

3DReid

Dynamo scripts for Revit 2023



A guide for users

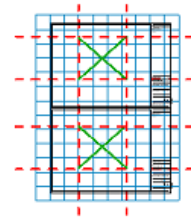
Latest issue: May 2024

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Align views across multiple sheets

This script will use a template view to align other views on other sheets so long as they have the **same scope box** applied as the selected sheet. If you wish to align several views on a sheet, run the script multiple times selecting one view per run.



They must have different scope boxes for this to work.

Step #	Instruction	Comments
1	Make sure the chosen view is in the correct place on one sheet. This will be your 'template'.	For ease, make sure this sheet is your active sheet and is visible (not hiding behind your dynamo) and that the view is not active .
2	Run the script and click the "OK" button in the pop-up window, then left click on the view in Revit you want to use to align other views with.	Hit the escape key if you can't select your view.
3	In the next pop-up select all views you wish to align by ticking the tick box next to the view name. Then click the, "YAY align!" button.	Your template view will not appear in this pop-up. There are "Tick All" and "Tick None" buttons below the list.
4	A final pop-up will appear with a count of how many views have been aligned. Click the "Close" button.	
5	Please check your new sheets carefully.	If the title blocks have been moved the views may not appear in the exact same place as the original sheet.

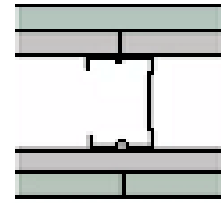
We hope you love this script!

Please give feedback, suggestions and praise! >>> computational.team@3dreid.com <<< E-mail

Create a Revit wall using a British Gypsum (BG) code

This script will create a wall in Revit using a code from British Gypsum's 'Internal Partitions and Walls' White Book.

Currently it only works for internal partitions and walls.



Step #	Instruction	Comments
1	Run the script.	You can have your BG code ready, or you can click one of the links on the first pop-up to take you to the White Book online or our downloaded version to select the code.
2	Enter the BG code into the box in the pop-up window and click the "Proceed" button.	
3	Read the next pop-up carefully. If you're happy you've selected the correct wall type then tick the tickbox and then click the 'OK' button.	If you've got the wrong wall type click the "Cancel" button.
4	If the script is successful, you will see a final pop-up which tells you what your new wall type is called along with other important information.	
5	In Revit carefully check your wall type and tweak as required.	Some components will not be modelled. These can be added manually or shown in detail drawings only.

We hope you've enjoyed this script!

Duplicate multiple sheets

This script will duplicate sheets selected by ticking checkboxes in a pop-up. Everything on the sheet can be copied including the title-block information and any views placed on the sheets.



Step #	Instruction	Comments
1	Ensure the correct Revit model is active and then run the script.	Have a sheet/ view open of the model containing the sheets you want to copy.
2	From the pop-up menu, select the sheets you wish to copy (click the checkbox next to the sheet name)	
3	Decide if you also want views to be copied (with or without detailing) by ticking or unticking the boxes next to those options.	<div>Copy views <input checked="" type="checkbox"/> With Detailing <input checked="" type="checkbox"/></div>
4	Proceed by clicking on the "Agree and copy" button.	Your chosen sheets will be duplicated with the prefix, "_DYNCOPY". If the duplication process is not successful, then a pop up will appear with troubleshooting suggestions. Please check these before contacting the Dynamo team.
5	Read the final pop-up then click "Close".	
6	Marvel at your shiny new sheets. Do not forget to rename them & any relevant views.	You will feel happy you let Dynamo do the work and realise automation is awesome.

Find and replace – Sheet name

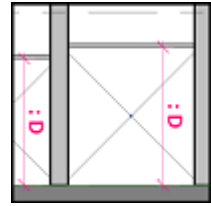
This script allows you to search for any characters in a sheet name and replace them with any other characters, including a space.

