

How to use the NZS 4218:2009 Calculation Method Tool

IMPORTANT: Data can only be entered into unshaded cells. Select options from the blue drop-down lists as appropriate.

- A. Set up the climate and building construction type:
 1. Go to the Project Summary worksheet.
 2. Enter the details of the project name, addresses, designer etc. (This is for your own information only.)
 3. Select the climate zone from the drop-down list.
 4. Select the wall construction type from the drop-down list.
 5. If mixed construction (wall construction type option 4) selected, enter the percentages of wall area (excluding glazing) of different types. The 'Any wall type' percentage is automatically calculated. For example, if the design has 20% wall area solid timber, 30% wall area high thermal mass and 50% other, type in '20' for solid timber and '30' for high thermal mass, and 50 is automatically calculated .
 6. If solid timber (wall construction type option 2) selected, choose the wall construction details from the drop-down list.
 7. If the wall construction R-values are all the same and the door construction R-values are the same, enter 'yes' in the drop-down list, otherwise leave as 'no'.

- B. Enter the areas and construction R-values for all building elements:
 1. Go to the Building Elements worksheet.
 2. Enter details for roofs/ceilings, skylights, walls, floors, vertical glazing and doors. (See NZS 4218:2009 for the definitions and measurement details of these building element areas.) For each building element, in the appropriate section:
 - Enter a description for each part of the building element.
 - For each part of the building element, enter the area.
 - For each part of the building element, enter the construction R-value –a message is displayed if the R-value is too low. (Different parts of the same building element with the same construction R-value may be combined into one area.)
 3. Check that:
 - all parts of building elements are entered
 - the individual and total areas match the plans
 - the R-values are reasonable.

- C. Check the Project Summary :
 1. Go to the Project Summary worksheet.
 2. Check that the climate zone and wall construction type options are correct.
 3. Check that the design has $\leq 40\%$ glazing.
 4. Check that the minimum R-values are not too low.
 5. Check that the design passes. (For wall construction type options 2, 3 and 4, a provisional pass may result as there are some issues that must be checked by the designer and BCA.)

- D. Save a copy of the spreadsheet for your design documentation –change the file name as Appropriate, making sure the extension is .xlsx

- E. Print a copy of the spreadsheet for your consent documentation. Supply all printed sheets with the consent so everything can be checked and include any relevant supplementary information