

Revit modelling specification

PROJECT INFORMATION

Project Number	
Title	
Date	

SOURCE DATA

Point Cloud	<input checked="" type="checkbox"/>	.dwg topo	<input type="checkbox"/>
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SCOPE

Interior	<input checked="" type="checkbox"/>	Exterior	<input checked="" type="checkbox"/>
2D .dwg Topo	<input type="checkbox"/>	3D .dwg Topo	<input type="checkbox"/>
Meshing	<input type="checkbox"/>	Export Revit sheets	<input checked="" type="checkbox"/>

REVIT VERSION

2017	<input type="checkbox"/>	2018	<input type="checkbox"/>
2019	<input type="checkbox"/>	2020	<input type="checkbox"/>
2021	<input type="checkbox"/>	2022	<input type="checkbox"/>
2023	<input type="checkbox"/>		
TBC	<input checked="" type="checkbox"/>	Please note Revit versions before v2017 are no longer available and we will not be able to create a Revit model in versions older than 2017. If no version is specified, 2017 will be used.	

REVIT LOD SPEC



LEVEL OF ACCURACY

10mm 15mm 20mm 30mm Other, see below

Additional Notes:

ASSIGN MATERIALS

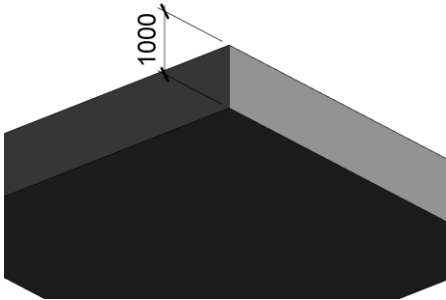
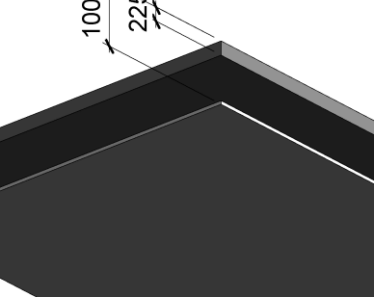
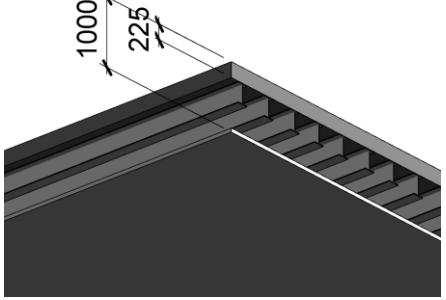
Yes No Yes, as checked below

Walls	<input type="checkbox"/>	Stairs	<input type="checkbox"/>
Floors	<input type="checkbox"/>	Roofs	<input type="checkbox"/>
Structure	<input type="checkbox"/>	MEP	<input type="checkbox"/>
Doors/Windows	<input type="checkbox"/>	Individual Items	<input type="checkbox"/>

LOCATION PLAN/EXTENTS

REVIT LOD SPEC

FLOORS	
Not Required	<input type="radio"/>
LOD2	<input type="radio"/> Mass object
LOD3	<input checked="" type="radio"/> Overall thickness modelled and ceiling below modelled
LOD4	<input type="radio"/> As LOD3 with visible structure details modelled
Other	<input type="radio"/> Specify below
Notes	

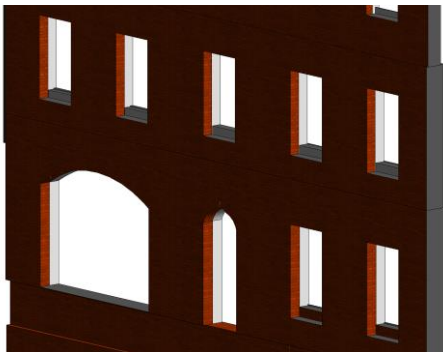
LOD2	LOD3	LOD4
		
<p>Modelled as a mass object including ceiling below.</p>	<p>Floor modelled as a single object with a separate ceiling below showing ceiling void (where visible).</p>	<p>Showing the floor structure and ceiling void.</p>

REVIT LOD SPEC



WALLS	
Not Required	<input type="radio"/>
LOD1	<input type="radio"/> Basic building shape block
LOD2	<input type="radio"/> Correct building shape
LOD3	<input checked="" type="radio"/> Correct building shape with major structural features modelled
LOD4	<input type="radio"/> Correct building shape with major and minor wall detailing
Other	<input type="radio"/> Specify Below
Notes	

LOD1



Basic building block shape only.