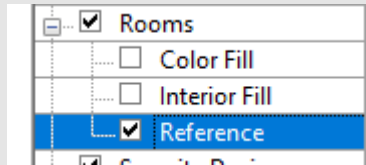


Step #	Instruction	Comments
1	Before you run this script you must synchronise. This script is not undoable without closing the model and reopening. This is a Revit quirk.	It is good practice to always synchronise before running a script but most of them can be undone in Revit after running. This one cannot.
2	Run the script and select any drawings you wish to alter the name of.	Tick the tick box next to the name.
3	In the text boxes replace, “Type the text to find in here” and “Type your replacement text in here” with your search text and replacement text. Then click the purple button.	
4	You will see a second pop-up with a preview of your changes. Nothing has been changed yet. Tick all sheets you wish to alter and click the purple button.	Select none if you wish to cancel.
5	You will see a final pop-up with information about how many sheets you have renamed. Check your work before continuing.	

Fix room heights

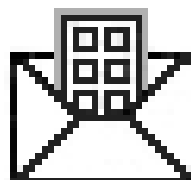
This script will adjust all room heights so the top is in line with the soffit/ ceiling directly above the room location point.



Step #	Instruction	Comments
1	Ensure none of your room cross hairs are underneath a bulkhead or low beam. (Turn on cross hairs in VV/ Rooms /Reference).	
2	Run the script and click the, “Fix room heights” button.	Dynamo will automatically adjust all your room heights.
3	Please read the final pop-up carefully as it contains information about your rooms.	

Issue Model

This script will add a revision to the central model and then detach the model, strip all sheets and views, apart from the Splash page and Navisworks view. It will remove all links and any imported items and purge the model too.



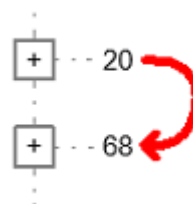
Step #	Instruction	Comments
1	<p>Make sure everyone has synchronised and closed the model before you press the play button.</p> <p>Press the play button and wait for the first pop-up to appear.</p>	<p>If you get an error pop-up read the note carefully. It will tell you the issue and how to correct it. Please correct the problem and run the script again.</p>
2	<p>Read the pop-up and fill in the pertinent parts. Default settings are already filled in. Tick the box for IFC export.</p> <p>Then click the purple, "Detach and Prepare" button.</p>	<p>Note the Navisworks export is not currently working as IT has not installed this on our machines to date (Feb 2024)</p> <p>Blue text on a pop-up means it's a link.</p>
3	<p>Wait a few minutes.</p>	<p>On larger models it will take longer. If you have a large model maybe stand up, stretch, make a cup of tea.</p>
4	<p>When the script finishes you will see a final pop-up confirming the deletions.</p> <p>Read the instructions.</p>	
5	<p>To re-iterate what the pop-up said: Remove the "_detached" suffix from the new model. When saving make sure to click the "options" button and then select the two tick boxes that say, "make this a central file". Also tick the box to compact the file.</p>	<p>This is an essential step as many CDEs will not accept files with suffixes.</p>

Your model will be saved under 02-IssuedInfo\Models in a sub folder with today's date (yymmdd) and the revision description. See example below.

P:\sco\2021\210907- CoolProject\04-Published\02-IssuedInfo\Models\201207 – Model Issue

New series from old

This script will create a brand new series with the appropriate view-templates applied to all the views by copying selected sheets from an existing series.



Step #	Instruction	Comments
1	Ensure you have a series to copy and run the script.	
2	On the first pop-up select the series you're using as the template. In the text box enter the series you wish to create and then click the purple button.	20 series is often a good choice here as it has the drawings required for many other series.
3	In the next pop-up select the individual sheets you wish to copy from your template series and then click the purple button.	
4	In the next pop-up pick the view template you wish to use. If your chosen series has no view template you will have to create one and run the script again.	Use view templates liberally in your work. They ensure the quality is uniform.
5	Check your new series carefully. Please remember, this is just a helpful script, it is not replacing a human.	

Number – Automatically number internal doors (per level)

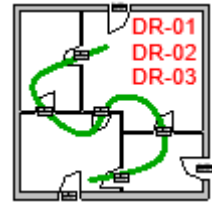


This script will automatically number internal doors per level using drawn area plans. It will also number if there are no area plans available.

Step #	Instruction	Comments
1	Have your door/window or wall plan open in Revit before running this script.	It is preferable to tag all your doors in this plan too (so you can easily check the numbering afterwards)
2	Run the script and a pop-up will appear with a drop down menu.	
3	From the drop-down menu select which type of Area Plan you'd like to use to number your doors.	If you have no area plans the script will use room numbers. If you have no areas or rooms the script will use "XXX" as a prefix.
4	A final pop-up will appear giving you a count of doors renumbered. Close the window and Revit will automatically update all your door marks.	
5	Check your numbering carefully. This is only a script and may not always be perfect!	

