

T350 Application User Manual Plugin: Checking of Manual- editing Works

Introduction

- This plugin can highlight the manual-editing works in Revit files.
- For avoidance of doubt, elements and information shown on the generated 2D Plans/Sections/Elevations/ Schedules/ Details that linked up with the BIM model that would be updated automatically according to the changes of the BIM model would not be considered as manual-editing works.

- Limitation of Plugin

For the schedules on the 2D plans which are generated using the built-in function "Schedules / Quantities" of Revit with "linked" values to the BIM model, they would not be checked by the plugin. However, users can verify the figures in the schedules against their "true values" from BIM model and check whether the figures in the schedules have been manually edited. The methodology can be referred to p.20 to p.23 of this manual.

Scope and Summary of Functions

- Manual-editing works (MEW) that can be highlighted by the plugin includes:
 - Detail Line
 - Text
 - Filled Region
 - Masking Region
 - Symbol
 - Dimension on 2D plan with replaced value, or value rounded up to the nearest 10 or above

Notes

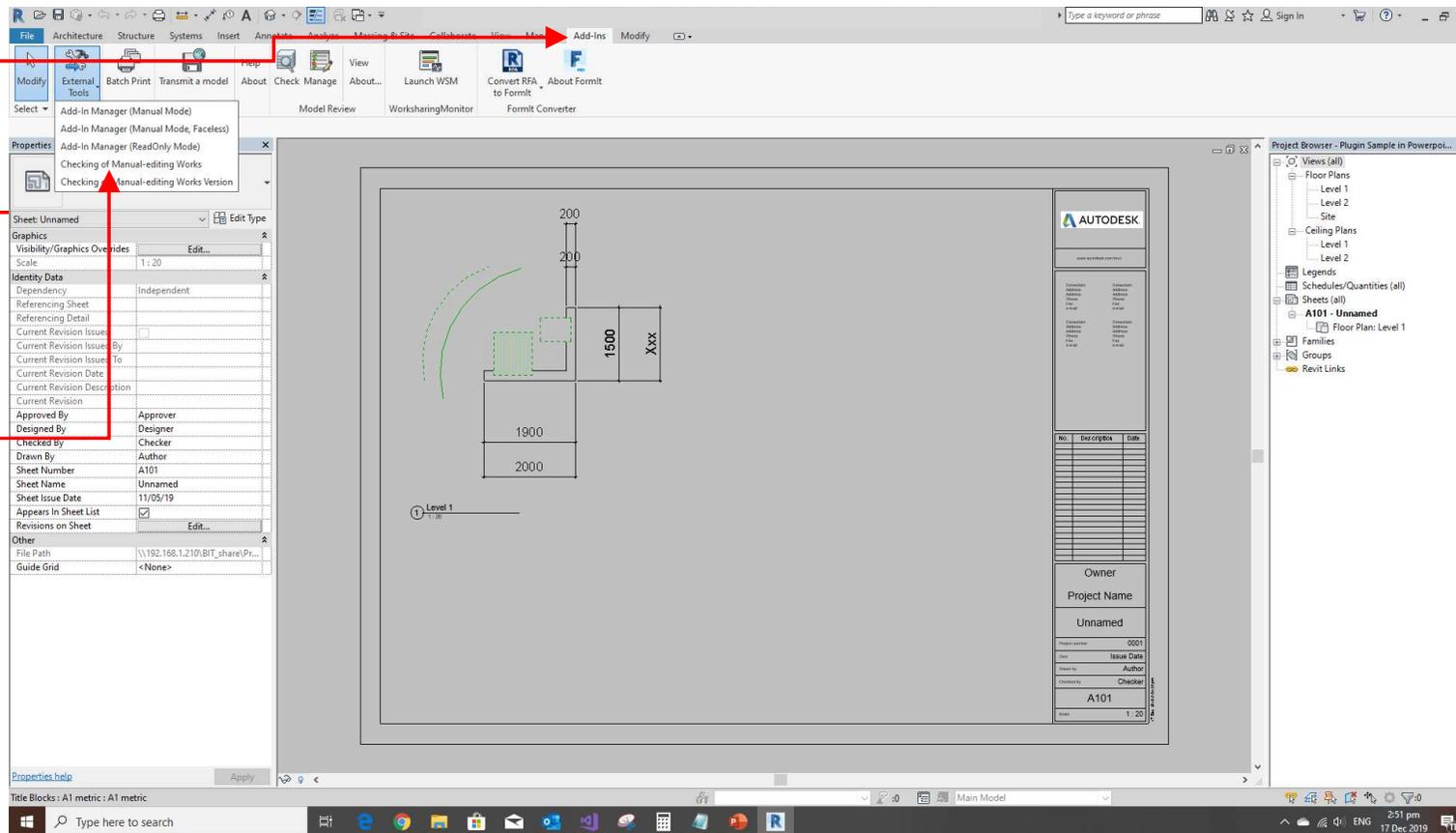
- The plugin can only highlight manual-editing works which exist in a project file. It does not provide any track change function and cannot detect manual-editing works which are deleted in a project file.
- By default, the plugin will only check manual-editing works presented on “drawing sheets”, which normally correspond to the contents of the statutory submission. Setting can be changed to cover checking of all manual-editing works in a project file.