LOD2



Correct building shape with no detailing.

LOD3



Correct building shape with major details modelled.

LOD4

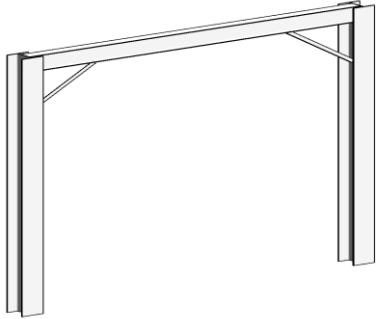


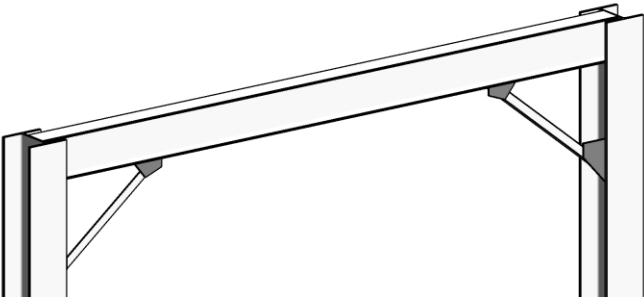
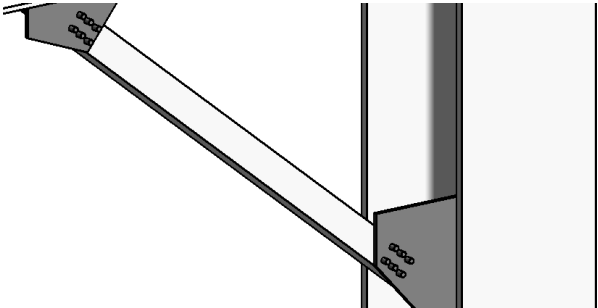
Correct building shape with major and minor details modelled – excludes ornate mouldings.

REVIT LOD SPEC



STEEL	
Not Required	<input type="radio"/>
LOD1	<input type="radio"/> Solid mass to the overall extents of the steel
LOD2	<input type="radio"/> Solid blocks to the extents of the individual primary steel elements
LOD3	<input checked="" type="radio"/> Primary and secondary steel elements modelled
LOD4	<input type="radio"/> Primary, secondary steel elements modelled with plates
LOD5	<input type="radio"/> Primary, Secondary, Plates and bolts modelled
Other	<input type="radio"/> Specify below
Notes	

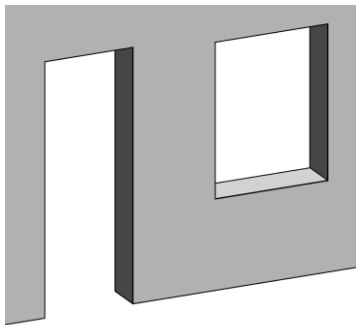
LOD1	LOD2	LOD3
		
Mass model to steel extents.	Mass model to primary steel elements.	Primary steel modelled.

LOD4	LOD5
	
Primary, Secondary steel and plates modelled	Primary, Secondary, plates and bolts modelled (as simple shapes - where visible)

REVIT LOD SPEC

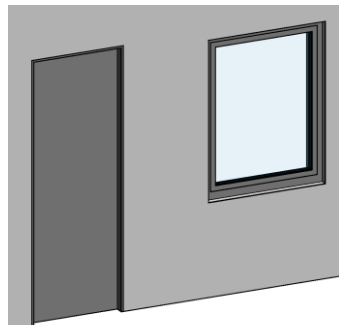
WINDOWS/DOORS	
Not Required	<input type="radio"/>
LOD2	<input type="radio"/> Basic shape cut out of the walls
LOD3	<input checked="" type="radio"/> Simple windows/door inserted showing frame and door panel
LOD4	<input type="radio"/> Complex modelling with generic styles
LOD5	<input type="radio"/> Complex modelling with accurate styles
Other	<input type="radio"/> Specify Below
Notes	

LOD2



Dimensionally correct cut outs.

