SMART 2022 ESTIMATOR

SMART SCAFFOLDER

SCHEDULE IT
USER GUIDE

Version: 2022.0

CADS

AUTODESK. Authorised Developer

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Gold Application Development

Contents

Introduction

Thank you for choosing SMART Estimator.

SMART Estimator **Schedule IT** is a rapid keyboard-based data entry tool for quickly scheduling scaffolding from a schedule or site plan.

Item Name	Scaffolding System
Plot A	Tube and Fitting (Tube and Fitting)
Plot B	Tube and Fitting (Tube and Fitting)

No	Item	Scaffold Type	Scaffold Name	Elevation Na...	Qualification	Length	Height	Width	Addons
Change values here to change all rows									
Plot B									
2.1	Plot B	Independent	Shop front indepen...	Elevation 1	(No Qualification)	10.00m	4 m: 2 lifts...	5 boards	1 add-on
2.2	Plot B	Independent	Shop front indepen...	Elevation 2	Bridging front entrance	10.00m	4 m: 2 lifts...	5 boards	1 add-on
2.3	Plot B	Independent	Shop front indepen...	Elevation 3	(No Qualification)	10.00m	4 m: 2 lifts...	5 boards	1 add-on

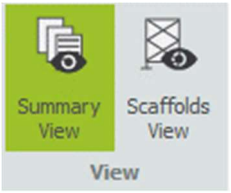
SMART Estimator **Schedule IT** now supports tube-and-fitting scaffolding and system scaffolding, with the present version supporting the Cuplok, Kwikstage, Layher Allround, Plettac Metrix, Turner OCTO, HAKI Universal and Frame Scaffolding systems.

Create a new project

Please see the **Getting Started Guide** for instructions on how to create a new project.

Navigating the views

There are two views in SMART Estimator **Schedule IT**:



- Summary View

This view, which is shown by default, lists the items in the project, including the quantity and system for each item. Changing properties in this view will affect all of the scaffolds in the changed item.

- Scaffolds View

This view shows the details of every scaffold in the item, including dimensions and add-on details. Changing properties in this view will only effect the scaffolds that are changed.

Switch view

You can switch between the views by pressing the appropriate button. The view will also change automatically when certain actions are performed.

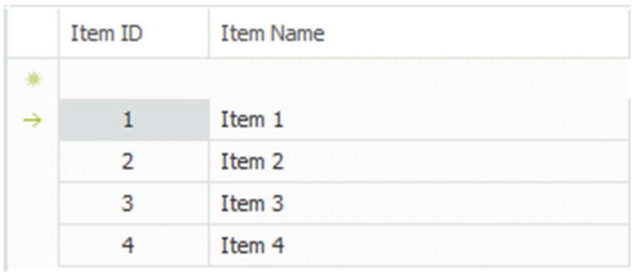
Set the item details

On the **Summary View**, you can change the quantity and type of work being estimated for each item. Use **Ctrl** with the arrow keys to change drop-down values.

Use **Tab** to navigate between cells in the table. When you tab to the end of the final item, the view will change to the **Scaffolds** view automatically.

Set the item ID

The **Item ID** column is a simple way to number your items. The numbers entered here can be set to appear in the quotation letter.



	Item ID	Item Name
*		
→	1	Item 1
	2	Item 2
	3	Item 3
	4	Item 4

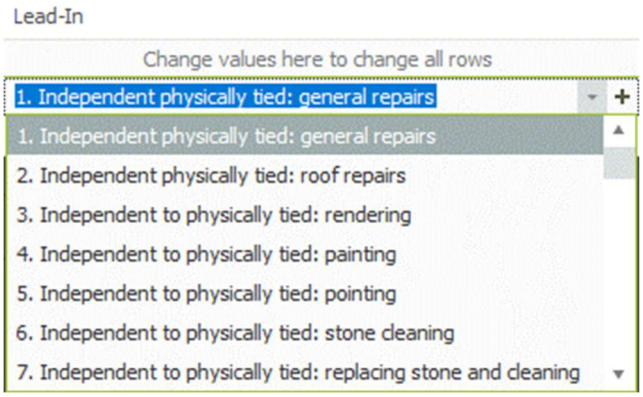
This column is handy for **variation quotes**. For example, you may want the first item to set the first item as “6”, the second as “7”, etc.

This column is not limited to numbers. You can enter “7a” for example.

Create a list of lead-in descriptions

You can select a **lead-in description**, which will appear in the quote from the **Lead-In** column.

Press the plus (**+**) button to add a new item permanently to this list.



Set the hire period

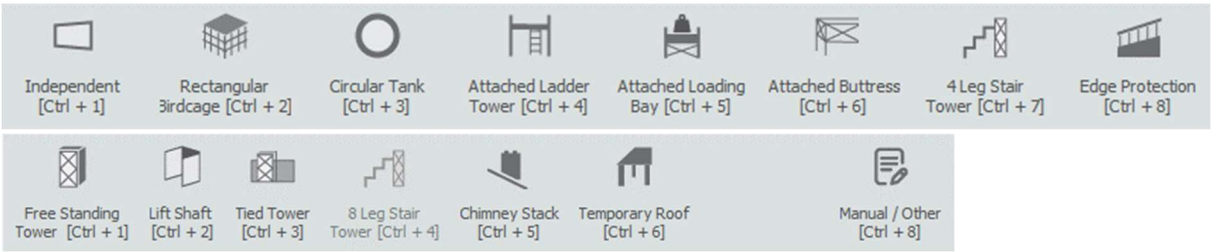
You can set a **hire period**, which is used for pricing and on the quotation.

Adaption	Re-adaption	Hire Period
Not adapted	Not re-adapted	4 weeks
Not adapted	Not re-adapted	4 weeks
Not adapted	Not re-adapted	4 weeks
Not adapted	Not re-adapted	4 weeks

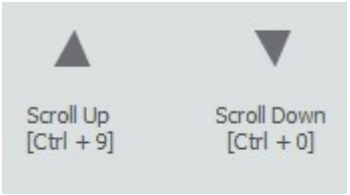
You may need to scroll the grid to the right to find this column.