Checking of Manual-editing Works

1 Click “Add-Ins”

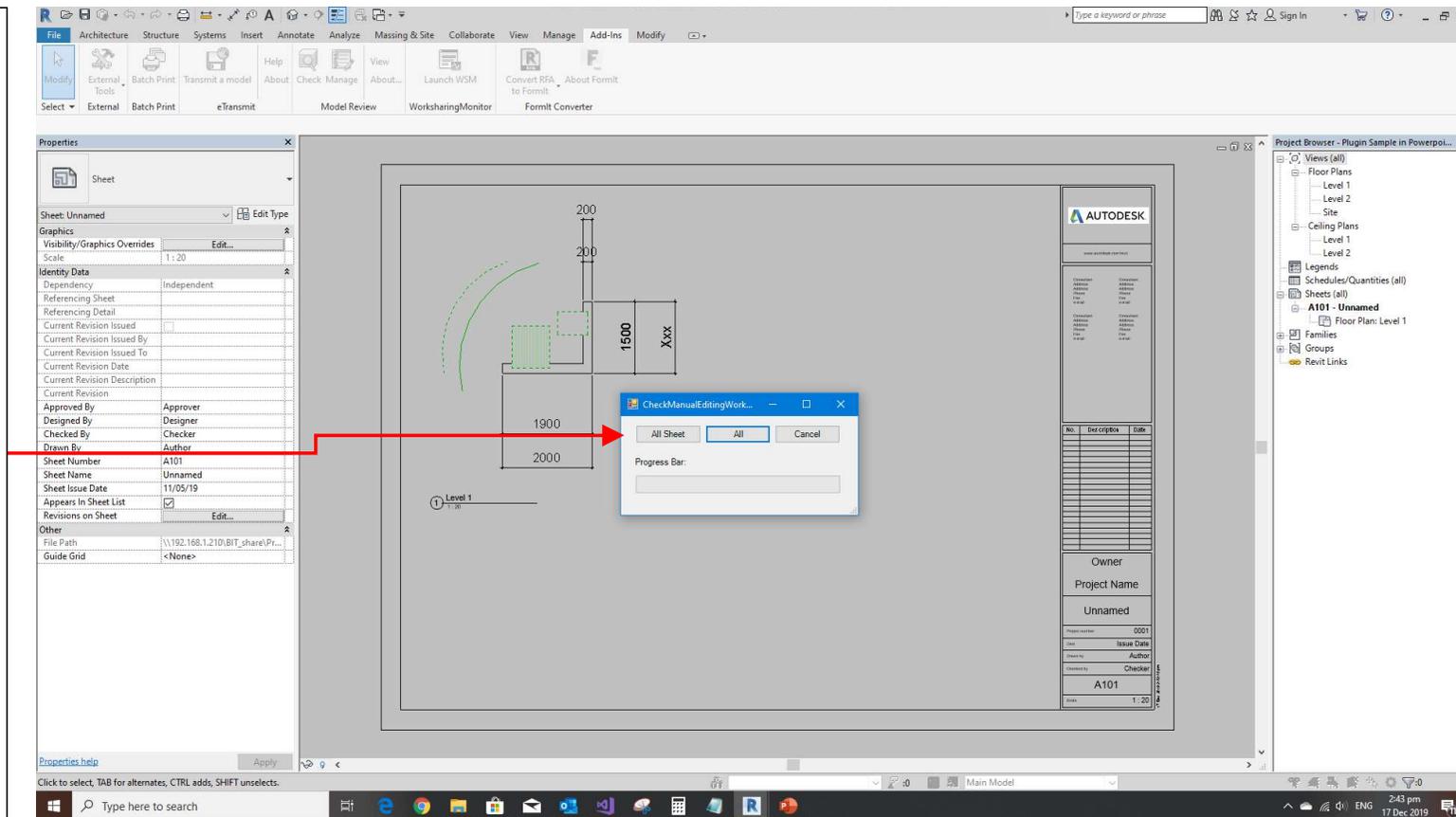
2 Click External Tools

3 Click “Checking of Manual-editing Works”



Checking of Manual-editing Works

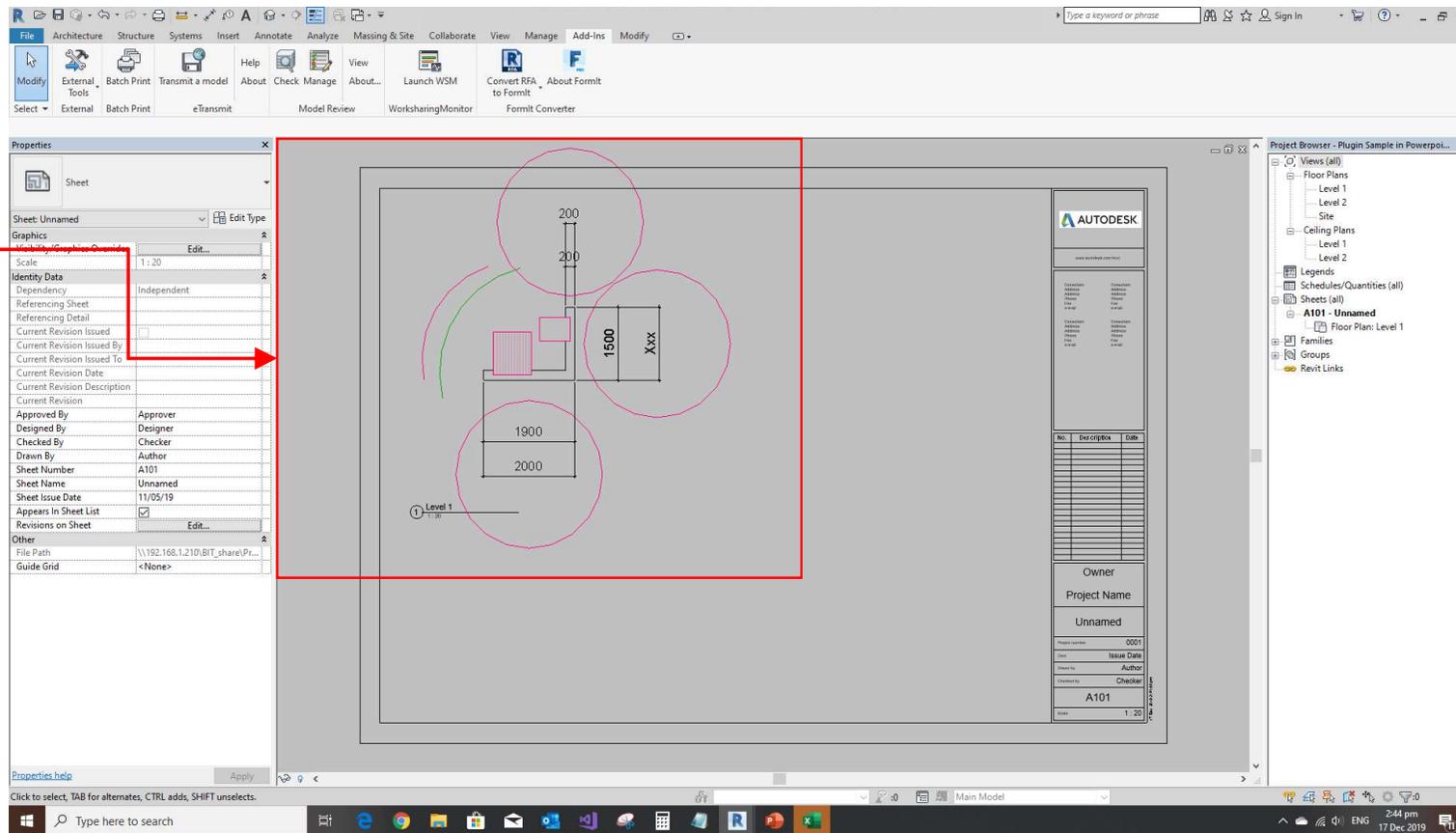
1 Two options: “Check for sheets only” or “Check for all view” are available. For submission which contains one Revit file only. “Check for sheets only” is adequate. Computer processing time is relatively quick. User can decide whether you want to save the result or not.



