

Waldram Tools V3.0 Features



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1a. Register by Model



Requirements

- All Building polylines must be in **Building_Polylines** Layer. Rooms must be in **Room_Polylines** Layer and Windows must be in Window_Polylines Layer.
- Building Name and Starting floor must be specified using Block with dynamic attribute. It must be inside the main Building_Polylines Layer.
 - Block must have 2 attributes BUILDINGNAME & FLOORNAME.
 - BuildingList.txt doesn't need to have correct names. It is created from text during Pre-registration.
 - Building Name Text should not contain any of these characters '<', '>', '^', '\\", ':', '?', '*', '|', ';', '=', ',', ''
- Extra polylines can be drawn for building shape changes which must be in Building_Sub_Polylines layer and its centre should be inside the main building polyline.
- Building polyline must be below room polylines. Rooms are ignored if on equal height.

PreReg Rooms

- Updates building names from block with building and floor names.
- Determines Building and Floor for Rooms based on Building_Polylines and Z of room.
 - If new Room's Z coordinate is more than 0.5 plus Z coordinate of previous Room then it is put on a new floor.

PreReg Windows

- Determines Building and Floor for Windows based on Building_Polylines and average Z of Pre-Registered Room_Polylines in a floor.
 - If Z coordinate of the Centre of a Window is greater than or equal to the average Z of the current floor and smaller than the floor above then it is put on current floor.
 - All windows which have Z coordinate of Centre greater than or equal to average Z of last floor they are put that last floor.

Registration

- Warning is issued about: Windows which are inclined less than 1.5 degrees but are not vertical, Vertical windows which are inside a room and Vertical windows which are facing inside.
- Selected buildings can also be registered.
- Windows can be registered without rooms if necessary. Tick '*Without Rooms*' Option.
 - They won't be attached to existing registered rooms though.
- Rooms can be registered without windows if necessary. Go directly to Step 3 after Step 1
 - Any existing registered windows will be attached to relevant rooms too.
- Each step can be undone using single Undo as a new Undo group is created for every step.

Limitations

- It doesn't register if the window is not within 50m of a Building Polyline.
- The combo boxes for floor names must have enough entries for the registration to succeed.



1b. Register by Model Setup



Rooms on: "Room_Polylines" Layer

Tick if you want to restrict the buildings to register

Tick if you only want to register windows

Windows on: "Window_Polylines" Layer

Building polyline on: "Building_Polylines" Layer
The Z needs to be lower than the rooms

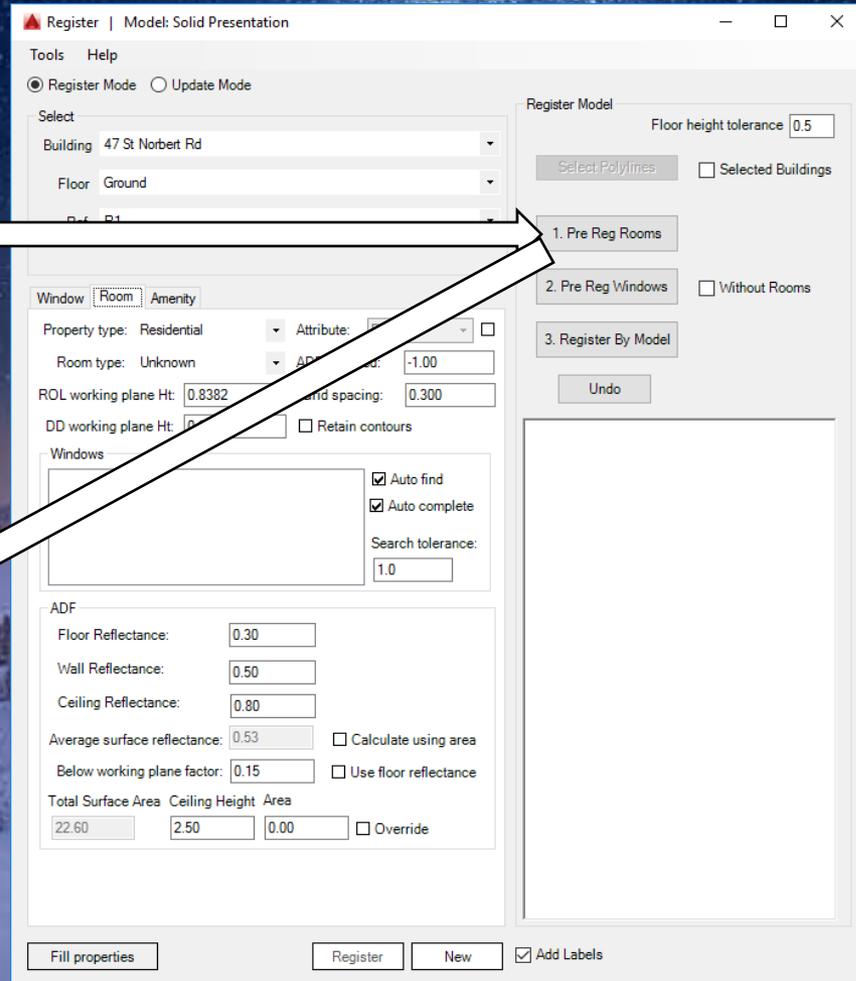
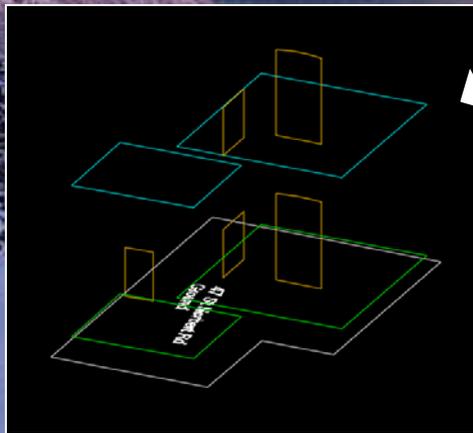
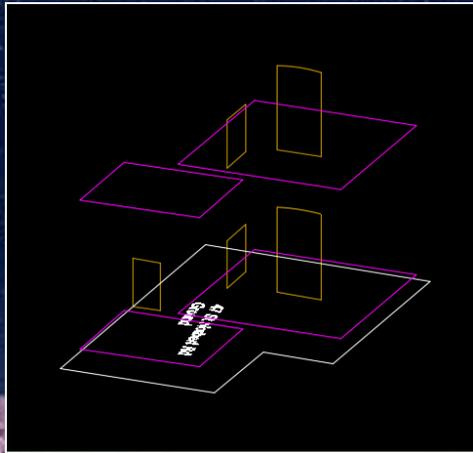
The image shows a software interface for registering a model. The main window is titled "Register | Model: Demo Job - Post Register" and has a menu bar with "Tools" and "Help". Below the menu bar are two radio buttons: "Register Mode" (selected) and "Update Mode". The "Register Model" section contains a "Select Polylines" button, a checkbox for "Selected Buildings" (unchecked), a list of options: "1. Pre Reg Rooms", "2. Pre Reg Windows", and "3. Register By Model", a checkbox for "Without Rooms" (unchecked), and an "Undo" button. An "Enhanced Attribute Editor" dialog box is open in the foreground, showing "Block: BuildingDetail" and "Tag: BUILDINGNAME". It has tabs for "Attribute", "Text Options", and "Properties". The "Attribute" tab is active, showing a table with columns "Tag", "Prompt", and "Value".

Tag	Prompt	Value
BUILDINGN...	What is building Name	47 St Norbert Rd
FLOORNAME	What is the starting Floor?	Ground

Below the table is a "Value:" field containing "47 St Norbert Rd" and buttons for "Apply", "OK", "Cancel", and "Help".



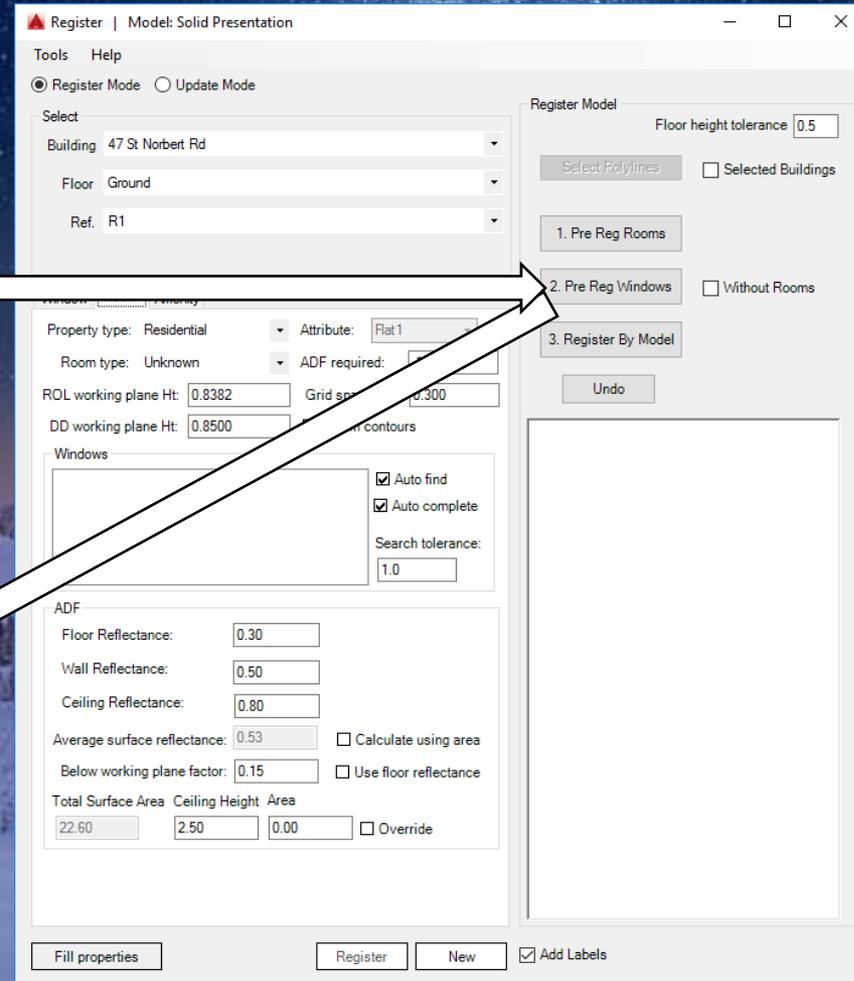
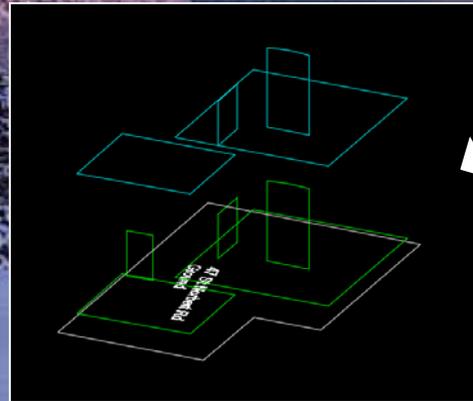
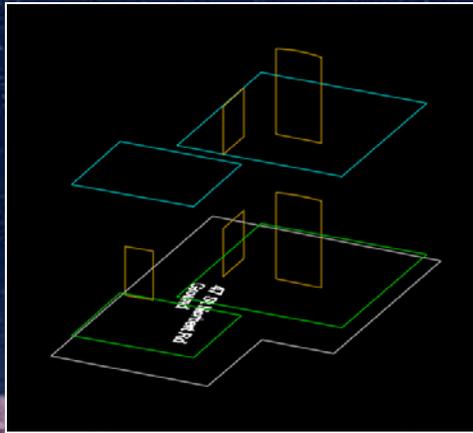
1c. Register by Model Process



After Pre Register Rooms the rooms are layered based on the floors that have been detected - they will alternate Green & Cyan as they go up.