Creating Scaffolds

You can create scaffolds by clicking on the scaffold buttons in the ribbon:



To switch between the lists of scaffold types, use the **Scroll Up** and **Scroll Down** buttons.



Depending on which scaffolding system licences you have bought, the scaffold will be created as either a tube-and-fitting scaffold or a system scaffold.

1.1	Item 1	Tube and Fitting: UK	Independent	Independent 1	Elevation 1	10.00m

You can create a scaffold without using the mouse by pressing the key combination that matches that button. For example pressing the **Ctrl** and **1** keys at the same time creates a single elevation of independent scaffolding.

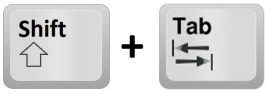
Navigating the grid

Move forwards

You can move to the next box by using the **Tab** key. This will apply the selected value before moving on.

Move backwards

In the rare circumstance where you need to move backwards, press the **Shift** and **Tab** keys at the same time.



Change a value in the grid

Text

To change a text value, type the new value and then press **Enter**.

Number

To set a number, either type it or use the up and down arrow buttons to change the value, then press **Enter**.

Tick box

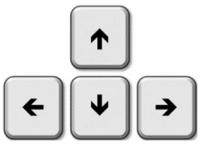
To tick or un-tick a tick box (sometimes called a checkbox), press **Enter** or **Spacebar**.
Note that some tick boxes cannot be unticked.

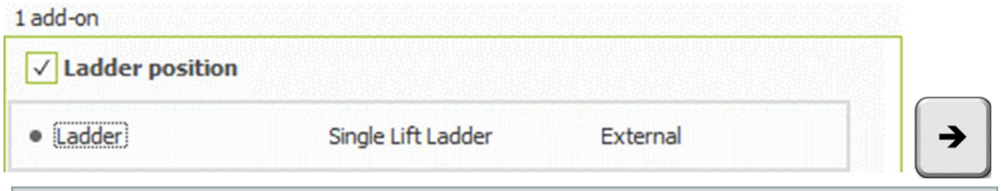
Button

To press a button, press **Enter**.

Multiple choice

To change the value in a multiple-choice group (sometimes called a radio group), use the **arrow** keys to move between the options.





You could change the ladder type to **External** by using the **right arrow**.

Edit the scaffold details

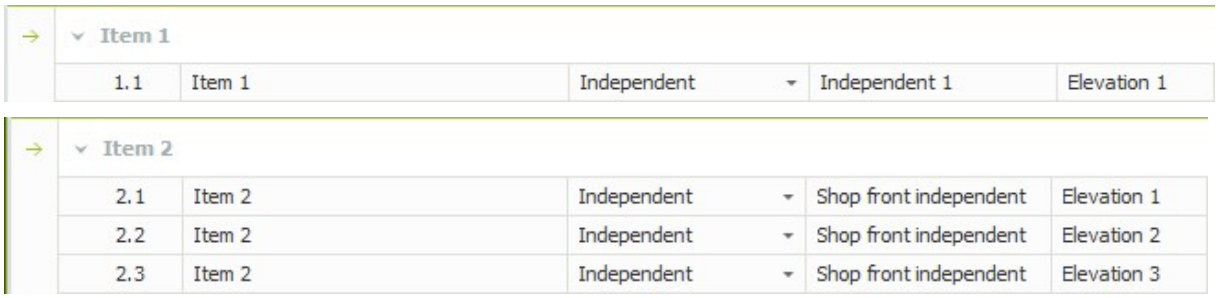
You can change the details of the scaffold by changing the options in the grid. Some examples of this are listed below:

You can change the value in a checkbox by selecting it and pressing the **Spacebar**.

You can change the value in a number editor by pressing **Ctrl** and **Up** or **Ctrl** and **Down**.

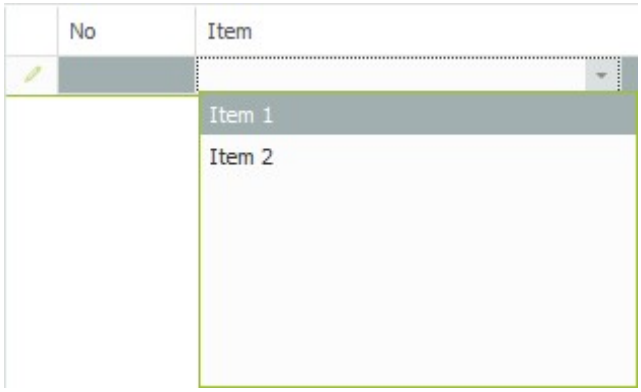
Change the scaffold number

The **No** column is an easy way to keep track of the scaffolds in your project. It is automatically set to the project's item number followed by the scaffold's number. For example, the 2nd scaffold in item 3 is automatically numbered "3.2".



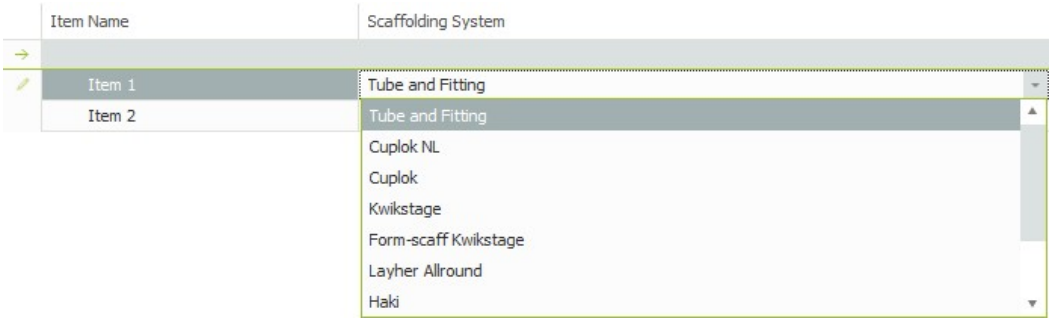
Item 1				
1.1	Item 1	Independent	Independent 1	Elevation 1
Item 2				
2.1	Item 2	Independent	Shop front independent	Elevation 1
2.2	Item 2	Independent	Shop front independent	Elevation 2
2.3	Item 2	Independent	Shop front independent	Elevation 3

Change the scaffold's item



If you click on the item drop-down for a scaffold, you can choose which project item it belongs to. This will move the scaffold in the **Project Browser**. For example, if you move a scaffold to an empty item, the project browser thumbnail will change to show a scaffold.