2 For submission containing multiple link files, open each file then “Check for all view”. You must save all checking result. Close all files. Re-open again for checking. Computer processing time is relatively slow.

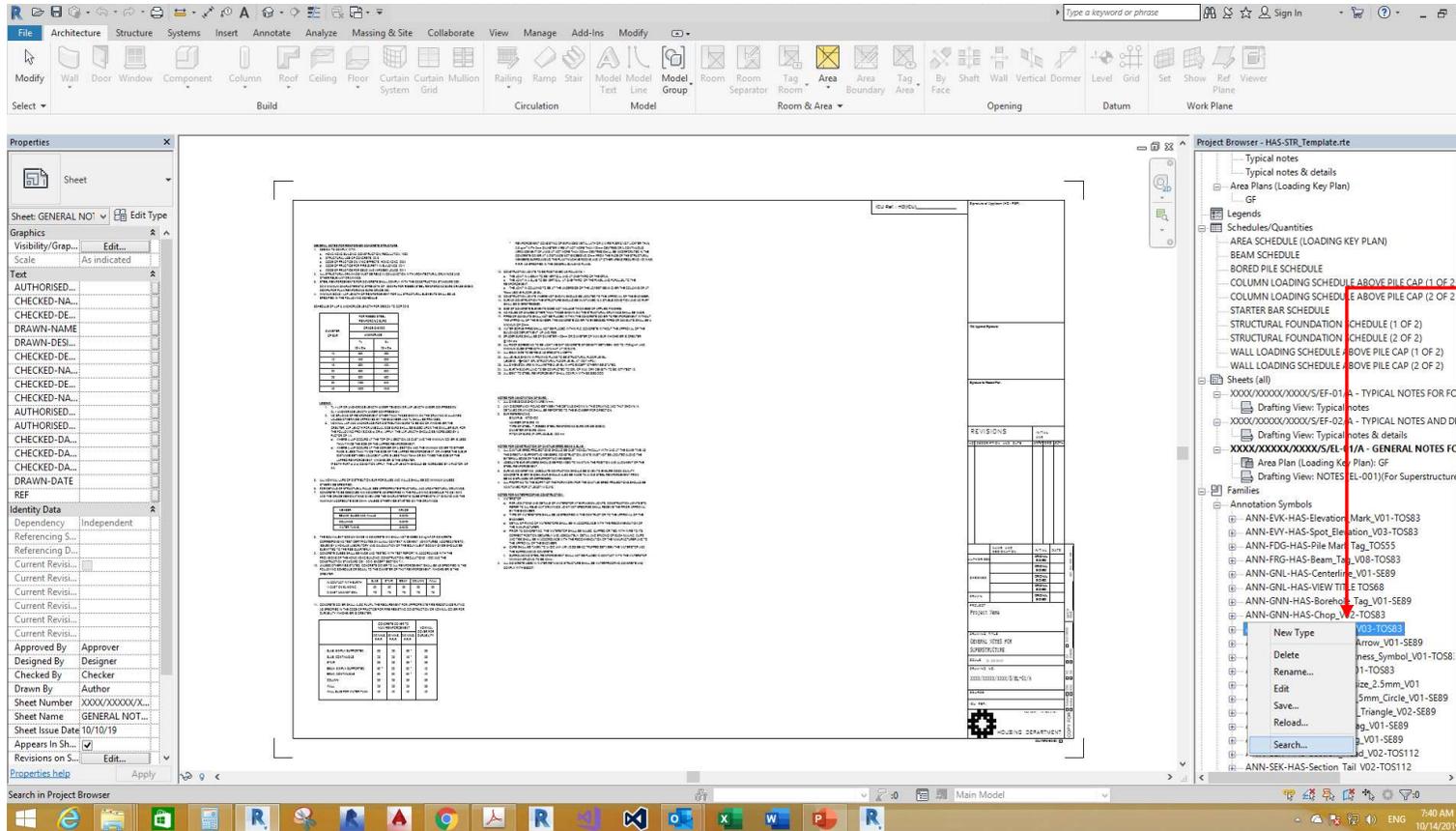
Checking of Manual-editing Works

1 Manual-editing works are highlighted in colour



Checking of Manual-editing Works

1 It is not necessary to review all "view" listed in excel, as some of them are irrelevant to statutory submission