LOD3



Simple door/window with correct opening width/heights.

LOD4



Complex door/window with correct opening dimensions and generic detail dimensions, includes architraves.

LOD5



Complex door/window with correct opening dimensions and correct detail dimensions, include architraves.

REVIT LOD SPEC

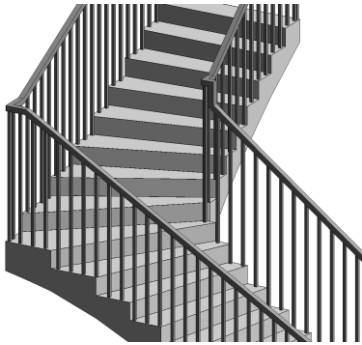


STAIRS	
Not Required	<input type="radio"/>
LOD3	<input checked="" type="radio"/> Monolithic stairs with generic handrails
LOD4	<input type="radio"/> Accurate stairs with generic, representative handrails
LOD5	<input type="radio"/> Accurate stairs with accurate handrails
Other	<input type="radio"/> Specify Below
Notes	

LOD3

LOD4

LOD5



Monolithic stairs with generic handrails.

Accurate stairs with generic handrails.

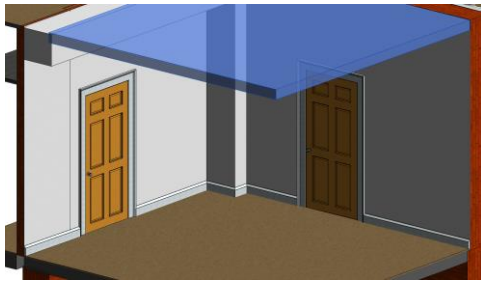
Accurate stairs with accurate handrails.

REVIT LOD SPEC



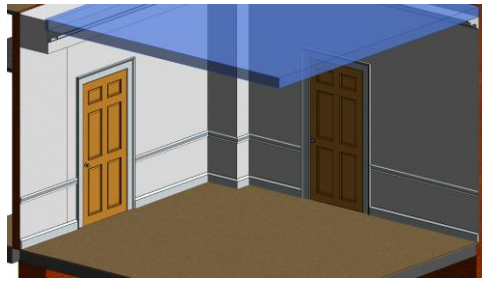
ROOM INTERIORS	
Not Required	<input checked="" type="radio"/>
LOD3	<input type="radio"/> Generic skirting boards included
LOD4	<input type="radio"/> Generic skirting boards, dado rails and picture rails
LOD5	<input type="radio"/> Accurate skirting boards, dado rails and picture rails
Other	<input type="radio"/> Specify Below
Notes	

LOD3



Representative skirting board to a generic profile.

LOD4



Representative skirting boards, dado rails and picture rails to a generic profile. Generic ceiling roses will be included.

LOD5



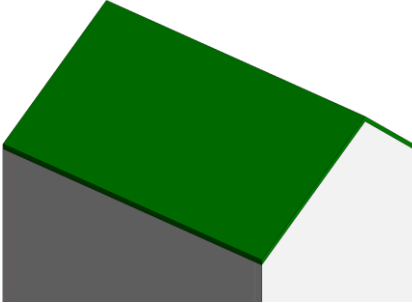
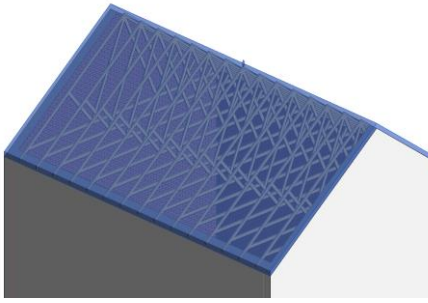

Representative skirting boards, dado rails and picture rails to an accurate profile. Generic ceiling roses will be included.