Change the scaffolding system



This drop-down list has an option for every scaffolding system which you have licensed.

The available scaffolding systems are determined by the system modules available on your licence.

Please contact CADS if you would like to activate any additional modules or if you would like more information about the modules that are available.

Why can't I change the value in some columns?

Some columns are specific to certain scaffold types. For instance, the **Tank diameter** and **Tank circumference** are only used for circular tank scaffolds.

Scaffold Name	Elevation Name	Qualification	Length	Tank Diameter	Tank Circumference
Independent 1	Elevation 1	(No Qualification)	10.00m		
Independent 1	Elevation 2	(No Qualification)	10.00m		
Circular tank 1		(No Qualification)		10.00m	31.42m

If a column does not apply to a particular scaffold, it is shown in a different colour. The values in these boxes cannot be changed.

Changing a value for all items

You can use the top row of the grid to change a column value for every scaffold in the project.

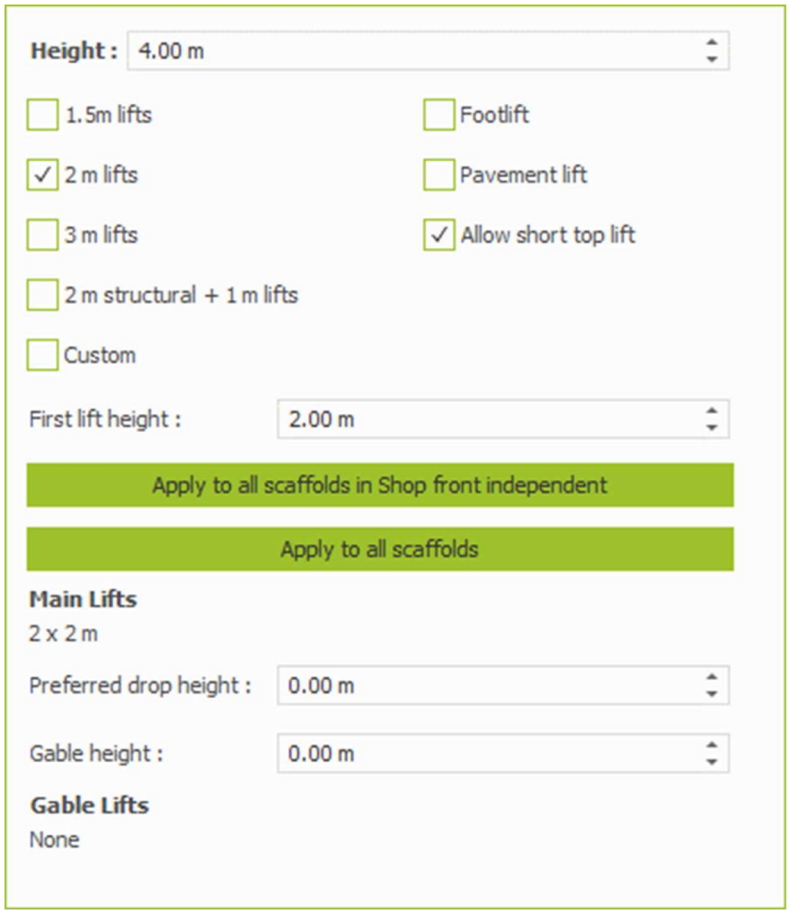
No	Item	Scaffold Type	Scaffold Name
			Building Name
Item 2			
2.1	Item 2	Independent	Building Name
2.2	Item 2	Independent	Building Name
2.3	Item 2	Circular Tank	Building Name

Some scaffolds might not be affected by this change.

For example, if you change the **Tank diameter** in the top row, it will only affect circular tank scaffolds. This is because **Tank diameter** only applies to circular tank scaffolds.

Editing the lift heights

Lift heights can be edited from the **Height** column:



Set the scaffold height

Set the height of the scaffold in the **Height** box.

Try it!

Create an independent and set the **Height** to 5.00m.

SMART Estimator creates 2 x 2m lifts + 1 x 1m lift.

Main Lifts
2 x 2 m; 1 x 1 m

Set the lift heights

Choose from:

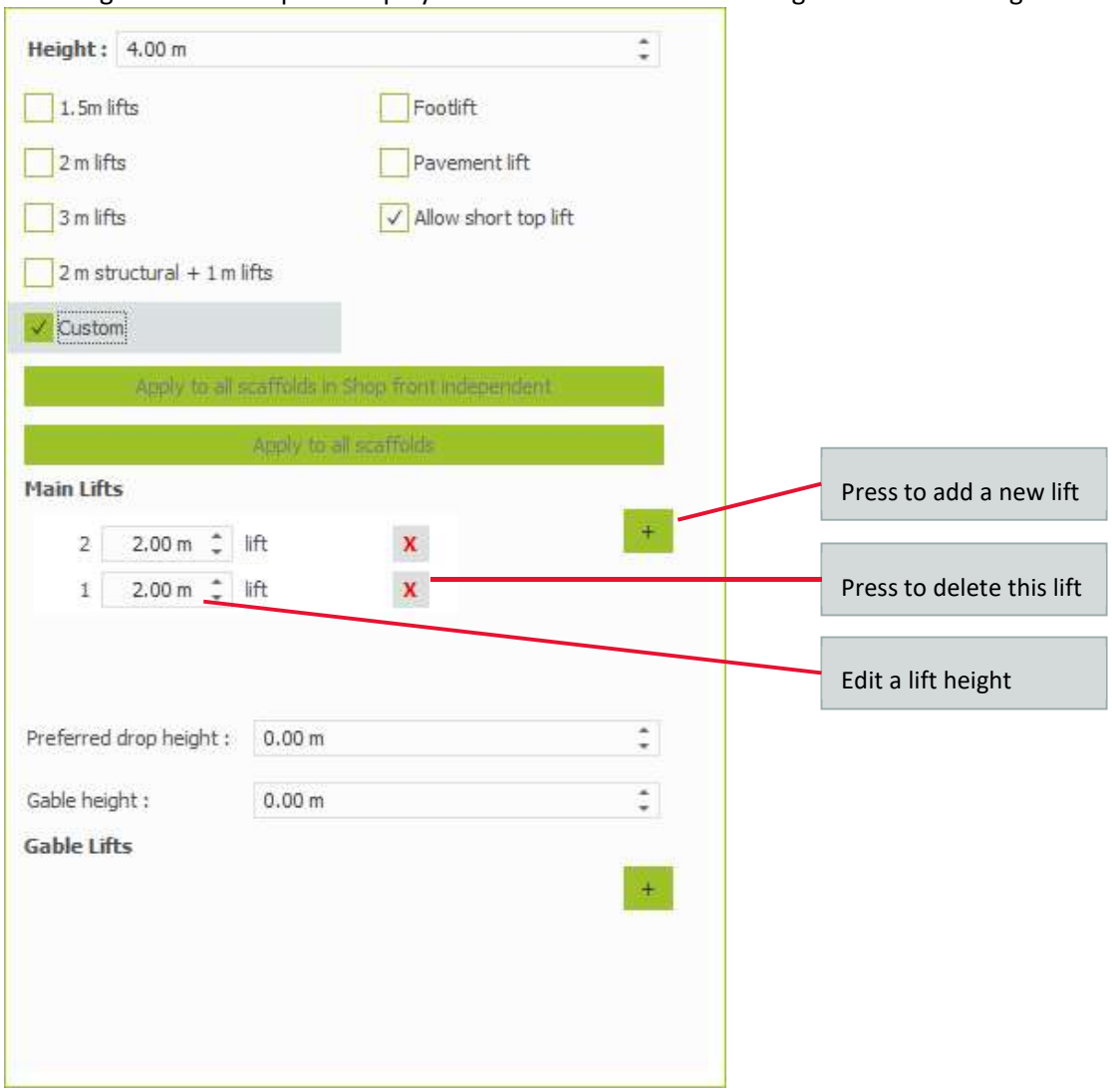
- 1.5m lifts
- 2m lifts
- 3m lifts
- 2m structural + 1m

  All lifts are 3m, but with a structural lift inserted at the 2m position.
- Custom

  Set the lift heights manually (see below).

Custom

Choosing the **Custom** option displays some new controls for setting individual lift heights:



Adding too many lifts

If the total height of your custom lifts exceeds the available space, a warning will appear:

You can correct this by removing lifts or changing lift heights.

If you do not correct this and you leave the **Height** column, SMART Estimator will automatically increase the height to make room for these lifts.

Choose other lift options

- Foot lift

  Only available for scaffolds and scaffolding systems that allow a foot lift. Some scaffolds (usually stair towers) **must** have a foot lift, so this option cannot be un-ticked.

- Pavement lift

  Tube and Fitting only: Adds a 2.70m high first lift and removes ledger bracing from that first lift.

- Allow short top lift

  Use this option to allow the top lift to place the top lift at the scaffold height, even if the lift must be shorter to achieve this.

Try it!

Create an independent and set the **Height** to 5.00m.

SMART Estimator creates 2 x 2m lifts + 1 x 1m lift.

Main Lifts
2 x 2 m; 1 x 1 m

Now un-tick the **Allow short top lift** option

SMART Estimator creates 2 x 2m lifts.

Main Lifts
2 x 2 m

Set the Preferred drop height

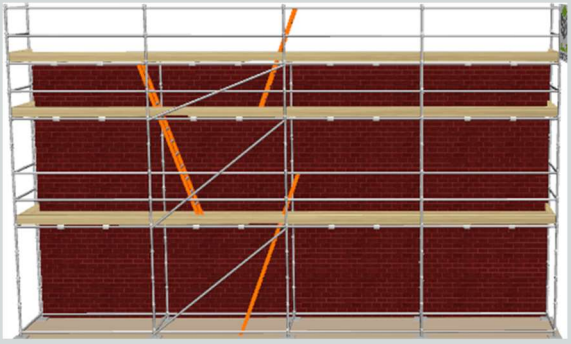
The **Preferred drop height** is an amount which you can set to specify how much of the top of the elevation does not require scaffolding.

You can increase this value to remove lifts from the top of the scaffold.

Try it!

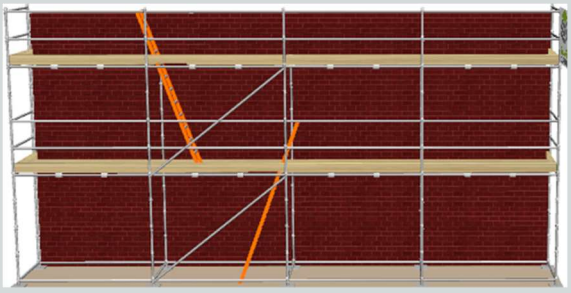
Create an independent and set the **Absolute Height** to 5.00m.

SMART Estimator creates 2 x 2m lifts + 1 x 1m lift.



Now set the **Preferred Drop Height** to 1.00m.