2 To find relevant views, mouse over Project Browser, right click, select "Search"

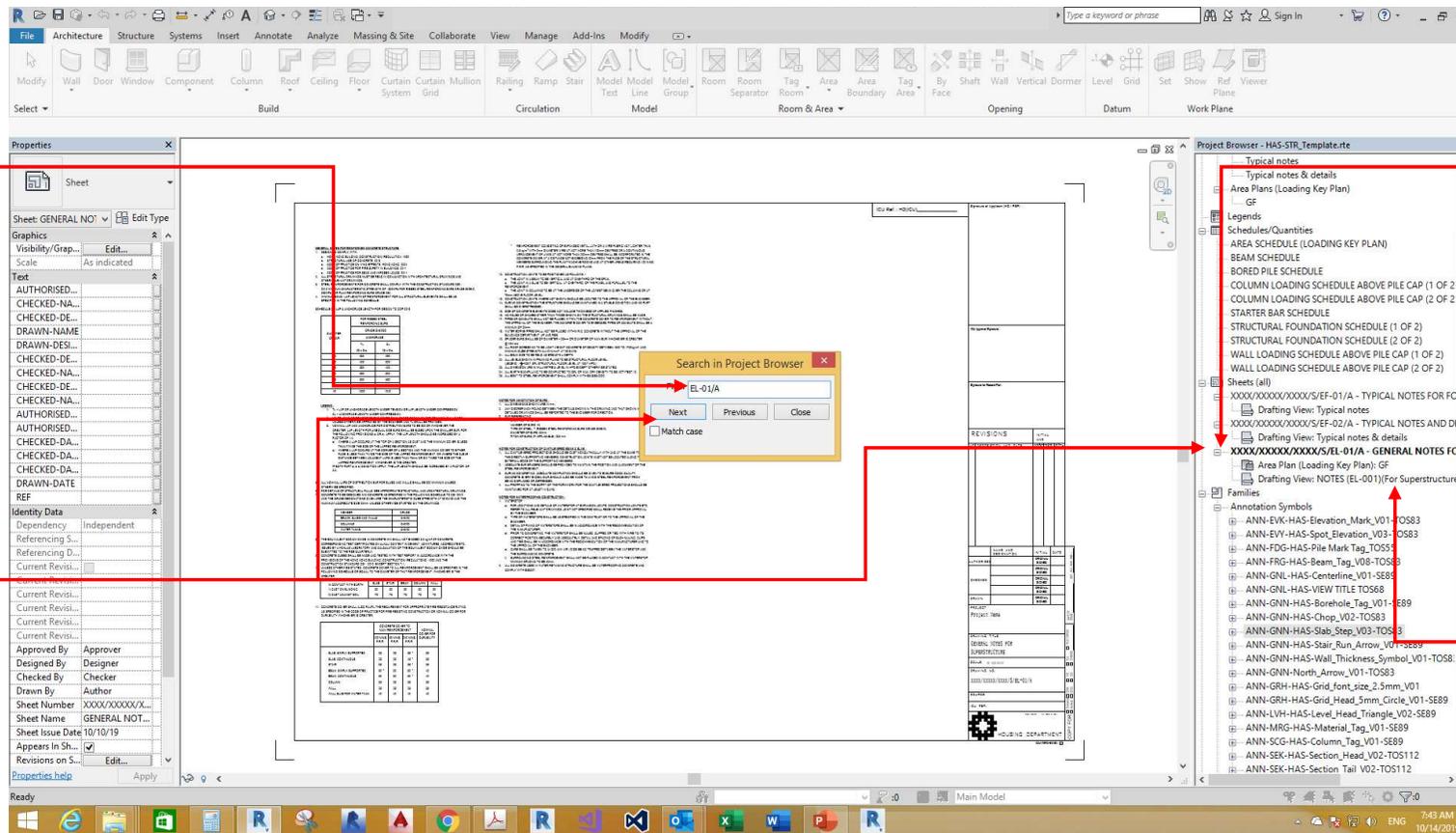
Checking of Manual-editing Works

1 Provide sheet/view name of as listed in previous excel.

2 Keep pressing Next until it can be found in Project Browser

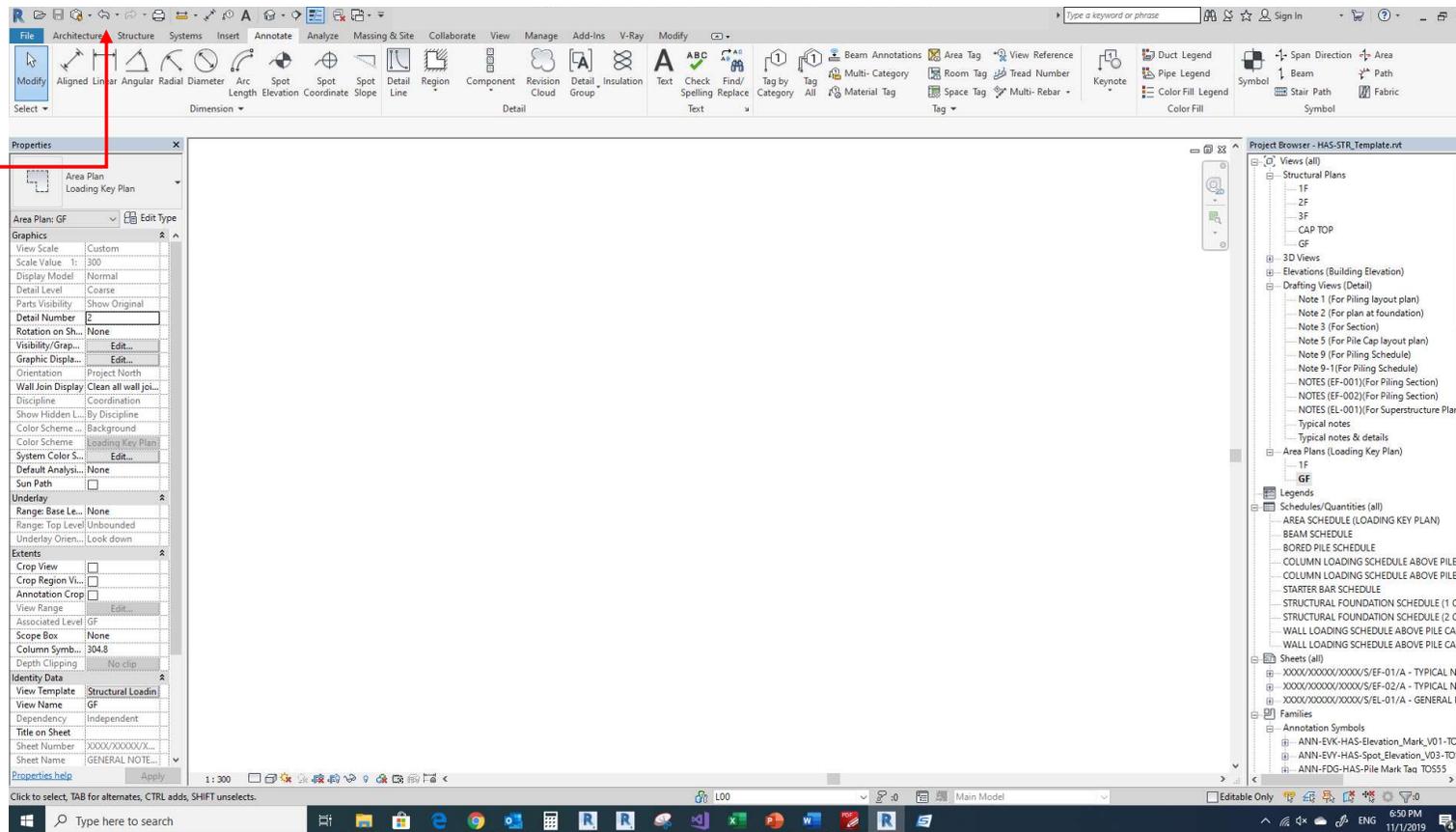
3 Click on "+" symbol to expand view used for submission drawing.