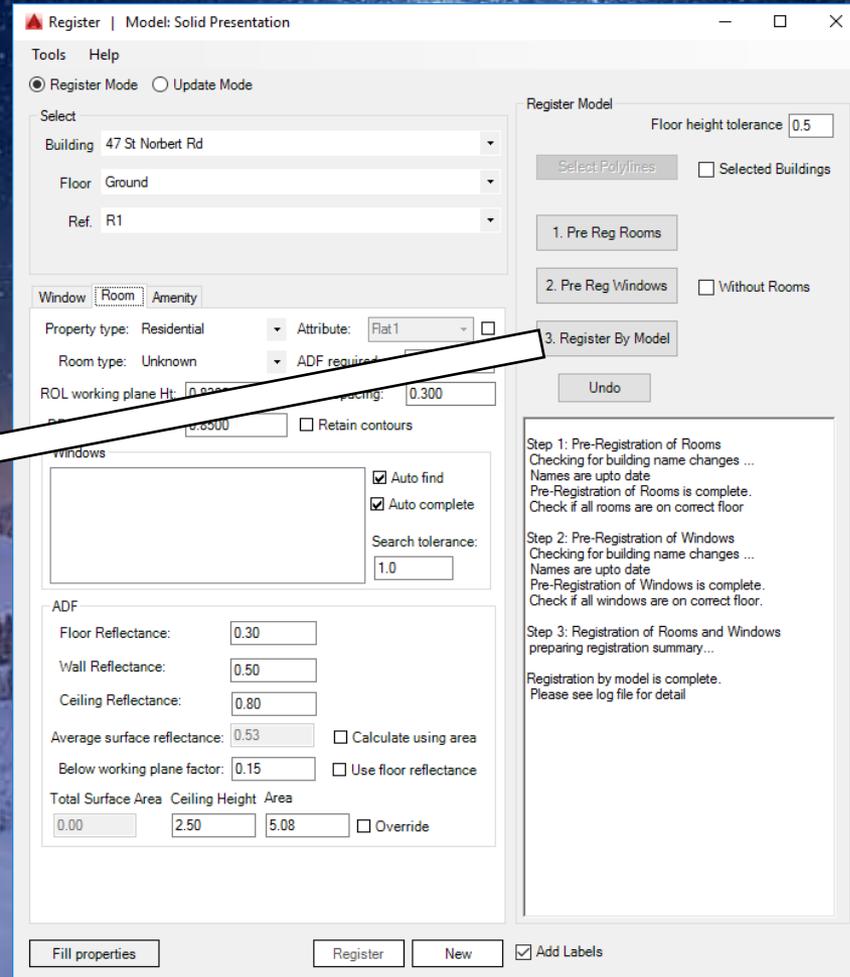
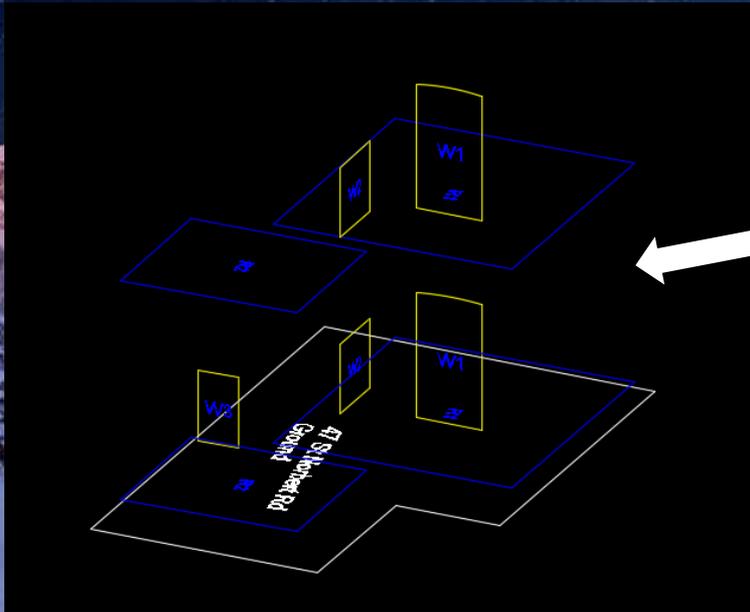
1d. Register by Model Process



After Pre Register Windows, the windows are layered in the same way. At this point, by using match properties, windows can be moved to a different floor.



1e. Register by Model Process



Press Register by Model and everything should be registered. Any warning or errors are written to the log file in the Waldram folder.



1f. Register Window Changes

The screenshot shows a software window titled "Register | Model: Demo Job - Post Register". The window has a menu bar with "Tools" and "Help". Below the menu bar, there are two radio buttons: "Register Mode" (selected) and "Update Mode". The "Select" section contains three dropdown menus: "Building" (47 St Norbert Rd), "Floor" (Basement), and "Ref." (W1). The "Window" section has tabs for "Room" and "Amenity". Under "Room", there are input fields for "Calculation height" (0.00), "VSC calculation offset" (0.00), and "Sunlight calculation offset" (0.00). A "Centre" checkbox is checked. Under "Amenity", there is an "Attribute" dropdown (Attribute 1) and an unchecked checkbox. The "ADF" section has an "ADF calculation offset" (0.15) and a table with columns "Glazed area", "Glazing multiplier", and "Structural area". The table contains the values: 0.00 = 0.80 x 0.00. Below the table is a "Glazing Transmittance" dropdown set to "0.68 Clear Glass (Double Glazed)". On the right side of the window, there is a "Register Model" panel with a yellow background. It contains a "Select PolyLines" button, a "Selected Buildings" checkbox, and three buttons: "1. Pre Reg Rooms", "2. Pre Reg Windows", and "3. Register By Model". An "Undo" button is at the bottom of this panel. At the bottom of the window, there are three buttons: "Fill properties", "New", and "Add Labels" (checked).

Register by Model

Additional text attribute – appears in excel outputs

Add labels as they register – takes settings from label dialogue



1g. Register Room Changes



The screenshot shows the 'Register' software interface with the following settings:

- Tools: Register Mode (selected), Update Mode
- Select: Building: 39 St Norbert Rd, Floor: Ground, Ref: R1
- Window: Room, Amenity
- Property type: Residential, Attribute: Flat.1
- Room type: Unknown, ADF required: -1.00
- ROL working plane Ht: 0.8382, Grid spacing: 0.300
- DD working plane Ht: 0.8500, Retain contours (unchecked)
- Windows: Auto find (checked), Auto complete (checked), Search tolerance: 1.0
- ADF: Floor Reflectance: 0.30, Wall Reflectance: 0.50, Ceiling Reflectance: 0.80, Average surface reflectance: 0.53, Calculate using area (unchecked), Below working plane factor: 0.15, Use floor reflectance (unchecked)
- Total Surface Area: 34.71, Ceiling Height: 2.50, Area: 0.00, Override (unchecked)
- Buttons: Fill properties, Register, New, Add Labels (checked)

Determines the height shift between rooms to create another floor

Register by Model

Floor, Ceiling & Floor Reflectance Values

In the case of the BRE ADF Formula the average is used and this can either be the mean of all three, or area weighted. The SPLIT FLUX Formula applies to all three reflectances

The below working plane factor can be overridden by ticking this box. The Floor Reflectance will then be used



1h. Register Dialogue Changes



The Drawing Filename is displayed on all dialogues

The screenshot shows the 'Register' dialog box with the title bar 'Register | Model: Demo Job - Post Register'. The 'Update Mode' radio button is selected. Under the 'Select' section, 'Building' is '47 St Norbert Rd', 'Floor' is 'Basement', and 'Ref.' is 'R1'. The 'Window' tab is active, showing 'Property type: Residential', 'Room type: Unknown', and 'Attribute: Flat1'. There are input fields for 'ROL working plane Ht: 0.8382', 'DD working plane Ht: 0.8500', and 'Grid spacing: 0.3'. The 'Windows' section has a 'Count: 0' and 'Attach'/'Detach' buttons. The 'ADF' section includes 'Floor Reflectance: 0.30', 'Wall Reflectance: 0.50', 'Ceiling Reflectance: 0.80', 'Average surface reflectance: 0.5', and 'Below working plane factor: 0.15'. At the bottom, there are buttons for 'Select polyline', 'Re-Number', 'Unregister', 'Update', 'Add Labels' (checked), 'Re-register room' (unchecked), and 'Count: 0'. A callout box points to the 'Re-register room' checkbox.

A new polyline is not created during Room & Amenity registration. The existing polyline is moved to the new layer instead.

Note: If unregistered, the registered polylines are moved back to original layer, e.g. If rooms in old models are unregistered, there could be duplicate room polylines. So the old original polylines should be deleted manually before unregistering and moved down to the floor where necessary.