The 1m top lift is removed, leaving 2 x 2m lifts.

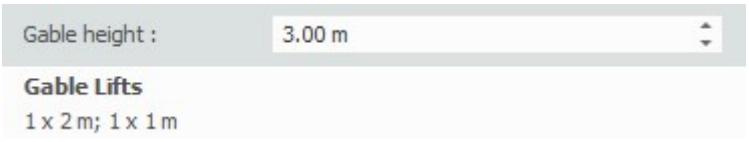


Now set the **Preferred Drop Height** to 3.00m.

The 2m top lift is removed, leaving 1 x 2m lifts.

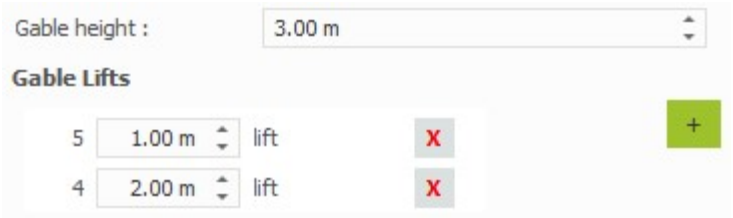
Set the gable height

For scaffold types that allow gables, the **Gable height** can be set.



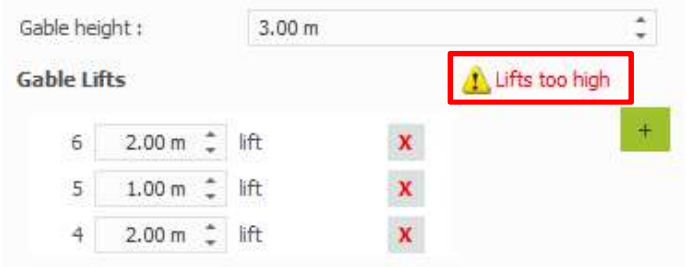
Gable lift heights are calculated in the same way as main lift heights.

When the **Custom** lift height option is set, gable lifts can be edited individually:



Adding too many lifts

If the total height of your custom gable lifts exceeds the available space, a warning will appear:

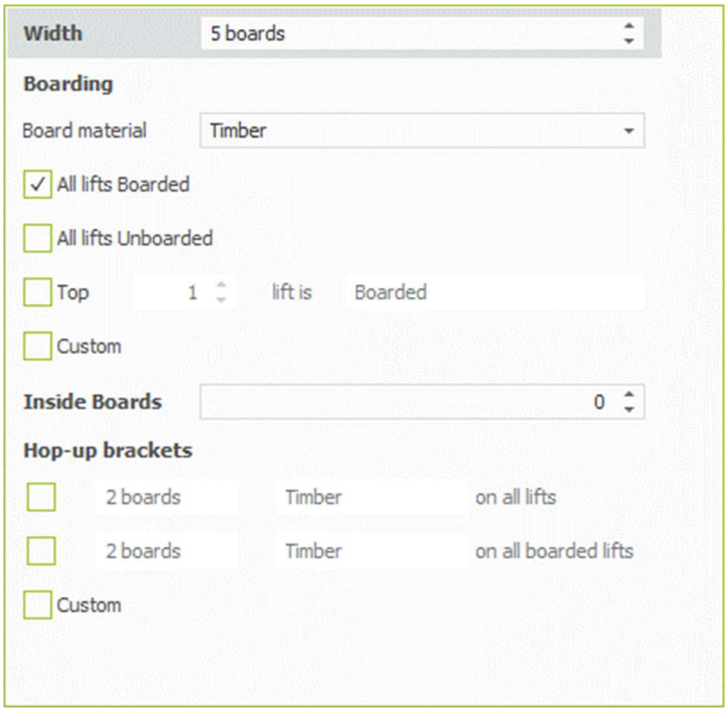


You can correct this by removing lifts or changing lift heights.

If you do not correct this and you leave the **Height** column, SMART Estimator will automatically increase the **Gable height** to make room for these lifts.

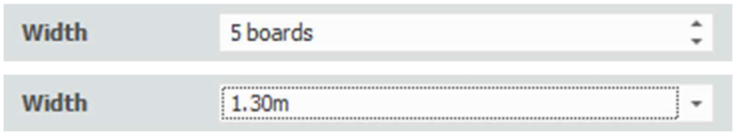
Editing the boards

Decking/board details can be set from the **Width** column:



Set the scaffold width

Set the width of the scaffold in the **Width** box.
This will either show the width in boards or as a length, depending on your scaffolding system:



Set the board material

Set the board (deck) material from the **Board material** box.

Set which lifts are boarded

To set which lifts should be boarded (decked), choose from:

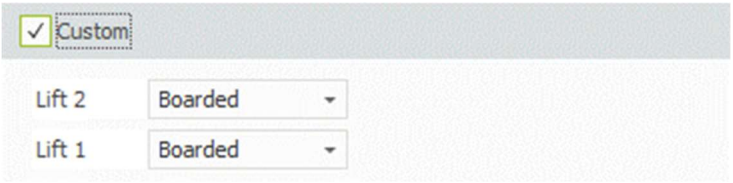
- All lifts boarded
- All lifts un-boarded
- The top **x** lifts boarded or un-boarded

  Set the number of lifts from the top which are boarded or un-boarded. The remaining lifts will be the opposite.
- Custom

  Set which lifts are boarded manually (see below).