4 Check if "views" listed can also be found in excel. If yes, then double click the view to check location of manual-editing works



Revert Manual-editing works

1 Pick undo to revert manual-editing works without highlight

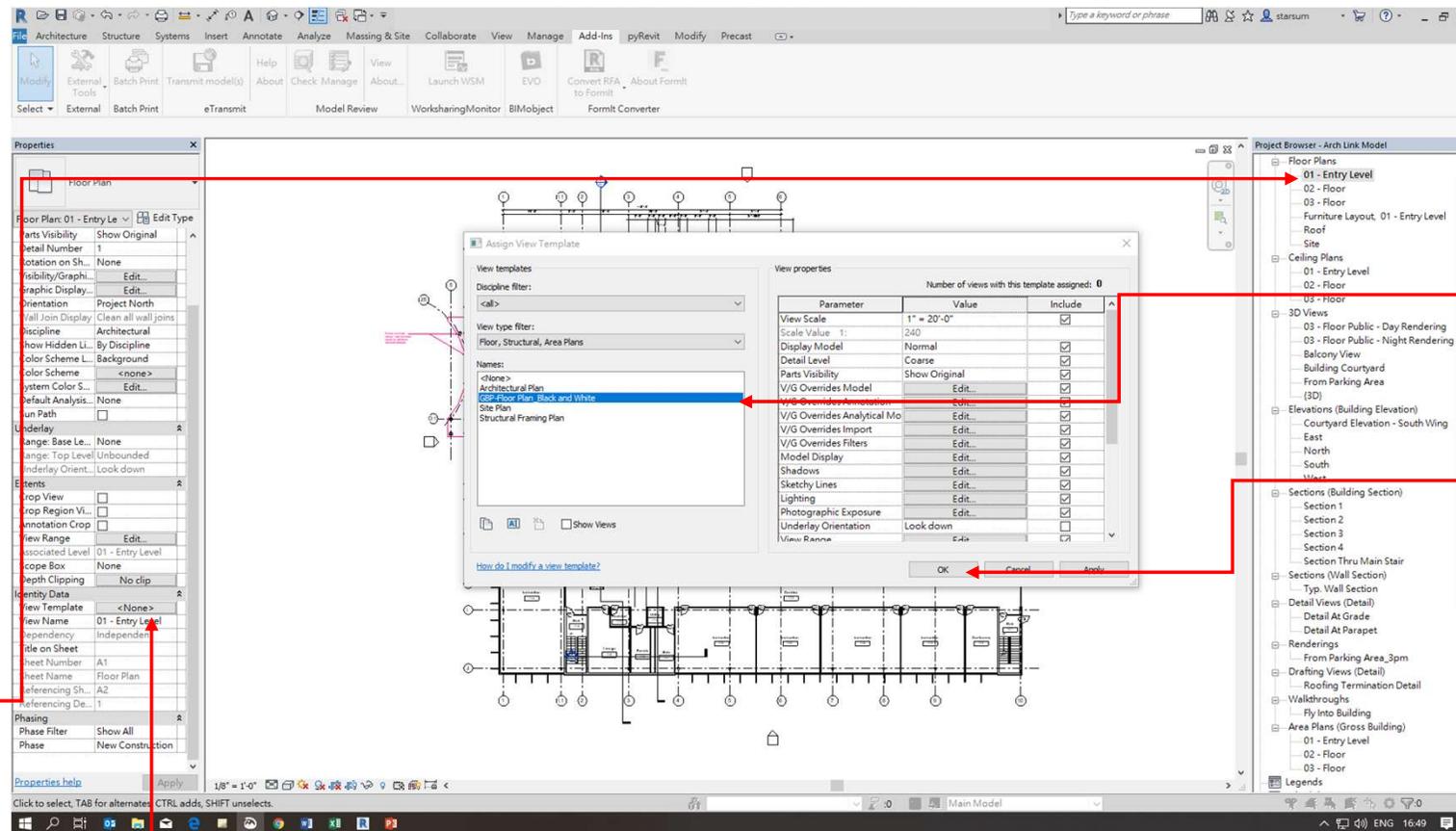


Change Background to Black & White

1 For review of GBP, it will be easier to locate highlighted manual-editing works by turning the background as black & white.

2 Select a floor plan.

3 Click "<None>"



4 Select the GBP-Floor Plan_Black and White

5 Click "OK"

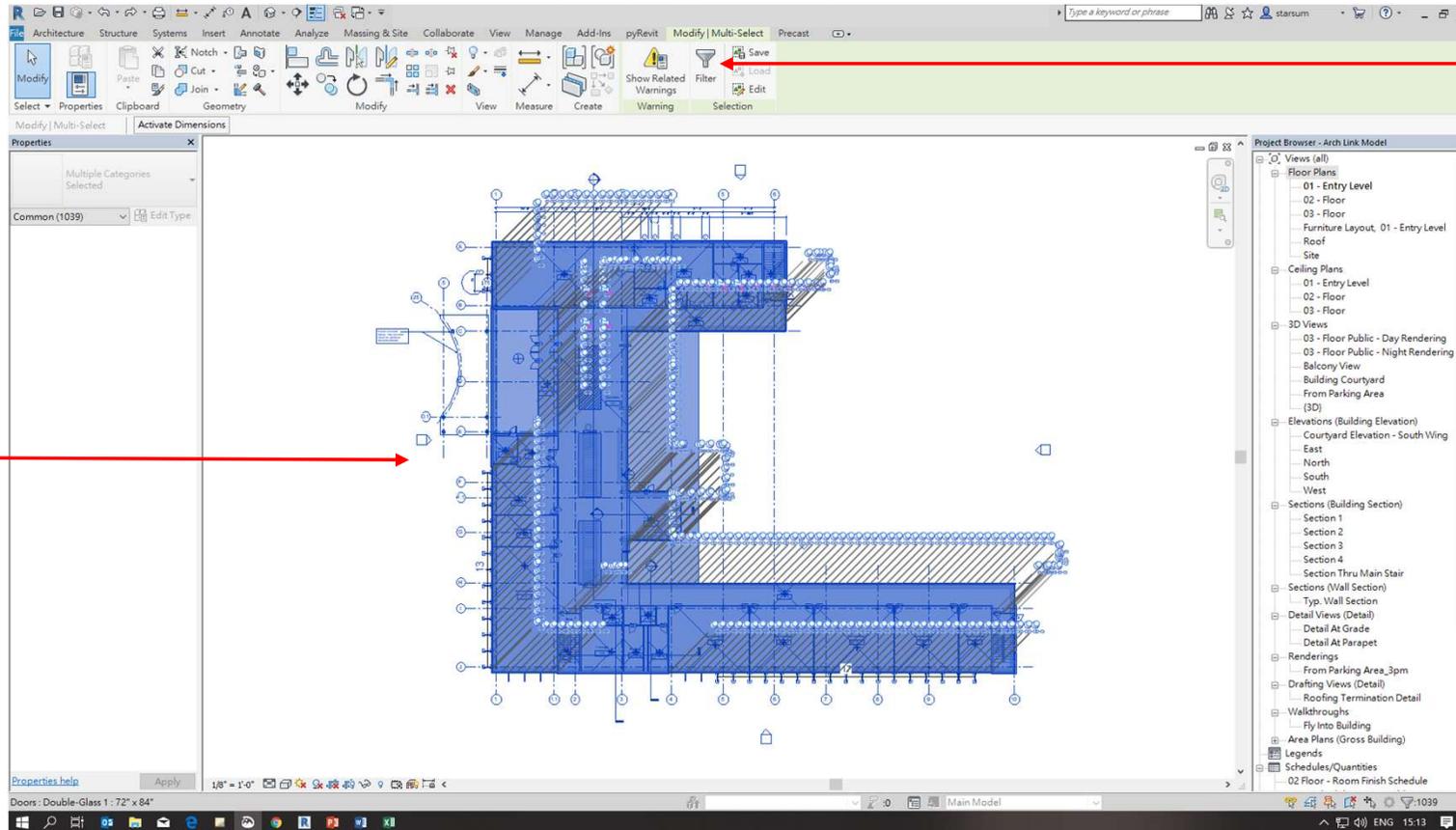
6 Users should also have basic knowledge on Revit for colour control of a plan.

