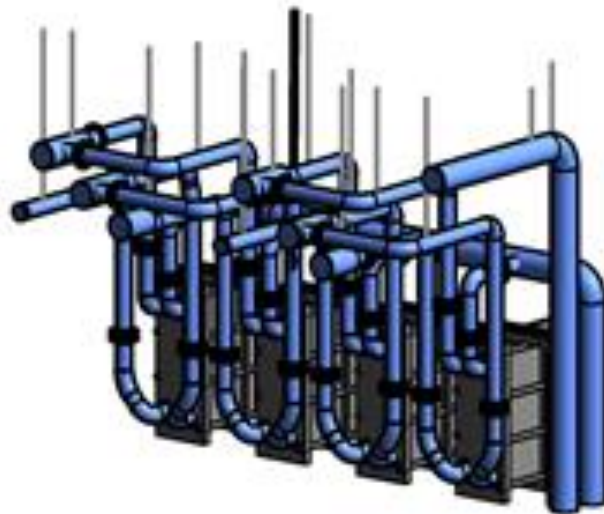
Level 3 (LOD 300)

Services such as pipes, ducts, and cable trays are modelled as runs, MEP under 50mm is not modelled unless requested.



Level 4 (LOD 400)

As above but with the addition of flanges, valves, instrumentation, and supports. MEP under 50mm is not modelled unless requested.



Note: Lighting, radiators, switches, plug sockets are an additional request.