The Re-register room tick box has been discontinued. The room will automatically re-register if required



2. Re-numbering



Re-Numbering

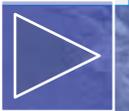
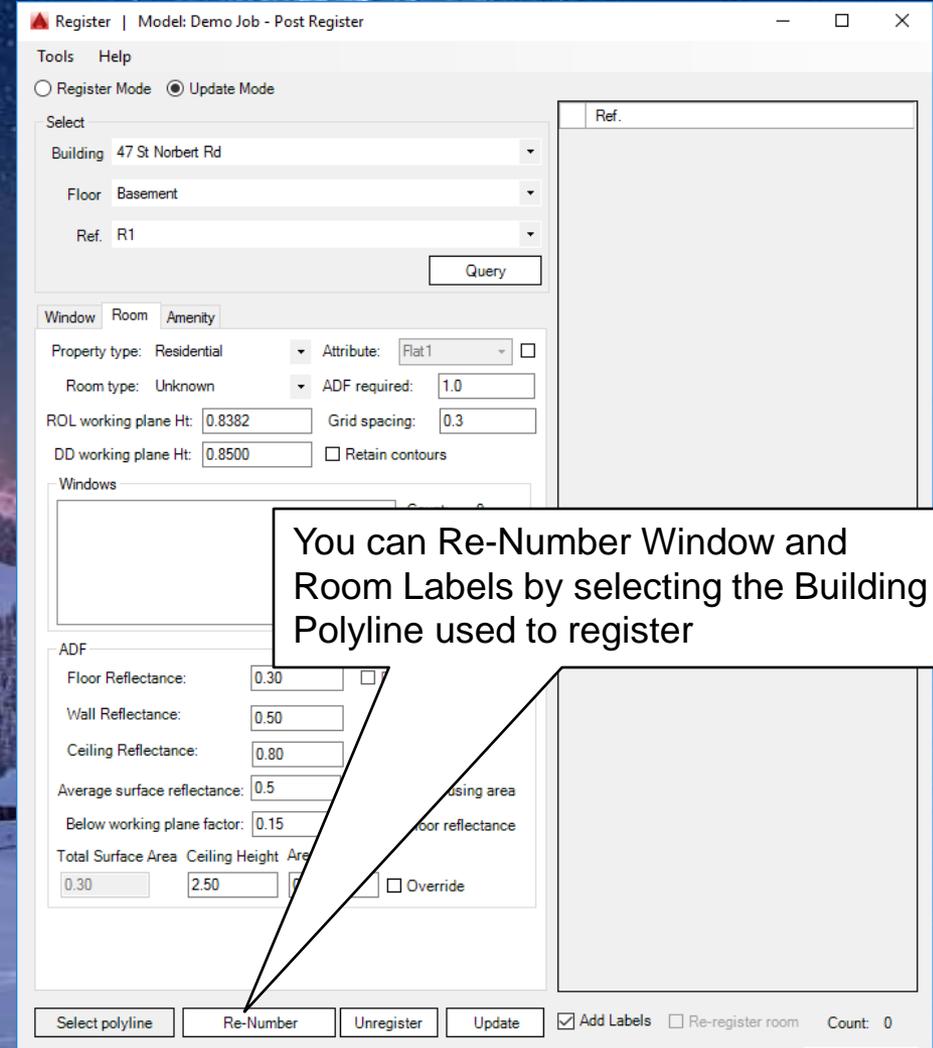
The windows and rooms can be re-numbered, e.g. if a window is deleted or inserted.

It requires a Building polyline and Attributed Block (the same one already used to Auto register). It can also make use of building sub-polylines

Un-Registration

No new polyline is created when registering Windows/Rooms/Amenities, it converts the initial polyline. Unregistering will revert the polylines to their original states.

Care should be taken updating an old model as the registered polyline will not be at floor level. Unregistering will leave it at the working plane height.



3a. Split Flux



Background

Split Flux calculates daylight factor for light entering from below and above the centre of the window separately.

BRE assumes all light entering from the window hits the working plane.

Split Flux includes reflectance from obstructing buildings and the ground.

BRE includes the reflectance from the ground only which is included in the theta/2 approximation for VSC and ground.

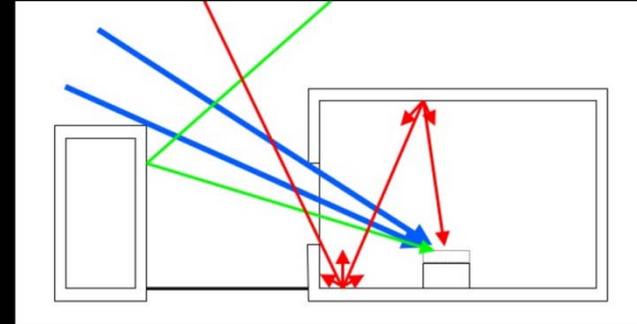
Split Flux method considers large and complicated obstructions forming an irregular skyline. BRE formula assumes that the obstruction is continuously horizontal. So it gives closer results for low obstruction angles but the difference increases for higher obstruction angles.

Use BRE if obstruction is parallel with horizon

Use Split Flux if obstruction is vertical or complex

Split Flux Method

UK Building Research Establishment (BRE)



— SC = direct component

— ERC = externally reflected component

— IRC = internally reflected component

$$DF = SC + ERC + IRC$$



3b. Split Flux



Default Values

Floor Reflectance: 0.3 | Ceiling Reflectance: 0.7 | Wall Reflectance: 0.5 | Reflectance of obstructing building: 0.2

$$D_{\text{Split Flux}} = A_w \tau \left(\frac{C_{\text{sky}}}{A_l} + \left(\frac{C_{\text{sky}} \rho_l + 0.05 \rho_u}{A_r (1 - \rho_{\text{av}})} \right) \right) \times 100\%$$

Where,

A_w is the Area of the window

τ is the Transmittance of the window glass

C_{sky} is the Existing Sky Component

A_l is the Area of the room below centre of the window *

A_r is the Area of the whole room

ρ_l is the mean Reflectance of lower part of the room. *

ρ_u is the mean Reflectance of upper part of the room. *

ρ_{av} is the mean Reflectance of the whole room.

* Window-side wall area is discounted while calculating all these parameters

Direct factor

Indirect factor

Note: If the Sky Component (SC) is not maximum (or there is some obstruction), then the **externally** reflected component is added using the formula below. The SC of the obstruction is assumed to be the same as the reference window. The formula below also assumes that the luminance is uniform.

$$E_{\text{RC}} = (\text{SCMAX} - \text{SC}) * (7.0 / 300 * R_b * \text{SC})$$

0.05 = D^* is calculated by assuming $D = 25$ and Ground reflectance = 0.2

- Window-side wall area is discounted while calculating all these parameters

Assumptions on Implementation

Ceiling area is assumed to be the same as the Floor area

Ceiling height specified during room registration is used for calculating area and reflectance values

SF calculations in the ADF excel output (in below working plane column) will show the factor as 0

BRE calculations 1.0 for full window and 0.15 for lower part of split ones.

Reflectance from ground is not included if the window is a roof light or inclined and above ceiling height



3c. Split Flux



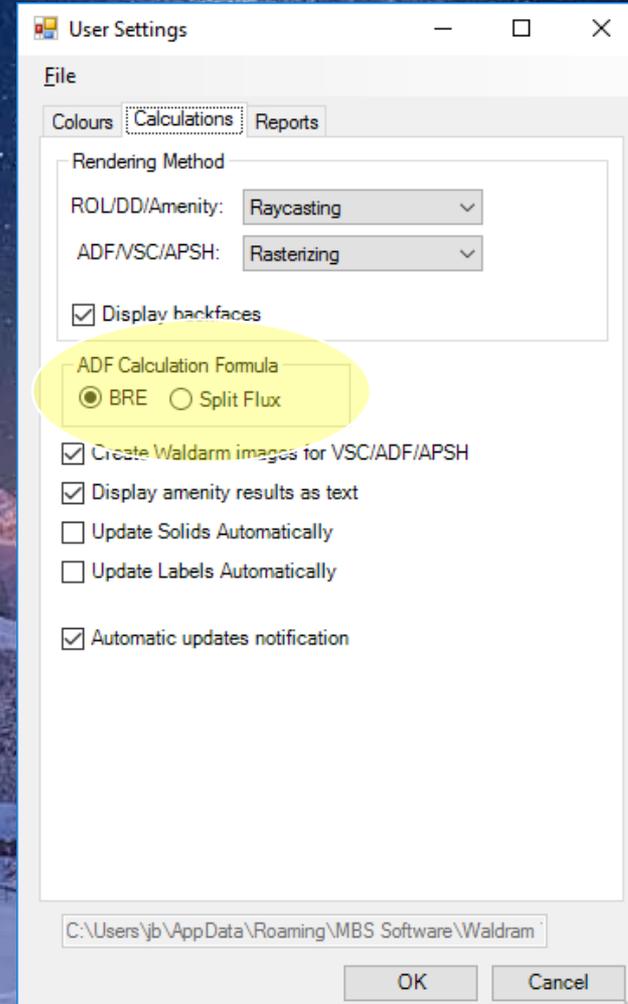
The Split Flux method can be selected in User Settings under the calculations tab. (image right)

It must be selected before running ADF calculations.

In the case of inclined windows the Split Flux method will automatically be used as the BRE offer no solution for this scenario other than a simple obstruction angle which is impractical in most situations. This is not the case for roof lights where the BRE formula outlined on P54 of the BRE Guide is used (see below)

C12 Where a rooflight has a continuous obstruction on one side of it, or continuous obstructions on two opposite sides, the angle of visible sky θ can be measured from the section perpendicular to the obstruction(s). If the obstructions are discontinuous or surround the rooflight, the horizontal sky component (HSC) on top of the rooflight can be found using a computer program, or by using BRE daylight protractor^(C4) number 10 to subtract off the sky component blocked by each obstruction in turn (the sky component on an unobstructed rooflight is 100%). The angle of visible sky θ can then be estimated from:

$$\begin{aligned} \text{Angle of visible sky } \theta \\ = 2 \times \text{HSC} + 0.2 \times (100 - \text{HSC}) \text{ degrees} \end{aligned}$$

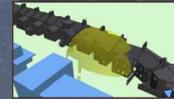


4. Calculations

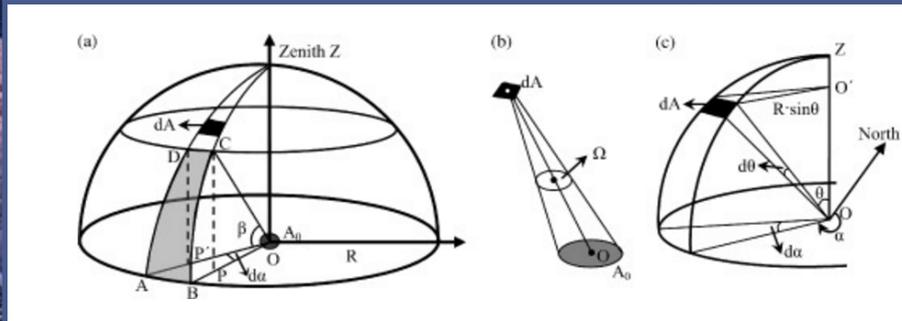


As well as the introduction of the Split Flux method, the Sky Component can now also be calculated for non vertical windows. This uses a sky patch methodology as opposed to a Waldram diagram.