Number – Doors and Windows along a drawn a spline

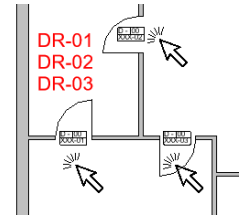
This script will allow you to select a spline in your Revit view, input a start number and prefix and number all doors or windows along the spline in sequence.



Step #	Instruction	Comments
1	In your Revit floorplan (preferably your door location plan) draw a spline running through all the doors you want to number.	It is also preferable to tag all your doors in this plan too (so you can easily check the numbering afterwards)
2	Run the script and select either, “Doors” or “Windows” from the first pop-up. Then click the, “Continue” button	You can also click cancel or click on the help button.
3	Read the second pop up, click, “Close” and then in the Revit window click on your spline.	
4	In the third pop-up enter a 3 character prefix and enter a start number. for example: L01-01 or ABC-21 Then click, “Renumber!”	
5	Check the final pop-up to see if the expected number of doors have been renumbered.	
6	Close the pop-up and check your numbering in Revit.	

Number – Doors, Walls and Windows by clicking

This script will allow you renumber doors, walls or windows in a view by clicking on them and then inputting a start number and prefix in the pop-up window.




Step #	Instruction	Comments
1	Have your door/window or wall plan open in Revit before running this script.	It is preferable to tag all your doors in this plan too (so you can easily check the numbering afterwards)
2	Run the script and select either, "Doors", "Walls" or "Windows" from the first pop-up. Then click the, "Continue" button	You can also click cancel or click on the help button.
3	Read the second pop up, click, "Close" and then in the Revit window click on your items in the order you wish them to be numbered. Hit the Escape key when you've finished clicking.	
4	In the third pop-up enter a 3 character prefix and enter a start number. for example: L01-01 or ABC-21 Then click, "Renumber!"	
5	Check the final pop-up to see if the expected number of doors have been renumbered.	
6	Close the pop-up and check your numbering in Revit.	

Open AutoCAD DWG from Revit

This script will open a DWG in AutoCAD 19 by clicking on it in Revit.




Step #	Instruction	Comments
1	Run the script and read the pop-up.	There is useful information on pop-ups but sadly not many people read them.
2	In your Revit window click on the DWG(s) you want to open. When you have clicked on your DWG(s) hit the Escape key (Esc).	
3	Wait for AutoCAD to open and dream of the day AutoCAD is a distant memory.	If ACAD does not open and you did not get any warning pop-ups please check you have AutoCAD 19 installed on your machine.

Place legends and schedules

This script will place legends and schedules on multiple sheets at once in the same position as they are situated on your template sheet.



Step #	Instruction	Comments
1	Ensure you have a sheet set up exactly to your layout requirements – this shall be called the template sheet.	
2	Press the ‘run’ button in Dynamo Player and read the instructions on the pop-up that appears.	
3	Select all the schedules and legends on your template sheet that you’d like to place on other sheets and then hit the escape key (Esc).	
4	In the second pop-up tick the box next to all the sheets you want to place the selected legends and schedules on. And then click the “Place my schedules and legends” button.	
5	A final pop-up will inform you of how many schedules and how many legends you have placed on how many sheets. After closing this window please check your work.	