Custom

Choosing the **Custom** option displays some new controls for setting which lifts are boarded:

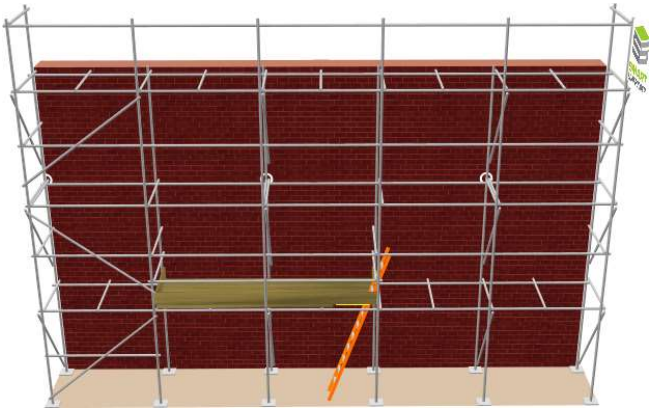


You can choose from:

- Boarded
- Un-boarded
- Structural

  This is the same as un-boarded, plus all intermediate transoms are removed from the lift. Also, structural lifts can be priced separately if you have the **Price IT** module.
- Landing

  Boards (decks) and guardrails are placed in one (or sometimes two) bay(s) to allow a ladder landing on this lift. If there are no ladders on this elevation, no landing will be created.



Lift 3 is **un-boarded**

Lift 2 is **structural**

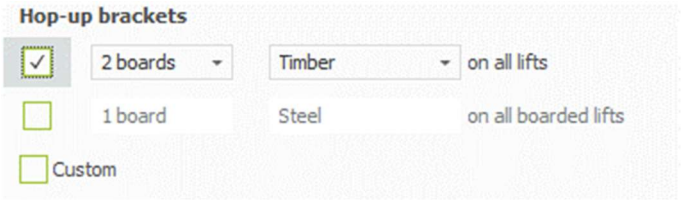
Lift 3 includes a **landing**

Set the number of inside boards

For scaffold types and systems that allow inside boards, the **Inside boards** can be set.

Add hop-up brackets

For scaffold types that allow cantilever hop-up brackets, these can be set.



Choose from:

- Adding brackets to all lifts

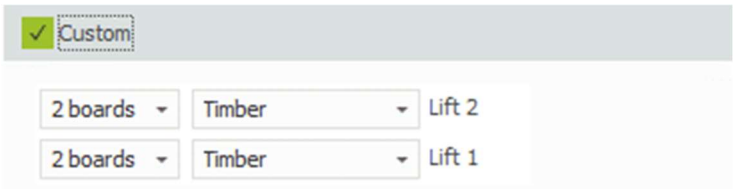
  Specify the bracket size and type.
- Adding brackets only to boarded lifts

  Specify the bracket size and type.
- Custom

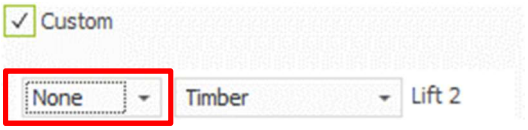
  Set the hop-ups manually (see below).

Custom

Choosing the **Custom** option displays some new controls for setting the hop-up brackets:

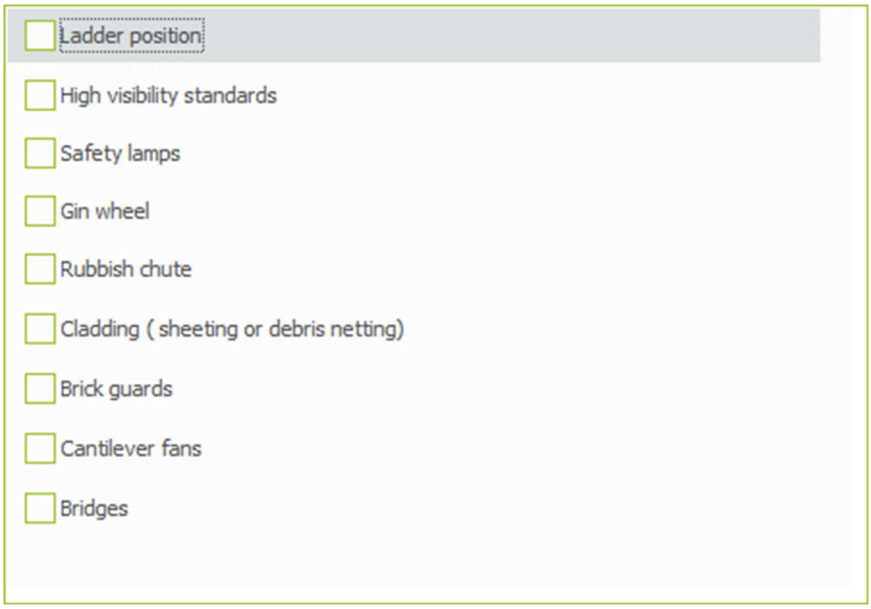


You can set the hop-up bracket size and type here.
To remove the brackets from a lift, set the size to **None**:



Editing the add-ons

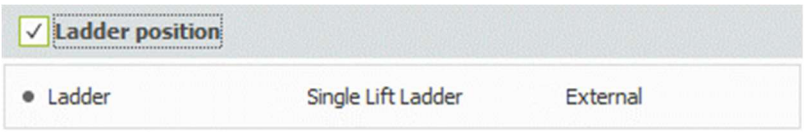
Add-ons can be set from the **Add-ons** column:



To select an add-on, tick the box using the **Enter** key.

Add a ladder position

Tick **Ladder position** to create a single column of ladders. The ladder types available vary by scaffolding system:



- Ladder

  The default ladder type for **Tube and Fitting** independent scaffolds. This ladder may span multiple lifts.

- Single lift ladder

  This ladder type can only span a single lift.

- External ladder

  This ladder type includes a safety gate at the first lift.

- Vertical ladder

  The default ladder type for **Frame Scaffolding**, used in the USA.

Multiple ladder positions can be added to the same elevation using the **Model IT** module.

Add high-visibility standards

Tick **High-visibility standards** to add high-visibility tape or foam to the standards below the first lift.

Add safety lamps

Tick **Safety lamps** to add safety lamps below the first lift.