Note: Architraves and managed under the door/window LOD. Ornate mouldings will not be included unless specifically requested.

REVIT LOD SPEC



ROOF	
Not Required	<input type="radio"/>
LOD2	<input type="radio"/> Standard roof
LOD3	<input checked="" type="radio"/> Standard roof showing major structural supports
LOD4	<input type="radio"/> Standard roof showing all structural supports
Other	<input type="radio"/> Specify Below
Notes	

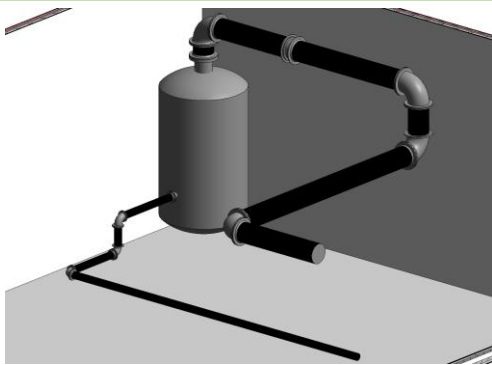
LOD2	LOD3	LOD4
		
Standard roof.	Standard roof with major structural supports.	Standard roof with all structural supports.

REVIT LOD SPEC



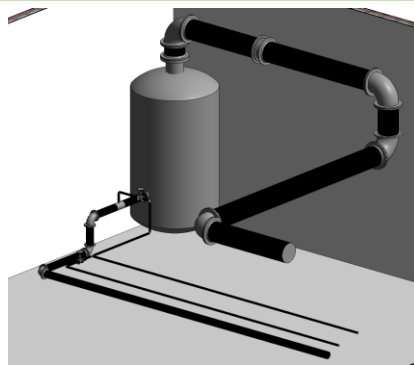
MEP	
Not Required	<input type="radio"/>
LOD2	<input type="radio"/> 12" and above piping and HVAC modelled*
LOD3	<input checked="" type="radio"/> 4" and above piping and HVAC modelled*
LOD4	<input type="radio"/> 2" and above piping and HVAC modelled*
Other	<input type="radio"/> Specify Below
Notes	

LOD2



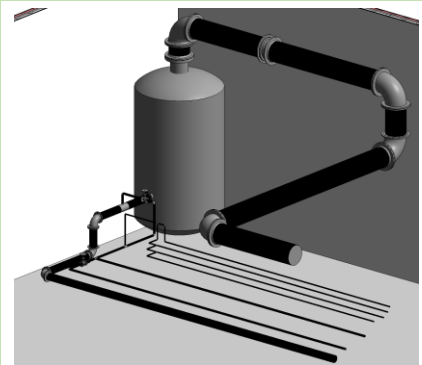
Major vessels and equipment, including 12" and above piping and HVAC.

LOD3



Major vessels and equipment, including 4" and above piping and HVAC.

LOD4



Major and minor vessels/pumps and equipment, including 2" and above piping and HVAC.

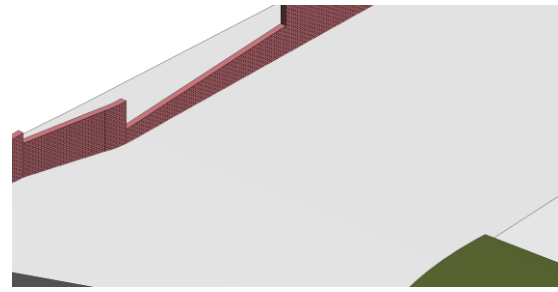
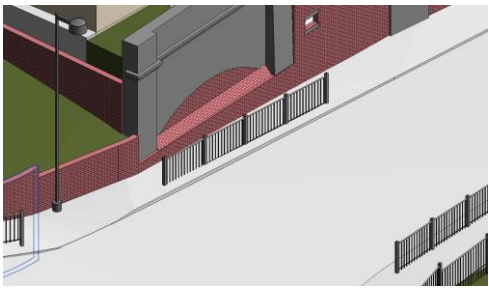

*Valves and equipment will be modelled on associated modelled piping/HVAC where applicable, valves may not be the correct type unless the information is provided before hand – this is required to be known in advance in the notes field above. Piping will be modelled as closest fit to point cloud the Revit will allow, 1:1 accuracy is not possible with Revit MEP systems.