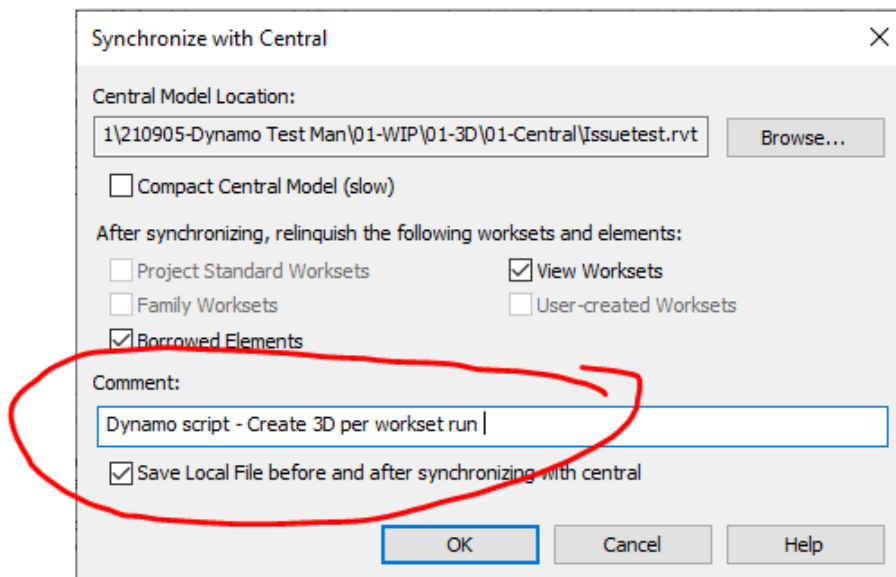
QA views - Create a 3D view per workset

This script will create a 3D view for every workset in your model and only show items in that workset.



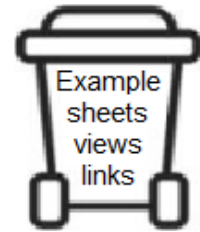
Step #	Instruction	Comments
1	Click run and you will be greeted with a pop-up. Click on "Make my views!"	We have preset a default type name but you can change this if required by typing into the box.
2	Use these views to keep your worksets organised. A clean, well organised model is a happy model.	Your views will be in this sub-folder in Revit + 3D Views (**DO NOT EDIT - Workset QA views**)

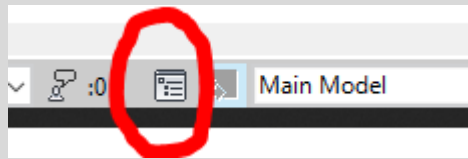
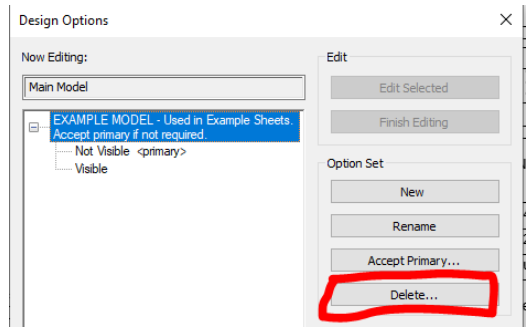
Don't forget to synchronise and make a note (see image below) that you've just run a dynamo script.



Remove examples

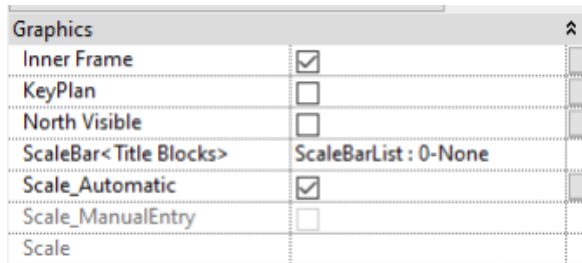
This script will remove all example sheets and views as well as removing the example model link. Use this script if you feel your team doesn't require the example items.



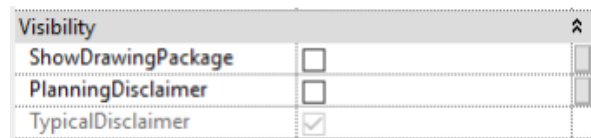
Step #	Instruction	Comments
1	<p>After pressing play a pop-up will appear.</p> <p>Please read this carefully and tick the boxes next to the items you wish to remove from your model.</p>	<p>The first tick box will remove anything associated with the examples, sheets, views and the linked model.</p> <p>The second tick box will remove the information sheet.</p>
2	<p>After confirming your choice you'll see another pop-up reminding you to remove the design option associated with the examples. Close this pop-up.</p>	<p>Sadly Revit doesn't allow Dynamo to remove design options (maybe in a future version).</p>
3	<p>Click this button at the bottom of your screen to take you to the design options.</p>	
4	<p>Then ensuring the 'EXAMPLE MODEL' option is selected, click the 'Delete...' button. (see image on the right)</p>	
5	<p>You will see another pop-up asking you to confirm deletion.</p> <p>Click the 'Yes' button.</p>	
6	<p>The final pop-up will show all the items to be deleted, check these then click the, 'Delete' button.</p> <p>Close the design Option Window.</p>	<p>***</p> <p>Congratulations, you have a smaller model.</p> <p>***</p>

Select – Title Blocks

This script will allow you to select multiple title blocks at once, enabling you to alter graphics and visibility parameters in one go (Revit doesn't allow this normally!).