This result can be visualised if required using a new command SKYSCANNER

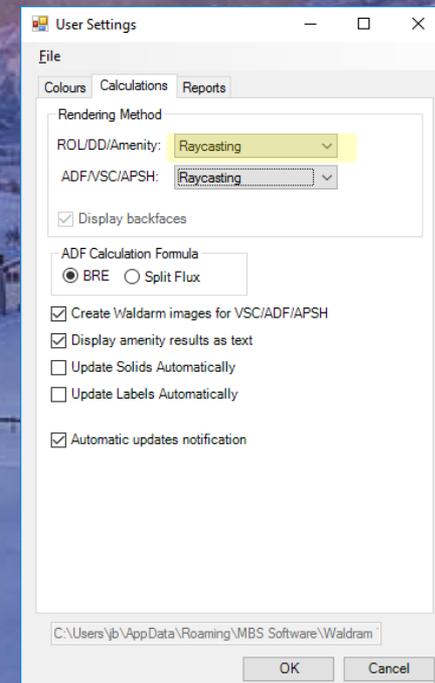


This sky component can then be used within the split flux ADF formula allowing inclined windows to be calculated.

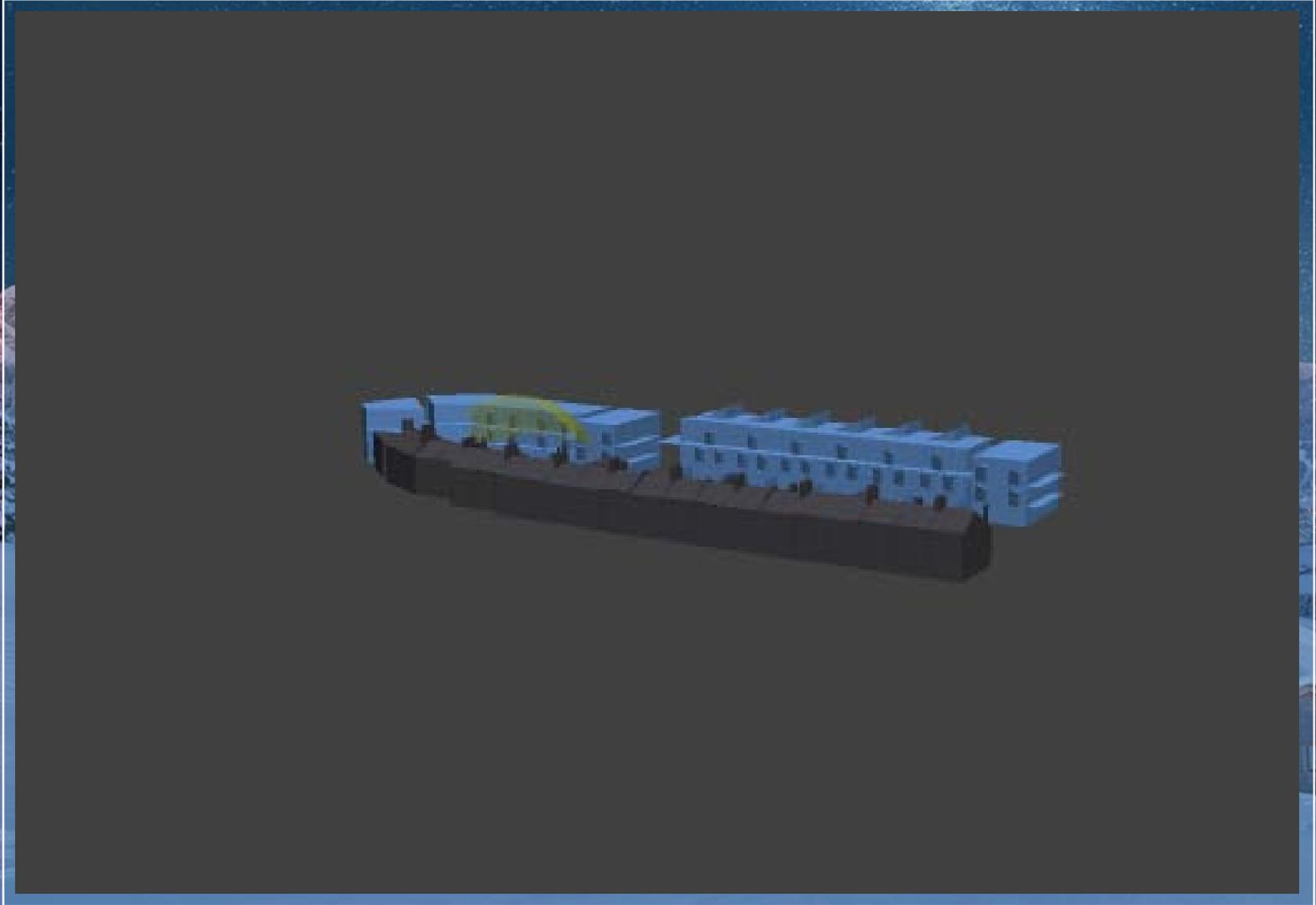


By setting ADF/VSC/APSH method to Raycasting APSH now uses a Raycasting technique to check sun availability. This runs significantly faster than the current method processing several hundred windows a second. Using the Rasterizing setting works in the same way as in previous versions.

VSC, APSH & ADF for **inclined** windows are all calculated using the Raycasting method. No diagrams are created.



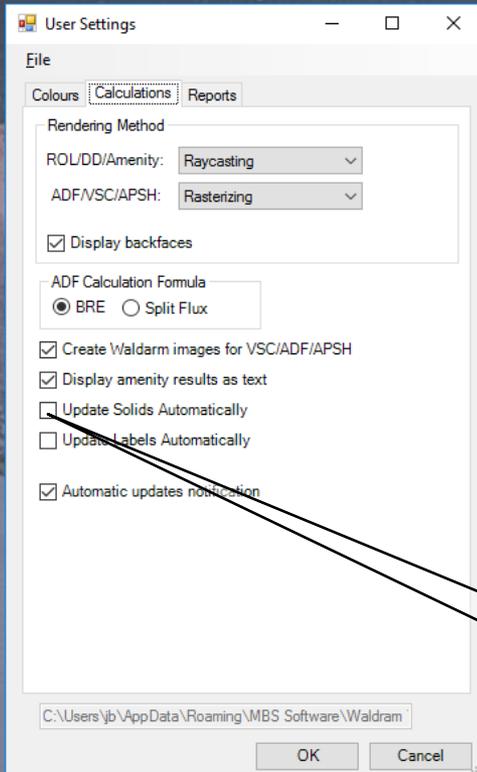
4. Sky Scanner



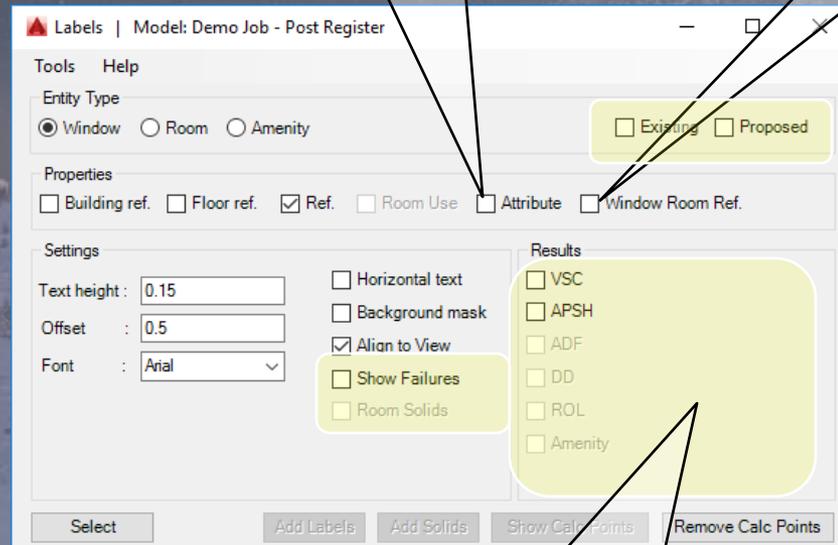
5a. Labels



The Labels Dialogue has had a fairly major overhaul



Labels and Solids can update automatically



You can now add an attribute value to a window, this will then appear in the excel export

The Room Reference can now be added to the window label

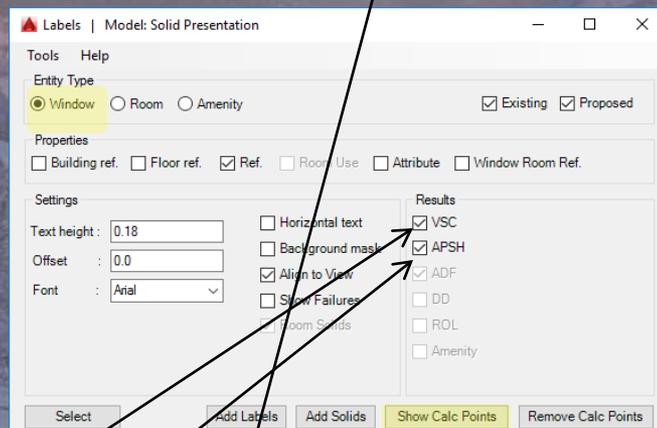
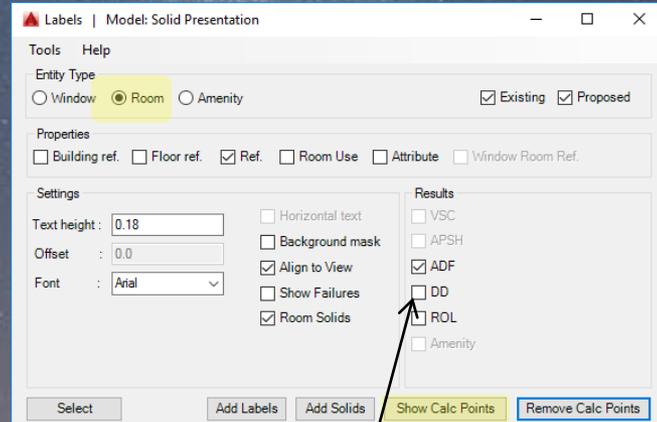
Results can now be shown as labels or solids (Areas in yellow)



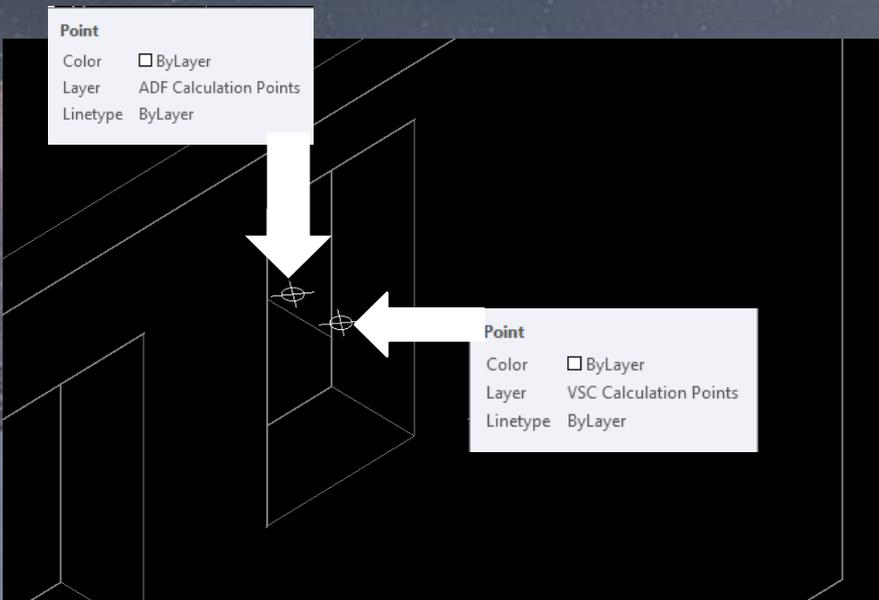
5b. Labels



Calculation Points can now be added to ease checking. They have **NO** affect On the running of software and are for display purposes only.