Cross check no. of MEW by Revit functions

1 No. of text and symbol can be found by Revit native functions.

2 Select all element in the view

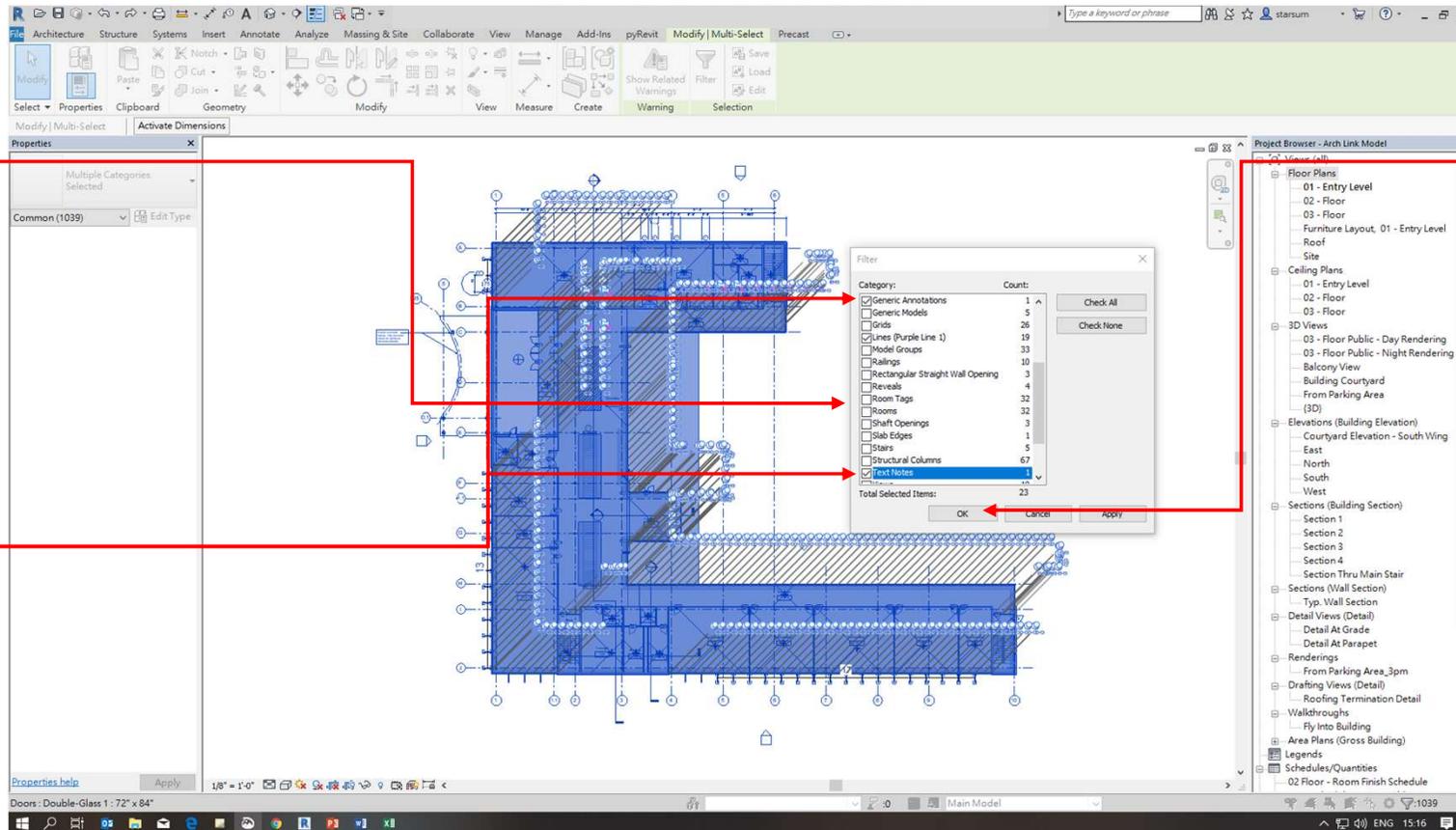
3 Click "Filter"



Text Notes, Generic Annotations

1 Find Text Notes (i.e. Text), Generic Annotations (i.e. symbol) in the list

2 Compare the number with the excel, it should be same with the excel



3 (Optional) you can click ok to select the filtered elements. Press keyboard "H" "I" to hide all elements outside selection. This facilitates a easier way to identify location of MEW.