Example of title block 'graphics' parameters.
(These may vary)



Example of title block 'visibility' parameters.
(These may vary)

Step #	Instruction	Comments
1	Run the script	A pop-up will appear with all your sheets listed and a tick-box next to each sheet.
2	Tick the boxes next to the sheets to select their title blocks and click the, "Change the names!" purple button.	The script will warn if you've not selected any sheets but have still run the script. If you have selected sheets the title blocks will now be selected in Revit and you can edit multiple block information at once.
3	In Revit you can now change the information and update all the selected sheets at once.	Do not: - Try to change sheet number. (Revit won't allow duplicate numbers) - Change sheet name. (your sheets would all have the same name)

>>> If you just wish to edit the identity data parameters such as, "drawn by" or "Sheet Issue Date" this can be done wholly in Revit by holding down the shift button and selecting your sheets in the Project browser. <<<

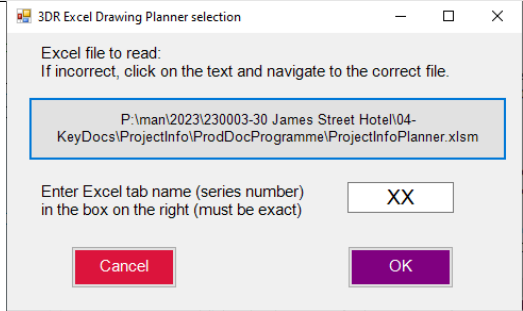
SheetCreate_4DrawingPlanner

This script will create blank Revit sheets and fill in some title bar information.



It is to be used in conjunction with the Excel document “ProjectInfoPlanner” in this folder:

P:\office\year\Job number + job name\04-KeyDocs\ProjectInfo\ProdDocProgramme

Step #	Instruction	Comments
1	Fill in your Excel.	Please read the instructions on the “Landing Page” tab. If you require further help, please contact the BIM team.
2	When you run the script, you’ll be greeted with the first pop-up; the link should be for the correct spreadsheet, but if it’s incorrect click the text and navigate to the correct Excel file. The text will update. Replace “XX” with a drawing series.	
3	Check the sheets that will not be created and alter either the Revit or the Excel so the data matches.	On the left-hand side of the second pop-up you can compare names of drawings whose numbers exist in both Excel and Revit. This is a visual check, you cannot alter or create these drawings using this script.
4	Choose the sheets you wish to add drawings to by ticking the box to the right of the drawing number and name.	On the right-hand side of the second pop-up is a list of all drawings, that do not exist in Revit and that are for the current Revit model’s zone and match the series you chose.
5	After clicking the purple button, “Create these sheets in Revit”, you will get a final pop-up telling you how many sheets have been created.	

SheetPopulate_Plan+AreaTypes

This script will populate any sheets in Revit with plans, RCPs and Area plans.
Use in conjunction with the SheetCreate script.



Step #	Instruction	Comments
1	Run the script.	
2	Select the series of drawings you want to populate from the drop-down on the first pop-up.	The drop down will only display numerical series that are within your current Revit model.
3	On the second pop-up tick the boxes corresponding to the sheets and views you wish to populate. Click the "Populate" button to continue.	For example; tick the box with "Plan" as the column heading that is in the same row as the sheet you wish to place a plan on.
4	On the third and final pop-up fill in the view information. Take particular care to note if any of the sheets have already been issued.	Views, View templates, Scope boxes and Viewport titles are taken directly from your Revit model. These must exist in your model, or the script will fail.
5	When you have filled in this pop-up and have checked your information click the, "Add views to sheets" button.	The 'create' box must be ticked or the view will not be placed on the sheet.
6	The views will all be placed on top of each other on your sheet. Rearrange the views on your sheets as you wish.	Align views across sheets can be used to ensure all views with the same scope box are set to the same place on each drawing within your series.