VSC/APSH/ADF Calc points can now be shown to allow easier checking. These are Layered



6a. Window Results as Solids



Using the Labels dialogue, results can be shown at the window as solids. These are coloured red for a failure, green for a pass and orange for a fail but within a set tolerance of passing.

The screenshot shows the 'Labels' dialog box for 'Model: Solid Presentation'. The 'Entity Type' is set to 'Window'. The 'Properties' section has 'Ref.' checked. The 'Settings' section has 'Text height' at 0.15, 'Offset' at 0.5, and 'Font' set to Arial. The 'Results' section has 'VSC' and 'APSH' checked. The 'Add Solids' button is highlighted. The background shows a 3D model of a building with windows colored red and green.

1. First Select the windows to apply the solids to...
2. Select the test to apply solids for
3. Select the Condition you want to test. For a self test this would be just proposed. Here we are comparing Existing and Proposed
4. Finally click Add Solids



6b. Window Results as Solids



Using the Labels dialogue, results can be shown at the window as solids. These are coloured red for a failure, green for a pass and orange for a fail but within a set tolerance of passing.

The screenshot shows the 'Labels' dialog box in a software application. The dialog is titled 'Labels | Model: Solid Presentation'. It has several sections: 'Tools Help', 'Entity Type' (with 'Window' selected), 'Properties' (with 'Ref.' checked), 'Settings' (with 'Text height: 0.15', 'Offset: 0.5', and 'Font: Arial'), and 'Results' (with 'VSC' and 'APSH' checked). At the bottom, there are buttons for 'Select', 'Add Labels', 'Add Solids', 'Show Calc Points', and 'Remove Calc Points'. The background shows a 3D model of a building with windows highlighted in red and green. Four callout boxes provide instructions: 1. '1. First Select the windows to apply the solids to...' points to the 'Select' button. 2. '2. Select the test to apply solids for' points to the 'Existing' and 'Proposed' checkboxes. 3. '3. Select the Condition you want to test. For a self test this would be just proposed. Here we are comparing Existing and Proposed' points to the 'VSC' and 'APSH' checkboxes. 4. '4. Finally click Add Solids' points to the 'Add Solids' button.

1. First Select the windows to apply the solids to...

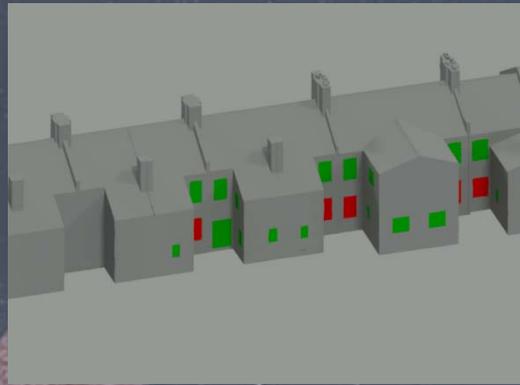
2. Select the test to apply solids for

3. Select the Condition you want to test. For a self test this would be just proposed. Here we are comparing Existing and Proposed

4. Finally click Add Solids



6c. Window Results as Solids

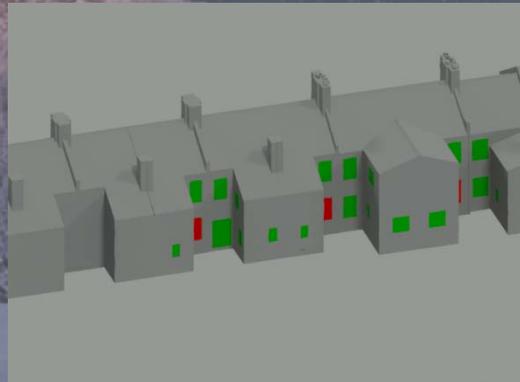


Current layer: VSC

S...	Name	O...	Fre...	L...	Color
<input type="checkbox"/>	APSH_A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	white
<input type="checkbox"/>	APSH_W	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	white
<input checked="" type="checkbox"/>	VSC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	white

Solids: 3 layers displayed of 547 total layers

VSC

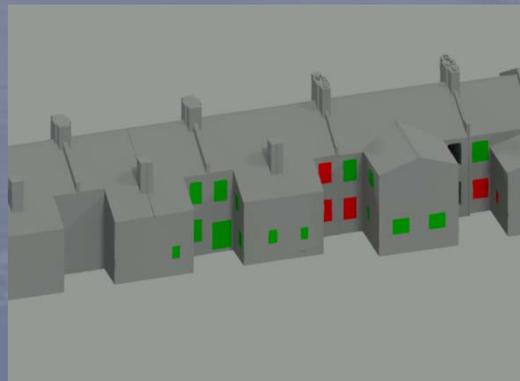


Current layer: APSH_A

S...	Name	O...	Fre...	L...	Color
<input checked="" type="checkbox"/>	APSH_A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	white
<input type="checkbox"/>	APSH_W	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	white
<input type="checkbox"/>	VSC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	white

Solids: 3 layers displayed of 547 total layers

APSH ANNUAL



Current layer: APSH_W

S...	Name	O...	Fre...	L...	Color
<input type="checkbox"/>	APSH_A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	white
<input checked="" type="checkbox"/>	APSH_W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	white
<input type="checkbox"/>	VSC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	white

Solids: 3 layers displayed of 547 total layers

APSH WINTER



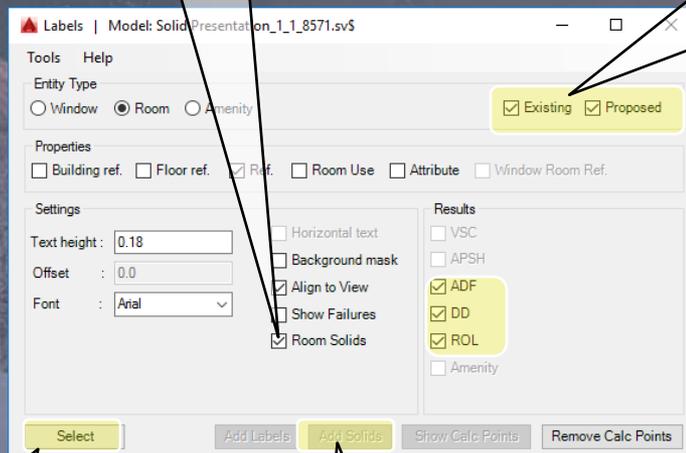
6d. Room Results as Solids



Using the Labels dialogue, results can be shown at the windows/rooms as solids. These are coloured red for a failure, green for a pass and orange for a fail but within a set tolerance of passing.

2. Select the test to apply solids at the Floor

3. Select the Condition you want to test. For a self test this would be just proposed. Here we are comparing Existing and Proposed

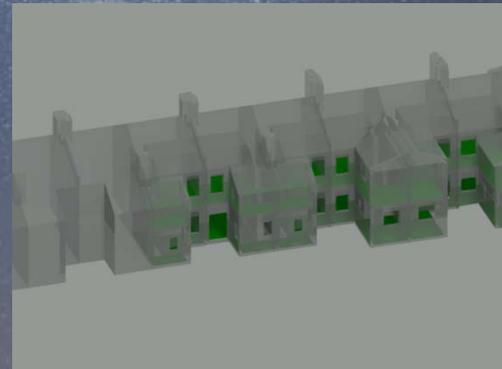
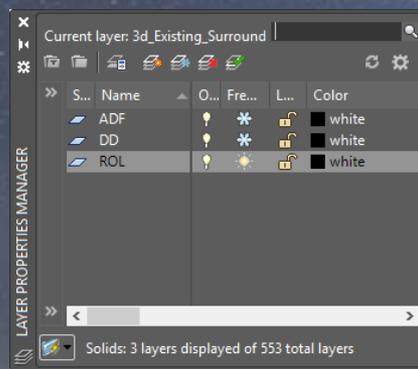
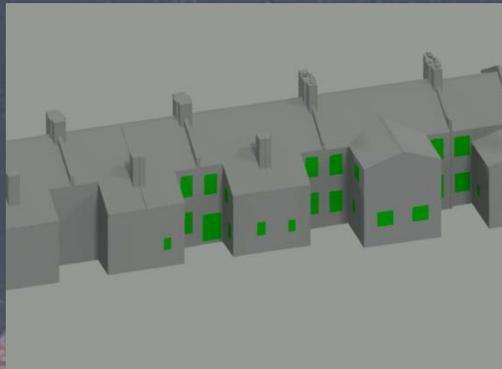


1. First Select the windows to apply the solids to...

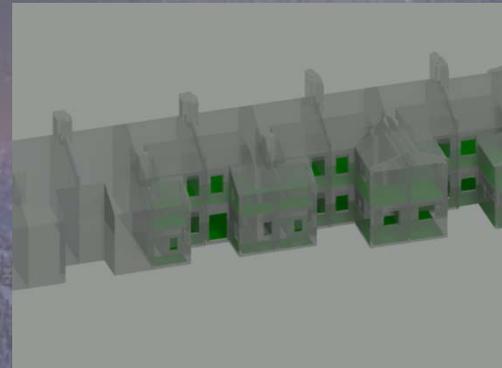
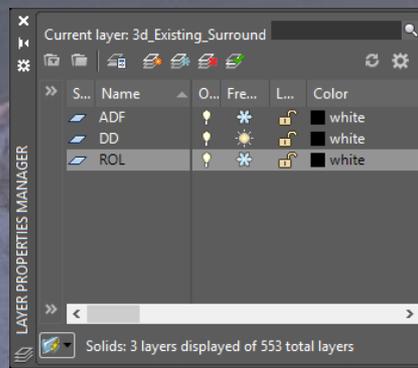
4. Finally click Add Solids