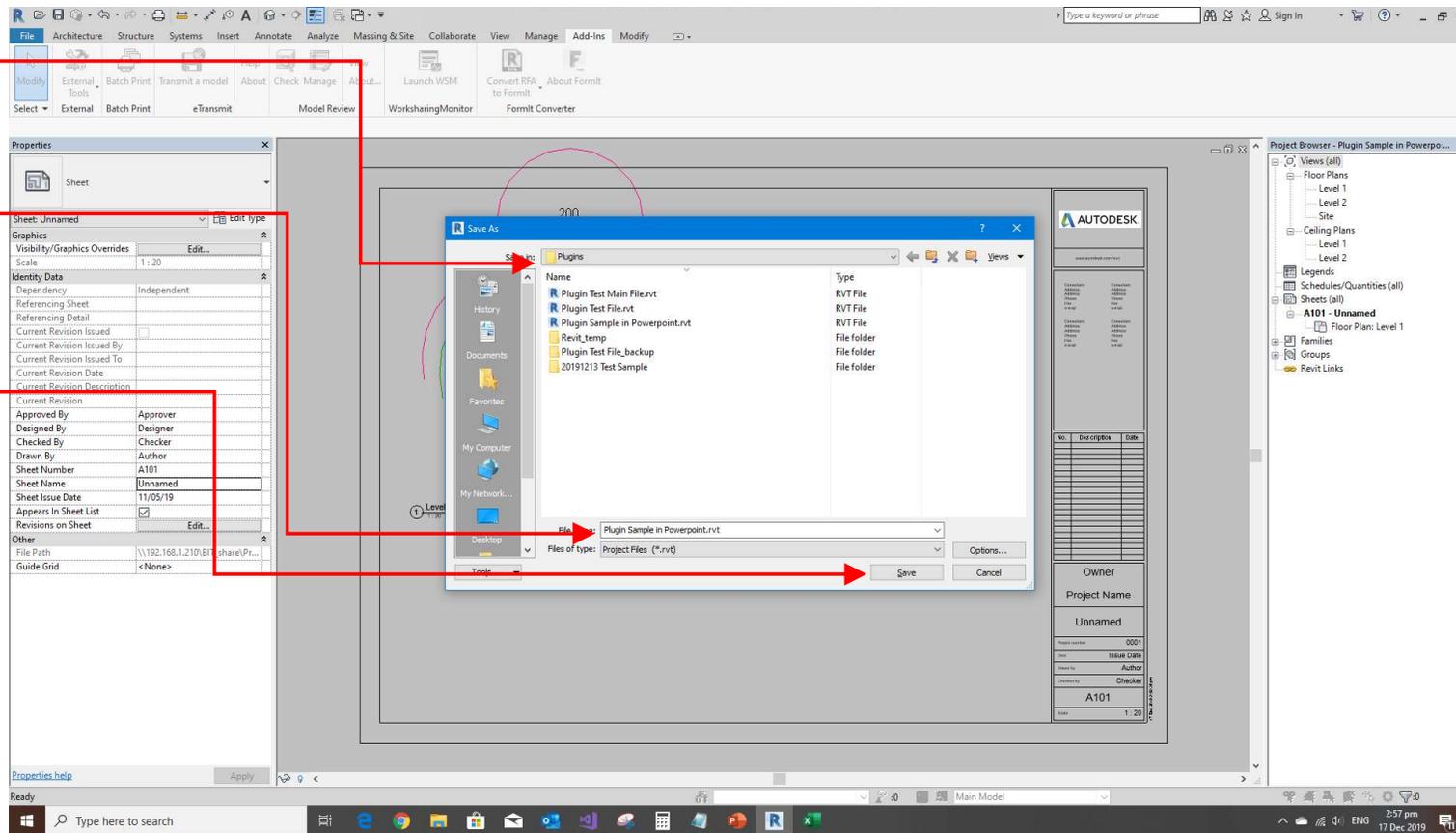
4 for remaining MEW, Revit does not provide a easy way to check exact no. of those items. User is advised to rely on the plugin functions.

Save the Works

1 Select the path

2 Enter the file name

3 Click "Save"

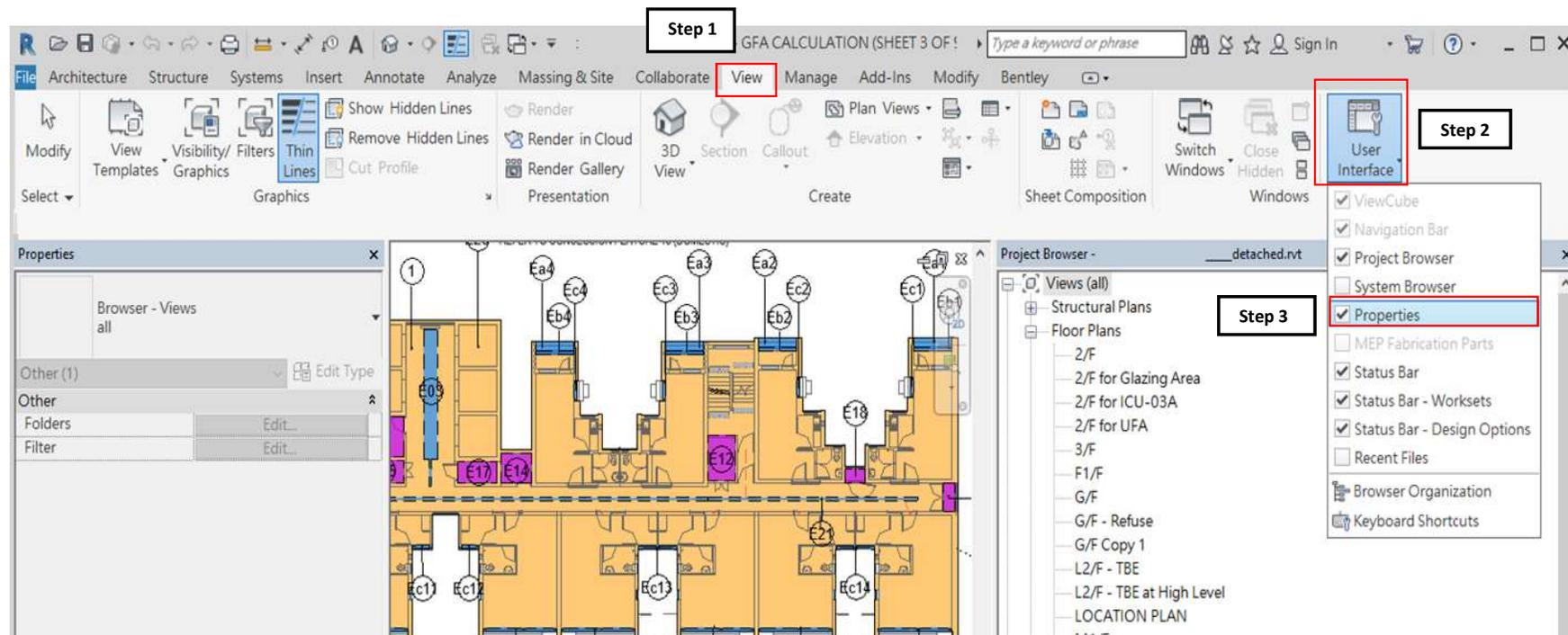


Methodology to verify the figures in the Schedules against their “true values” from BIM model

Step 1:
Select “View”.