*Piping will be modelled using DG Modelling LTD Piping modeller in AutoCAD and imported into Revit to give a much more accurate representation than Revit modelling systems will allow – For more information please email dominic.gregory@dgmodelling.com.

REVIT LOD SPEC





TOPOGRAPHY	
Not Required	<input type="radio"/>
LOD2	<input type="radio"/> Simple ground changing type on surface changes
LOD3	<input checked="" type="radio"/> Footpaths/Roads modelled with railings and lamp posts*
LOD4	<input type="radio"/> As LOD3 with traffic light systems bollards and other features*
Other	<input type="radio"/> Specify Below
Notes	

LOD2	LOD3	LOD4
		
<p>Basic ground to give general indicative layout.</p>	<p>Roads and footpaths are defined along with other surface changes. Railing and lampposts are included.</p>	<p>As LOD3 with extra features such as bollards, bins, traffic lights etc.</p>

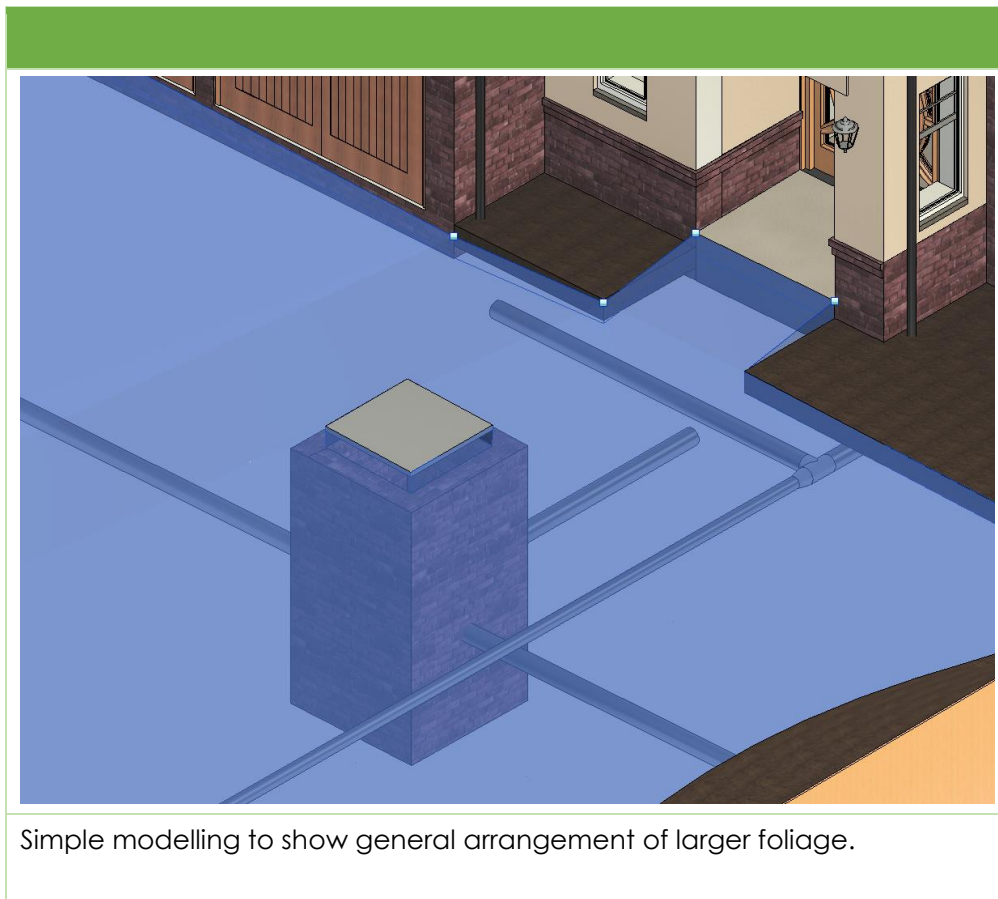
*If road markings are required, please check the item In the Individual items section at the end of this document.