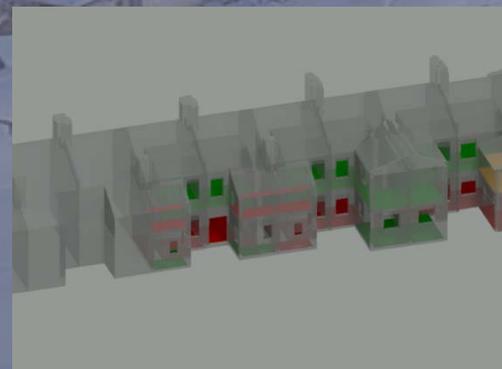
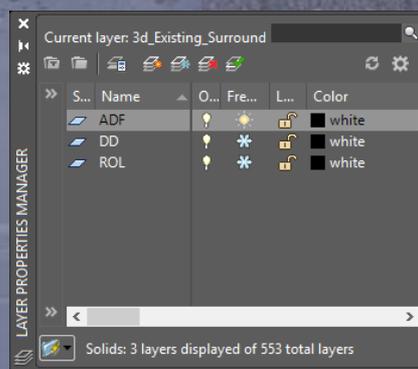
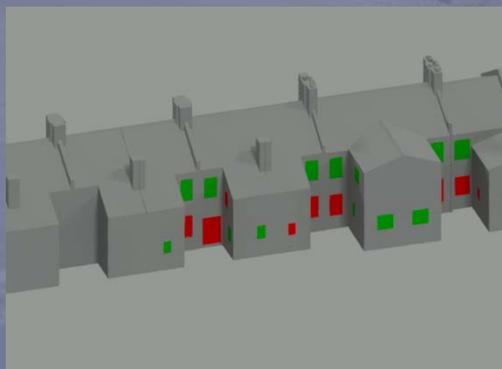
6e. Room Results as Solids



ROL



NSL



ADF



7a. Project Settings



Some Settings that are project based have been moved to a new menu item called "Project Settings"

These are stored in an xml file in the Waldram folder under the drawing files location

Reports | Model: Solid Presentation

Tools | Help

- Load Scripts
- Save Reports as Script
- Open Job Folder
- Settings
- Project Settings**

Window(s) Room(s) Amenity

Option

This PC > Desktop > Nov 30th > Solid Presentation_Waldram >

Name	Date modified
Assets	25-Nov-16 2:25
Tasks	25-Nov-16 2:25
WaldramDiagrams	25-Nov-16 2:25
AmenityRgst.UIN	25-Nov-16 2:38
MBSWaldramLog.txt	25-Nov-16 2:41
ProjectDetails.xml	25-Nov-16 2:41
ROL-Solid Presentation.xlsx	25-Nov-16 2:41
RoomDesc.txt	22-Nov-16 1:01
RoomRgst.UIN	25-Nov-16 2:38
WindowRgst.UIN	25-Nov-16 2:38

Project Settings

Project Details | Results

Project Details

Tag Name	Tag Value
Project Name	Example
Project No.	1
Report Title	
Architect	MBS
Date	29/09/2016

Date of Analysis : 29/09/2016

Cube size: 1.0

Location: LONDON

Open Project Folder

C:\Users\j\p\Desktop\Nov 30th\Solid Presentation_Waldram\ProjectDetails.xml

Apply OK Cancel

The date the analysis was run

Cube size affects speed of calculation only

Location for APSSH and Amenity test



7b. Project Settings - Details



	A	B	C	D	E
2					
3					
4					
5					
6					

	A	B	C	D
2				
3				
4				
5				
6				
7				

Some Settings that are project based have been moved to a new menu item called "Project Settings"

These are stored in an xml file in the Waldram folder under the drawing files location

Reports | Model: Solid Presentation

Tools Help

- Load Scripts
- Save Reports as Script
- Open Job Folder
- Settings
- Project Settings**

Window(s) Room(s) Amenity

Option

This PC > Desktop > Nov 30th > Solid Presentation_Waldram >

Name	Date modified
Assets	25-Nov-16 2:25
Tasks	25-Nov-16 2:25
WaldramDiagrams	25-Nov-16 2:25
AmenityRgst.UIN	25-Nov-16 2:38
MBSWaldramLog.txt	25-Nov-16 2:41
ProjectDetails.xml	25-Nov-16 2:41
ROL-Solid Presentation.xlsx	25-Nov-16 2:41
RoomDesc.txt	22-Nov-16 1:01
RoomRgst.UIN	25-Nov-16 2:38
WindowRgst.UIN	25-Nov-16 2:38

Project Settings

Project Details Results

Tag Name	Tag Value
Report Title	
Project No.	1
Project Name	Example
Date	29/09/2016

Date of Analysis: 29/09/2016

Cube size: 1.0

Location: LONDON

C:\Users\yb\Desktop\Nov 30th\Solid Presentation_Waldram\ProjectDetails.xml

Apply OK Cancel

The date the analysis was run

Cube size affects speed of calculation only

Location for APSH and Amenity test



7c. Project Settings - Results



Project Settings

Project Details **Results**

BRE Settings

VSC
Pass Value %: 27
% of Existing: 80
Tolerance: 1

ADP
Tolerance: 0.01

DD
% of Existing: 80
Tolerance: 1

APSPH
Annual Value: 25
Winter Value: 5
% of Existing: 80
No. of Suns: 4
Tolerance: 1

ROL
Property Type: Residential
Pass Value %: 55
Tol. Pass Value: 1
Tolerance: 1

Amenity
Amenity Sunlight Date: 21 March, 2010
Start time: 3 Hrs, 0 Mins
End time: 21 Hrs, 0 Mins
No. Sun hours(mins): 120
Ignore Sun positions below(in deg): 10
Pass Value %: 50
% of Existing: 80
Tolerance: 1

Color Banding contour Refined Contours

Contour Color Bandings
Interval contour Min: 10 Blue
Interval contour Max: 120 Red
Step: 10

NB: Orange Text Boxes represents the results failed by given Tolerance value

Apply OK Cancel

This sets all the BRE related settings to be compliant with the guide. These defaults are set in the ProjectDetails.xml in the Waldram Tools Folder under %appdata%

All Orange Tolerance boxes are for the "Results Solid" applied in the labels dialogue. They are all based on percentage from passing

Different values can now be set for property type. This is done in PropertyType.txt in the Model Lists directory

```
"Residential",55  
"Commercial",50
```

This is the accepted deviation, as a percentage from the baseline condition, still deemed to be a pass



7d. Project Settings - Results



Project Settings

Project Details **Results**

BRE Settings

VSC
Pass Value %: 27
% of Existing: 80
Tolerance: 1

ADP
Tolerance: 0.01

DD
% of Existing: 80
Tolerance: 1

APSH
Annual Value: 25
Winter Value: 5
% of Existing: 80
No. of Suns: 4
Tolerance: 1

ROL
Property Type: Residential
Pass Value %: 55
Tol. Pass Value: 1
Tolerance: 1

Amenity
Amenity Sunlight Date: 21 March, 2010
Pass Value %: 50
Start time: 3 Hrs, 0 Mins
End time: 21 Hrs, 0 Mins
% of Existing: 80
Tolerance: 1
No. Sun hours(mins): 120
Ignore Sun positions below(in deg): 10

Color Banding contour Refined Contours

Contour Color Bandings
Interval contour Min: 10 Blue
Interval contour Max: 120 Red
Step: 10

NB: Orange Text Boxes represents the results failed by given Tolerance value

Apply OK Cancel

The date to test Sunlight to amenity

Start and end times can be applied

Ignore any sunlight below this figure. The BRE ignores anything below 10 degrees

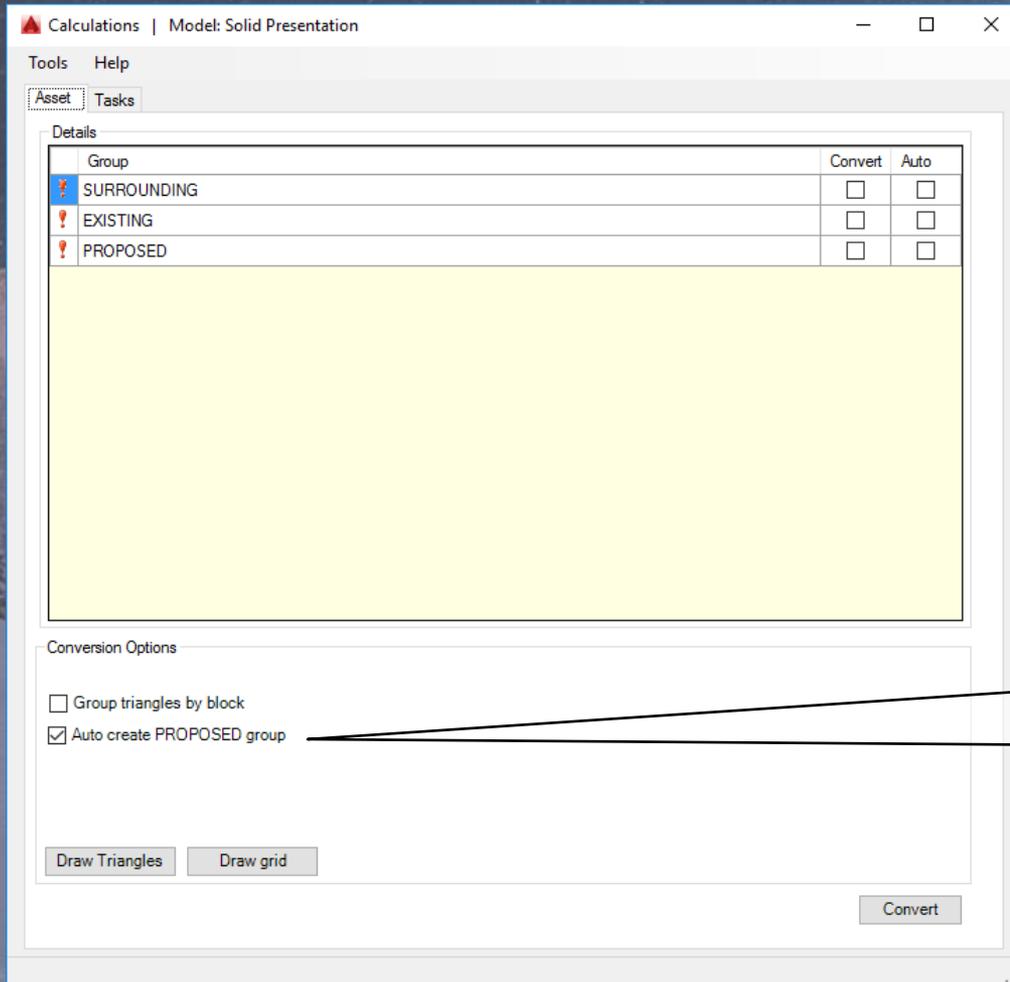
The contour to draw (in minutes)