Step 2:
Select “User Interface”.

Step 3:
Select “Properties”.



Methodology to verify the figures in the Schedules against their “true values” from BIM model

Step 4:
Double click the table inside the Sheet to open the Schedule.

The screenshot displays the Autodesk Revit 2018 interface with a 'GFA CALCULATION (SHEET 3 OF 5)' sheet. The central part of the image shows architectural drawings including a 'PART PLAN FLOOR DIAGRAM FROM F3/F - F20/E' and a 'SUMMARY OF GLAZING AREA FOR EACH STOREY (F3 - F39/F) OF WIDER COMMON CORRIDOR AND LIFT LOBBY'. To the right, there are several tables. One table, titled 'TYPICAL FLOOR DOMESTIC GFA CONCESSION - EXEMPTED GFA', is highlighted with a red border. A callout box labeled 'Step 4' points to this table. Below the main drawing area, there are more drawings for 'CORRIDOR AT WING B' and 'WIDER CORRIDOR DIAGRAM AT WING C'. At the bottom right, another table is visible, titled 'Larger lift shaft: EXEMPTED LIFT SHAFT AREA PER FLOOR'. The interface includes a ribbon with various toolsets and a Properties panel on the left.

Item	Description	Area (m²)
B01	CORRIDOR	2,259 m²
B02	CORRIDOR	2,215 m²
B03	CORRIDOR	1,938 m²
B04	CORRIDOR	5,503 m²
B05	CORRIDOR	15,515 m²

Item	Description	Area (m²)
B01	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B02	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B03	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B04	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B05	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B06	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B07	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B08	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B09	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B10	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B11	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B12	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B13	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B14	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B15	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B16	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B17	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B18	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B19	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B20	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B21	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B22	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B23	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B24	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B25	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B26	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B27	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B28	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B29	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B30	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B31	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B32	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B33	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B34	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B35	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B36	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B37	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B38	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B39	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B40	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B41	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B42	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B43	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B44	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B45	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B46	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B47	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B48	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B49	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B50	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B51	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B52	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B53	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B54	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B55	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B56	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
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B58	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B59	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B60	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B61	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B62	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B63	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B64	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B65	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B66	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B67	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B68	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B69	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B70	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B71	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B72	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B73	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B74	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B75	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B76	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B77	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B78	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B79	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B80	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B81	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B82	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B83	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B84	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B85	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B86	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B87	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B88	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B89	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B90	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B91	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B92	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B93	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B94	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B95	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B96	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B97	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B98	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B99	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
B100	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²

Methodology to verify the figures in the Schedules against their “true values” from BIM model

Step 5:
Select “Edit” button next to “Formatting” inside the “Properties” window.

Step 6:
Select “Area” under Fields.

Step 7:
Untick the “Hidden Field”.

Step 8:
Press OK button.

Item	Description	Area (m²)
06 Wider common corridor and lift lobby:		
E02	CORRIDOR	2.259 m²
E03	CORRIDOR	6.213 m²
E21	CORRIDOR	1.935 m²
E22	CORRIDOR	5.506 m²
11 Non-structural prefabricated external wall:		
Eb1	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb2	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb3	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb4	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb5	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb6	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb7	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb8	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb9	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb10	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m²
Eb11	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.595 m²
Eb12	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.595 m²
Eb13	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m²
Eb14	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m²
Eb15	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m²
Eb16	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m²
Eb17	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m²
Eb18	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m²
Ec1	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec2	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec3	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec4	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec5	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec6	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec7	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec8	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec9	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec10	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m²
Ec11	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.215 m²
Ec12	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.215 m²
Ec13	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
Ec14	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m²
13 Larger lift shaft:		
E28	EXEMPTED LIFT SHAFT AREA PER FLOOR	7.431 m²
SUB TOTAL OF NON-ACCOUNTABLE GFA:		36.652 m²

Methodology to verify the figures in the Schedules against their “true values” from BIM model

Step 9:

A column showing the true values of the area from the BIM model will now be displayed. You can verify the figures in the Schedules against their true values from the BIM model by visual inspection.

TYPICAL FLOOR DOMESTIC GFA CONCESSION - EXEMPTED GFA			
A	B	C	D
06 Wider common corridor and lift lobby:			
E02	CORRIDOR	2.259 m ²	2.259 m ²
E03	CORRIDOR	6.213 m ²	6.213 m ²
E21	CORRIDOR	1.935 m ²	1.935 m ²
E22	CORRIDOR	5.508 m ²	5.508 m ²
		15.915 m ²	15.915 m ²
11 Non-structural prefabricated external wall:			
Eb1	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb2	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb3	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb4	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb5	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb6	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb7	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb8	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb9	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb10	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.423 m ²	0.423 m ²
Eb11	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.595 m ²	0.595 m ²
Eb12	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.595 m ²	0.595 m ²
Eb13	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m ²	0.795 m ²
Eb14	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m ²	0.795 m ²
Eb15	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m ²	0.795 m ²
Eb16	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m ²	0.795 m ²
Eb17	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m ²	0.795 m ²
Eb18	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.795 m ²	0.795 m ²
Ec1	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec2	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec3	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec4	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec5	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec6	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec7	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec8	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec9	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec10	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.188 m ²	0.188 m ²
Ec11	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.215 m ²	0.215 m ²
Ec12	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.215 m ²	0.215 m ²
Ec13	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m ²	0.403 m ²
Ec14	NON-STRUCTURAL PREFABRICATED EXTERNAL WALL	0.403 m ²	0.403 m ²
		13.310 m ²	13.306 m ²
18 Larger lift shaft:			
E28	EXEMPTED LIFT SHAFT AREA PER FLOOR	7.431 m ²	7.431 m ²
		7.431 m ²	7.431 m ²
SUB TOTAL OF NON-ACCOUNTABLE GFA:		36.656 m ²	36.652 m ²

Step 9

True values from BIM model.