FOLIAGE	
Not Required	<input type="radio"/>
LOD3	<input checked="" type="radio"/> Large trees, bushes and hedges*
LOD4	<input type="radio"/> As LOD3 but including smaller trees, bushes and hedges*
Other	<input type="radio"/> Specify Below
Notes	

LOD3	LOD4
	
<p>Simple modelling to show general arrangement of larger foliage.</p>	<p>More detailed modelling, including smaller foliage.</p>

*Species cannot be guaranteed and the best shape/size options within Revit will be used to give an indicative arrangement of the foliage.

UNDERGROUND UTILITIES	
Not Required	<input checked="" type="radio"/>
Automatic	<input type="radio"/> Imported from on site data*
Manual DWG	<input type="radio"/> Manually modelled from supplied DWG data
Manual MH Cards	<input type="radio"/> Manually modelled from supplied Manhole Card data
Notes	



*Automatic importing of data will only be available if the DG Modelling Manhole card mobile app is used to capture the data. This is a free service.

REVIT LOD SPEC



INDIVIDUAL ITEMS

Large Furniture (Desks, Tables, Sofas etc.)	<input type="checkbox"/>
Small Furniture (Chairs etc.)	<input type="checkbox"/>
Fixed Furnishings (Build in wardrobes, kitchen cupboards etc.)	<input type="checkbox"/>
Radiators	<input type="checkbox"/>
Road Markings	<input type="checkbox"/>
WC	<input checked="" type="checkbox"/>
Sinks	<input checked="" type="checkbox"/>
Showers/Baths	<input checked="" type="checkbox"/>
Cable Trays	<input type="checkbox"/>
Lighting	<input type="checkbox"/>
Gutters/RWP	<input checked="" type="checkbox"/>

EXTRA NOTES/REQUIREMENTS

Standard Terms and conditions:

- Tolerances are given for a specific point and are +/- the indicated tolerance.
- Tolerances are in addition to point cloud noise and potential point cloud registration errors.
- Doors and Windows will be created in 10mm Width and Height increments to keep the Revit file from being saturated.
- Any deviances in the model must be reported back to DG Modelling LTD within 3 months of delivery, any deviances will be rectified within the scope of this document.
- External wall materials will be assumed based on visible data and unless visible, the thickness will be set to 10mm with a brick core.
- Materials will be set by the best of the information available from the point cloud data.
- Slightly sloped walls will be placed as straight walls.
- Slightly tapered and bowed walls will be placed as straight walls.
- Uniclass 2015 will be applied to all compatible elements, to the best knowledge available.
- If no information regarding project location and rotation is given, we will use our best judgement to set up the project to set the required modelling to be straight on a sheet.
- Unless otherwise specifically requested, Elevations will be set as orthographic 90 degrees North, East, South, and West and should not be used for measurements.
- Modelling co-ordinates will be set to the same co-ordinates as the point data.
- If major registration issues are found, work will halt, and the sender will be notified, and work will re commence until the issues have been rectified or we have received instruction on how to proceed.
- If minor registration issues are found but the model is still workable, we will use our best judgement on the modelling.
- If data is missing due to shadows or other reasons, we will use our best guess on details in the area e.g., 1 window edge is missing along a run of the same windows, this will be assumed that the size matches the previous window.
- Floor levels and head heights are correct at the indicated locations only.
- Floor levels will be the visible finish level.
- Sill levels will be indicated from the level of which they're drawn.
- Any grid lines that are added will be created to line up to the as-built geometry (to a best fit if the geometry is not perfectly straight).
- The modelled Revit version will be in 2017 unless specifically requested for a different version (only versions 2017 and up are available).
- The Revit version can be upgraded from the modelled version, and we are happy to do this if asked. The Revit version CANNOT be downgraded into an earlier version.