Add a gin wheel

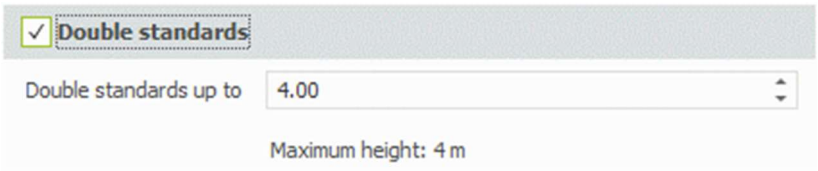
Tick **Gin wheel** to add a single gin wheel (used for lifting materials) to the top lift.

Add a rubbish chute

Tick **Rubbish chute** to add a single rubbish chute from the top lift to the ground.

Add double standards

Tick **Double standards** to add double standards. This reveals new controls for setting the height that double standards are required to. This is sometimes required for TG20:13 compliance. You can check this using the **Check IT TG20:13** module.

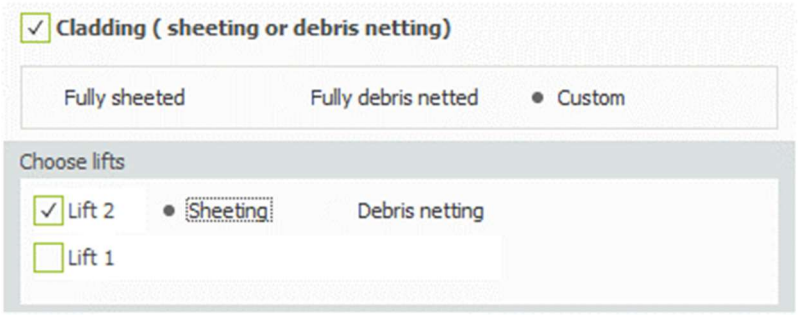


Add sheeting or debris netting

Tick **Cladding** to add sheeting or debris netting. This reveals new controls for setting the cladding:

Choose **Fully sheeted** or **Fully debris netted** to add cladding to all lifts.

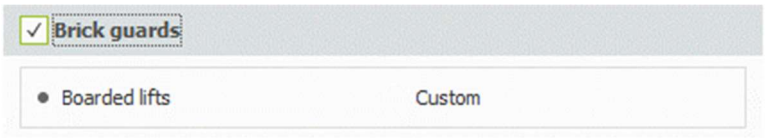
Choosing **Custom** allows further customisation:



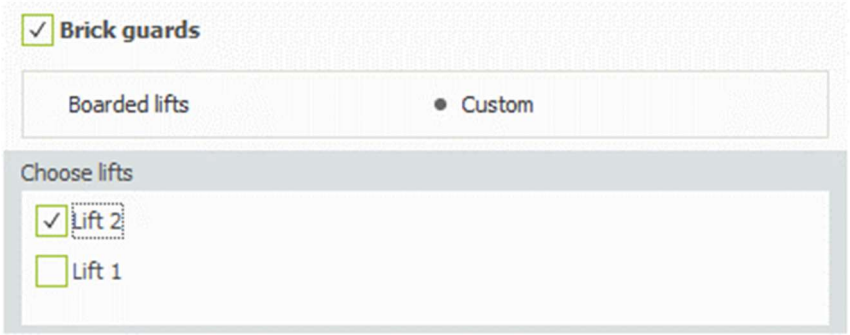
Tick a lift to add cladding, then select the cladding type.

Add brick guards

Tick **Brick guards** to add brick guards. This reveals new controls for setting which lifts have brick guards:



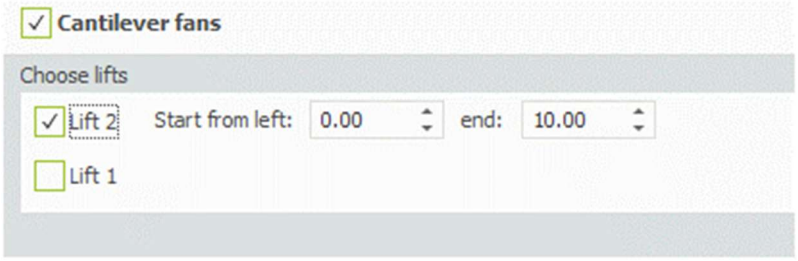
Choosing **Custom** allows you to select which lifts have brick guards:



Add a cantilever fan

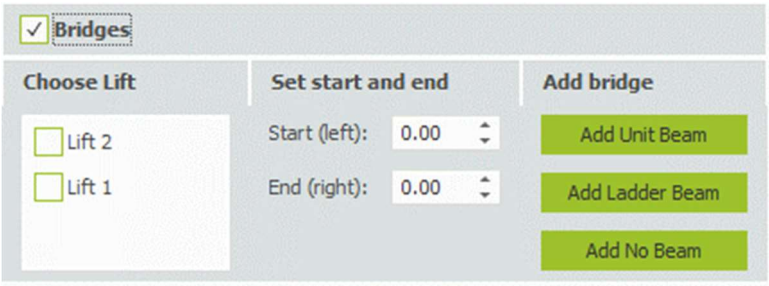
Tick **Cantilever fans** to show the controls for adding a cantilever protection fan.

First choose which lift should have the fan. By default it will run the full length of the lift. To leave a gap in the fan at the left or right end, set the **Start from left** and **end** position:



Add a bridge

Tick **Bridges** to show the controls for adding bridges to the scaffold:



Choose the lift, the **Start (left)**, the **End (right)** position, then select a button to add a bridge of that type. Bridges are listed above the add controls:

- The types of bridge available depends on the scaffolding system.
- It is possible to add multiple bridges to the same lift, but they must be separated horizontally by a clear bay.
- If you place a large bridge above a small bridge, the small bridge may be removed.
- Occasionally attached scaffolds, add-ons and ground conditions might prevent you from adding a bridge.

Other editing features

Selecting scaffolds

You can select a scaffold by clicking on that row. It is normally easiest to select a row by clicking on the **Row Selector** on the far left.