A range of contours can now be applied

The range and step size in minutes



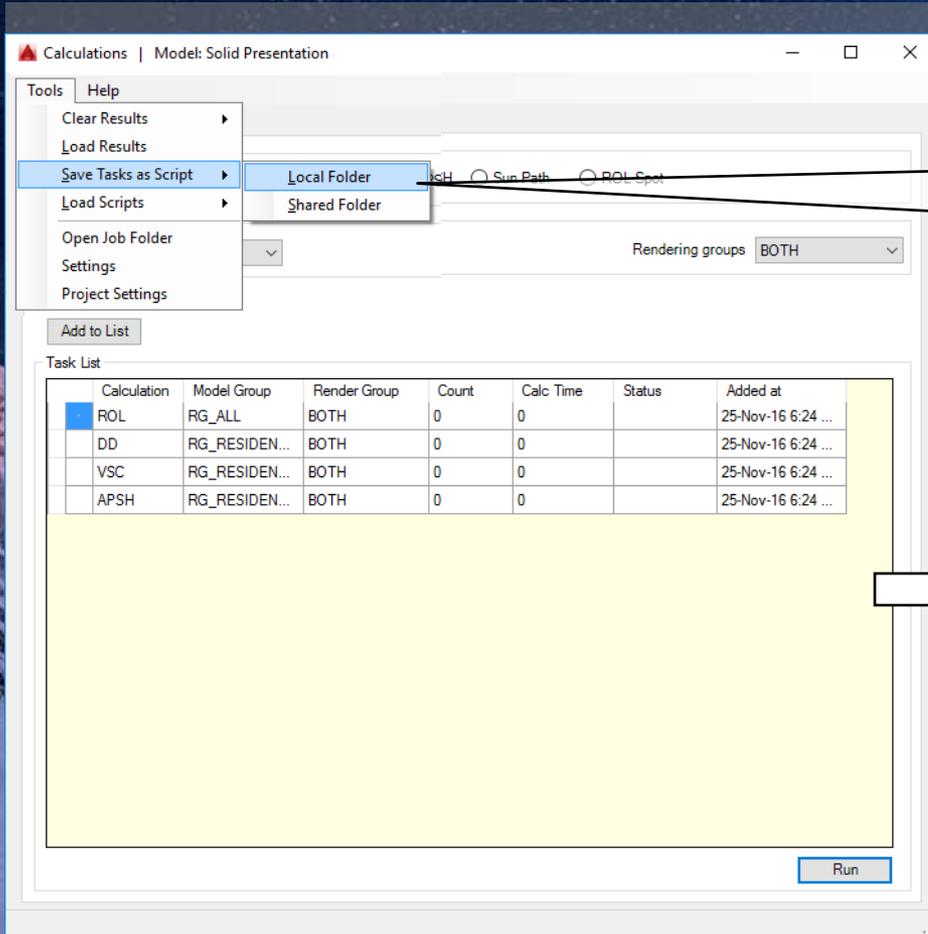
8. Auto Create Proposed Group



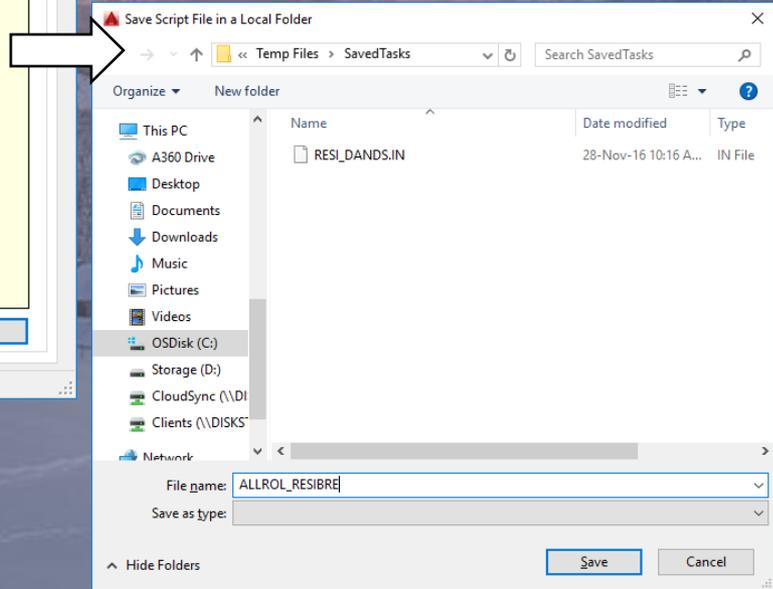
Automatically creates the PROPOSED group from the entities on the "3d_Proposed_Buildings" Layer before converting. This is mainly to help with cutbacks



9a. Save Script



The task list can now be saved as a script. They can be stored either in a local directory (user) or a shared folder (shared/network), allowing task lists to be shared company wide



9a. Load Scripts



The task list can be loaded from a script file and run

File name: ALLROL_RESIBRE.IN

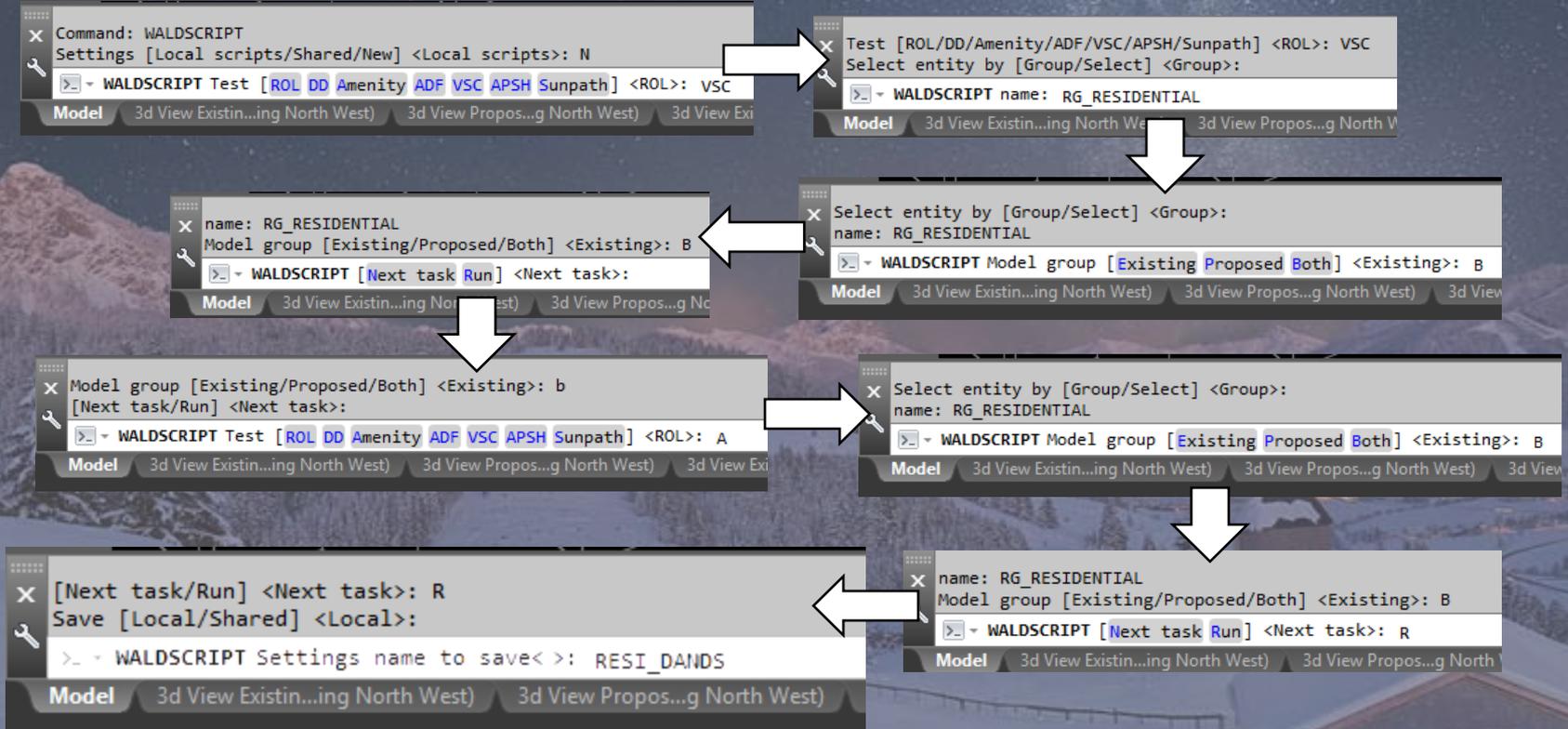
Calculation	Model Group	Render Group	Count	Calc Time	Status	Added at
ROL	RG_ALL	BOTH	0	0		25-Nov-16 6:24 ...
DD	RG_RESIDEN...	BOTH	0	0		25-Nov-16 6:24 ...
VSC	RG_RESIDEN...	BOTH	0	0		25-Nov-16 6:24 ...
APSH	RG_RESIDEN...	BOTH	0	0		25-Nov-16 6:24 ...



10a. WALDSCRIPT – New



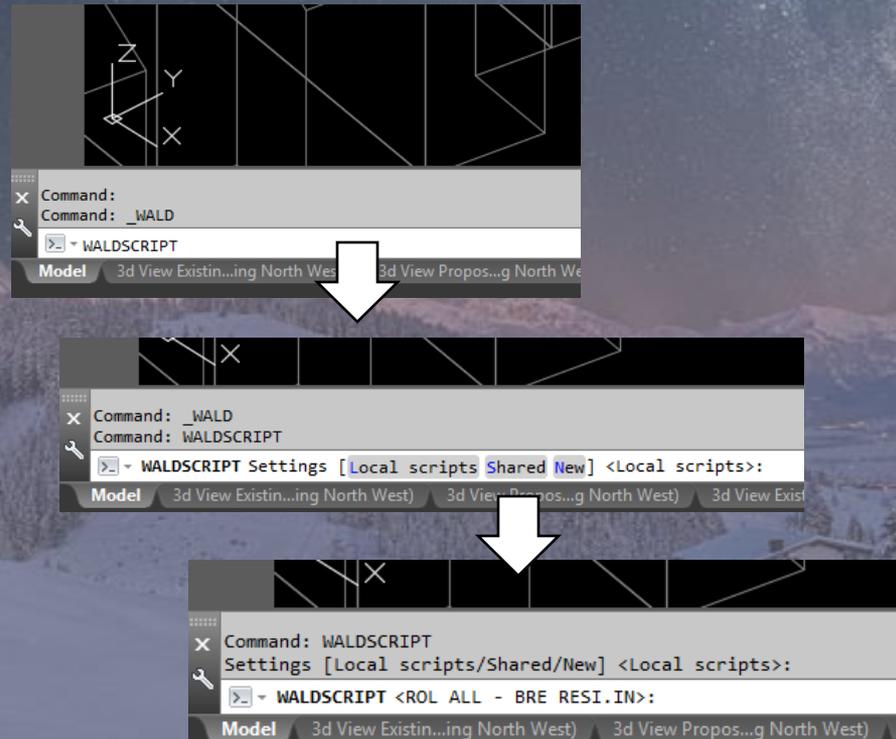
Using “WALDSCRIPT” Task lists can also be created and run from the command line.



10b. WALDSCRIPT – Load/Run



Using “WALDSCRIPT” Task lists can also be loaded and run from the command line.



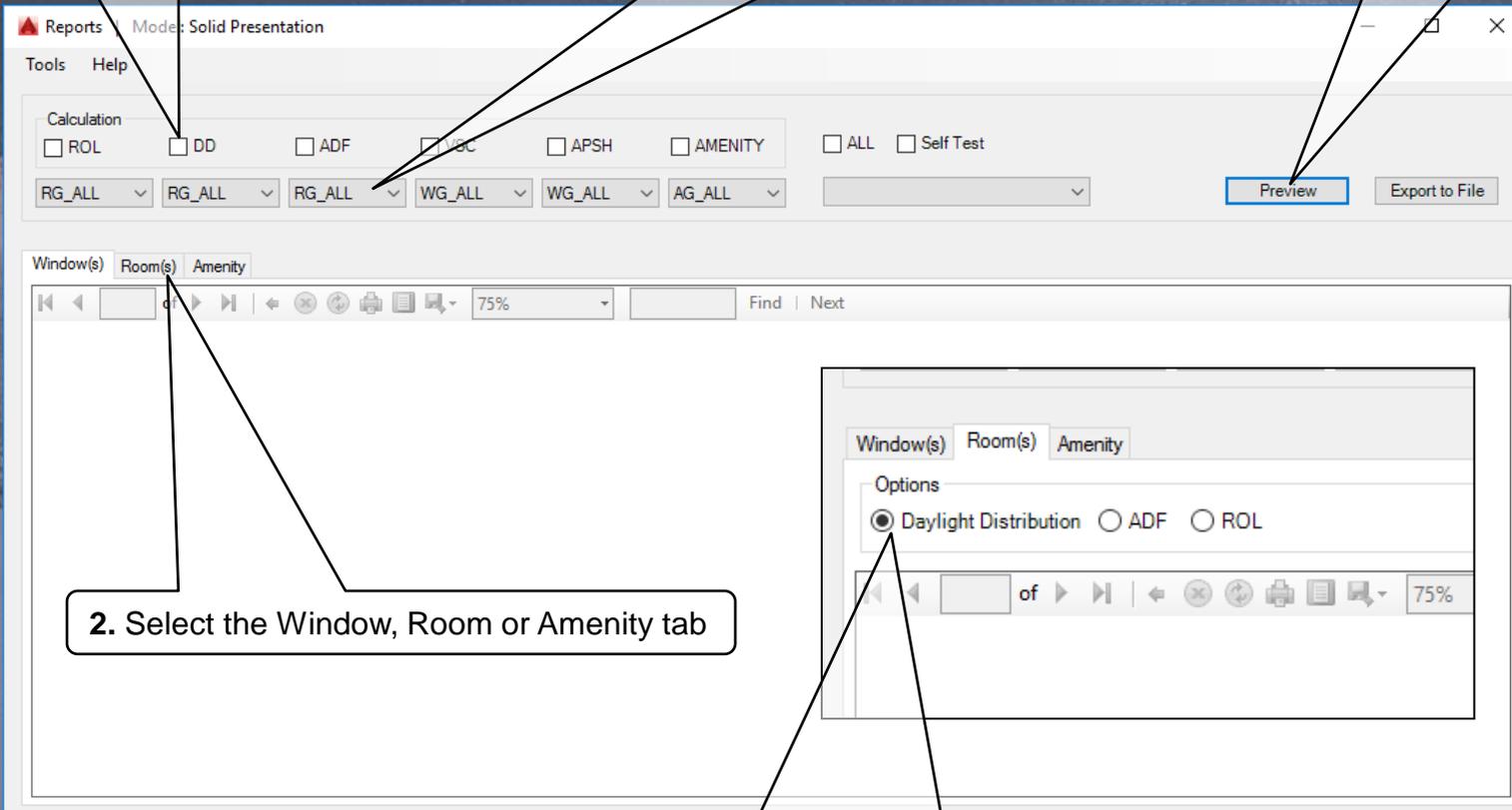
11a. Report - Preview



The tick boxes are only used to export, not to preview

1. Either use a group or use select. If select is picked, you are then asked to pick the items in model space

3. Finally Press Preview



2. Select the Window, Room or Amenity tab

2. If Room is selected choose the Calculation to preview



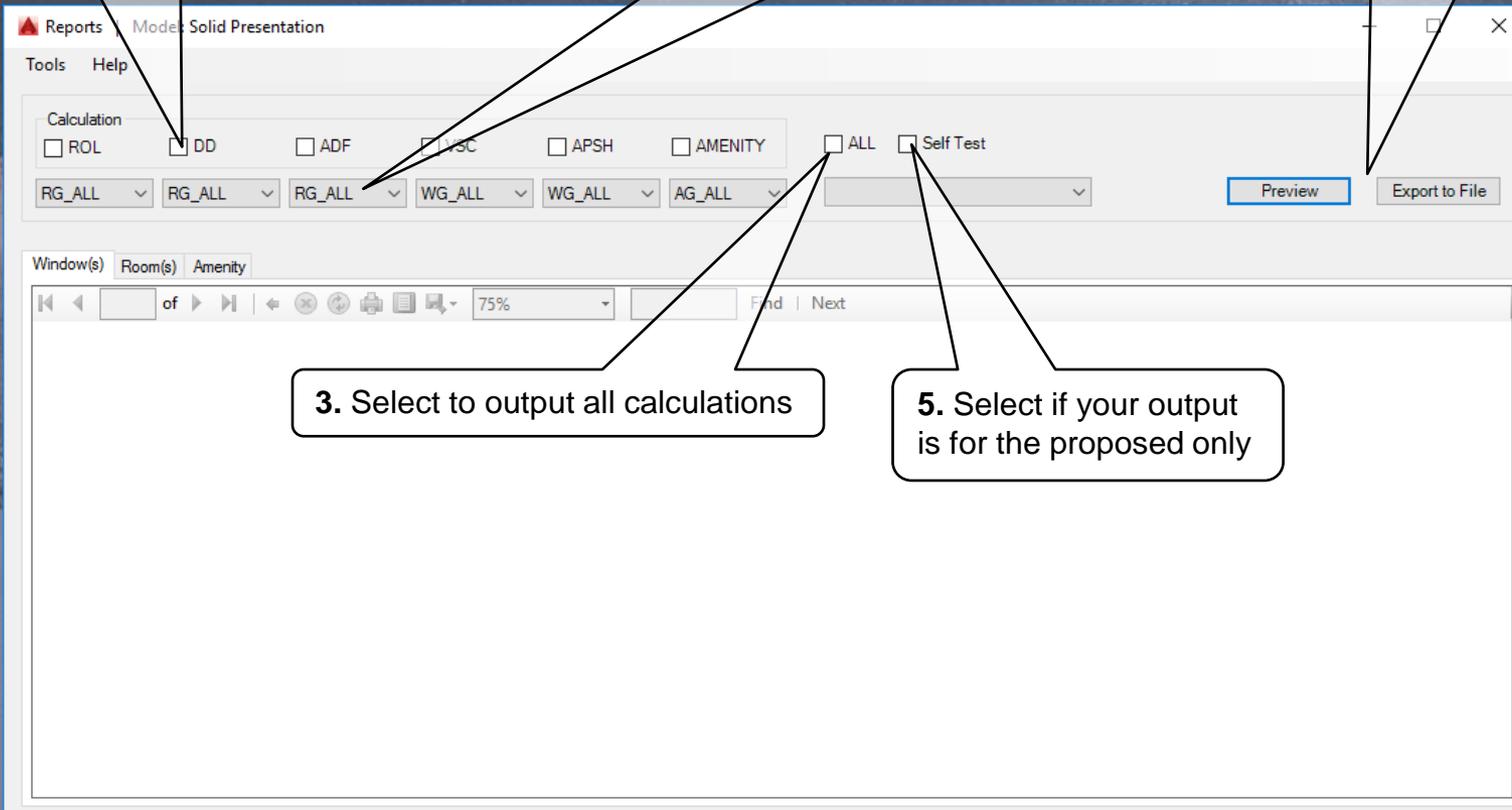
11b. Report - Export



1. Choose the calculations you want to export

2. Either use a group or use select. If select is picked you are then asked to pick the items in model space

4. Finally press preview



3. Select to output all calculations

5. Select if your output is for the proposed only



12. Bug Fixes



1. ADF calculation when window is completely below working plane height
2. Labels colour not set to ByLayer
3. Selecting windows from Label dialogue takes a long time
4. Self-intersecting room polyline checking
5. Column visibility checkboxes in User Settings->Report requiring double click to select
6. The building and floor name combo boxes not refreshing automatically after Recreating Text files
7. The building and floor name combo box changing values between Register and Update mode
8. Contour does not get drawn if the area is zero
9. Error on CSV report where ADF room "required value" displays wrong value
10. Error on CSV APSH if no room is in the model
11. The installer to be compatible with Windows 10 and the Latest Deskey version
12. Rooms with inclined windows that are split by working plane height gave incorrect contour
13. "Calc Room APSH" option adds 2 extra Excel rows for room APSH regardless
14. A broken link between the contours and the room when re-registering the room
 - This has been fixed by the room not getting deleted on re-registering
15. No warning if new version of windows has broken link to room
 - Warning message is given on preview/exporting the report
16. Amenity calculation uses default date if the date is not loaded from Xml. A warning is given now
17. Room sides getting divided evenly by the grid spacing size causing the Trig.exe exception



13. In the Basement



The Research & Development department has been very active recently and we hope to bring you some of the things being worked on in the new year. These include:-

- Working Plane Daylight Factor Contours. These are based on a backward ray tracing approach. At this point we are unsure as to whether this will be using our own Ray tracing engine or Radiance, or most likely both (optional).
- Facade Analysis for Daylight & Sunlight
- Allow multiple scenarios within the one drawing file with resulting contours being saved as Xrefs
- Incorporating the Building/Floor/Room/Window Lists into the package
- Hatching to distinguish between Loss & Gain
- Customisable Layer names for Model and polyline elements to give flexibility



13. Example Outputs