To select multiple rows, hold the **Ctrl** key down while you click on each scaffold.

To select a set of scaffolds which are together, hold the **Shift** key and click the first scaffold, followed by the last scaffold.

Deleting scaffolds

To delete a scaffold, select it by clicking on the row:

Then press the **Delete Scaffold** button in the toolbar.

You can delete a scaffold without using the mouse by pressing the **Ctrl** and **Del** keys at the same time.

Copying and pasting scaffolds

To copy a scaffold, first select it by clicking on the row:

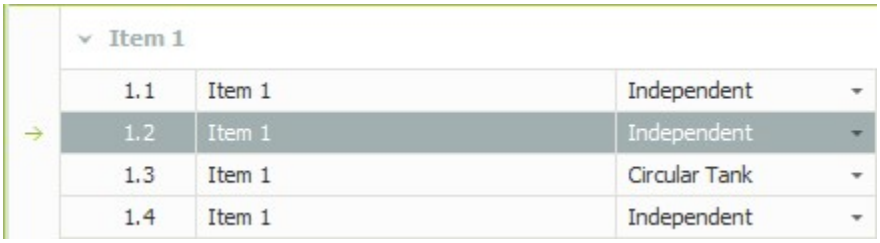
Then press the **Copy Selected Scaffolds** button in the toolbar.

You can copy the selected scaffolds by pressing the **Ctrl** and **C** keys at the same time.

To paste the scaffold, first make sure that the grid is selected, then press the **Paste Scaffolds** button in the toolbar.

You can paste the selected scaffolds by pressing the **Ctrl** and **V** keys at the same time.

The scaffolds are then added to the grid:



Chimney stacks and temporary roofs

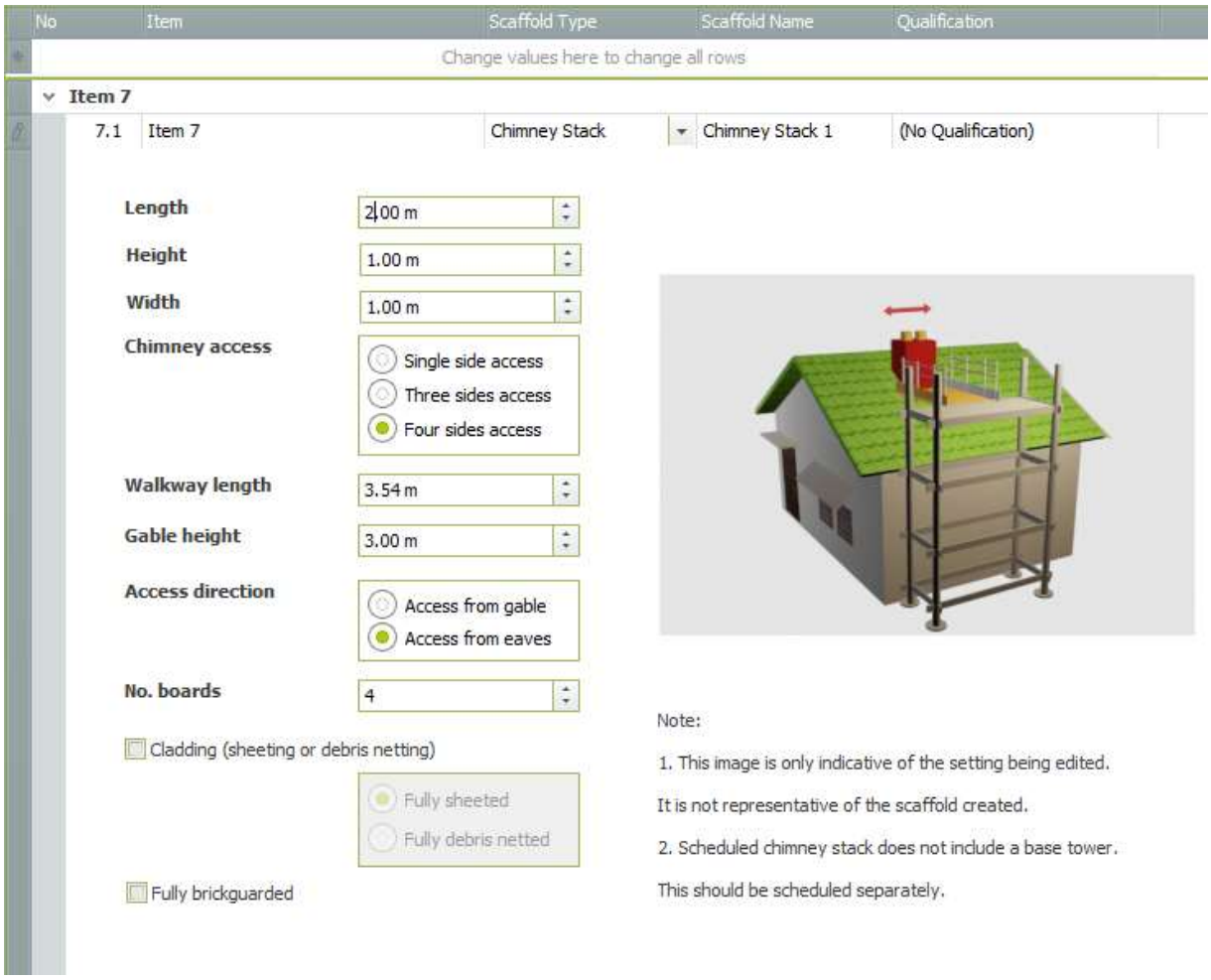
Chimney stacks and temporary roofs are complex, 3D scaffolds. They are scheduled a little differently from other scaffold types.

Chimney stacks and temporary roofs are only available for the **Tube and Fitting** scaffolding system.

Please contact the SMART Estimator sales team if you would like to activate any additional systems or modules or if you would like more information about the modules that are available.

Chimney stack

After selecting a chimney stack row, some extra options will appear:



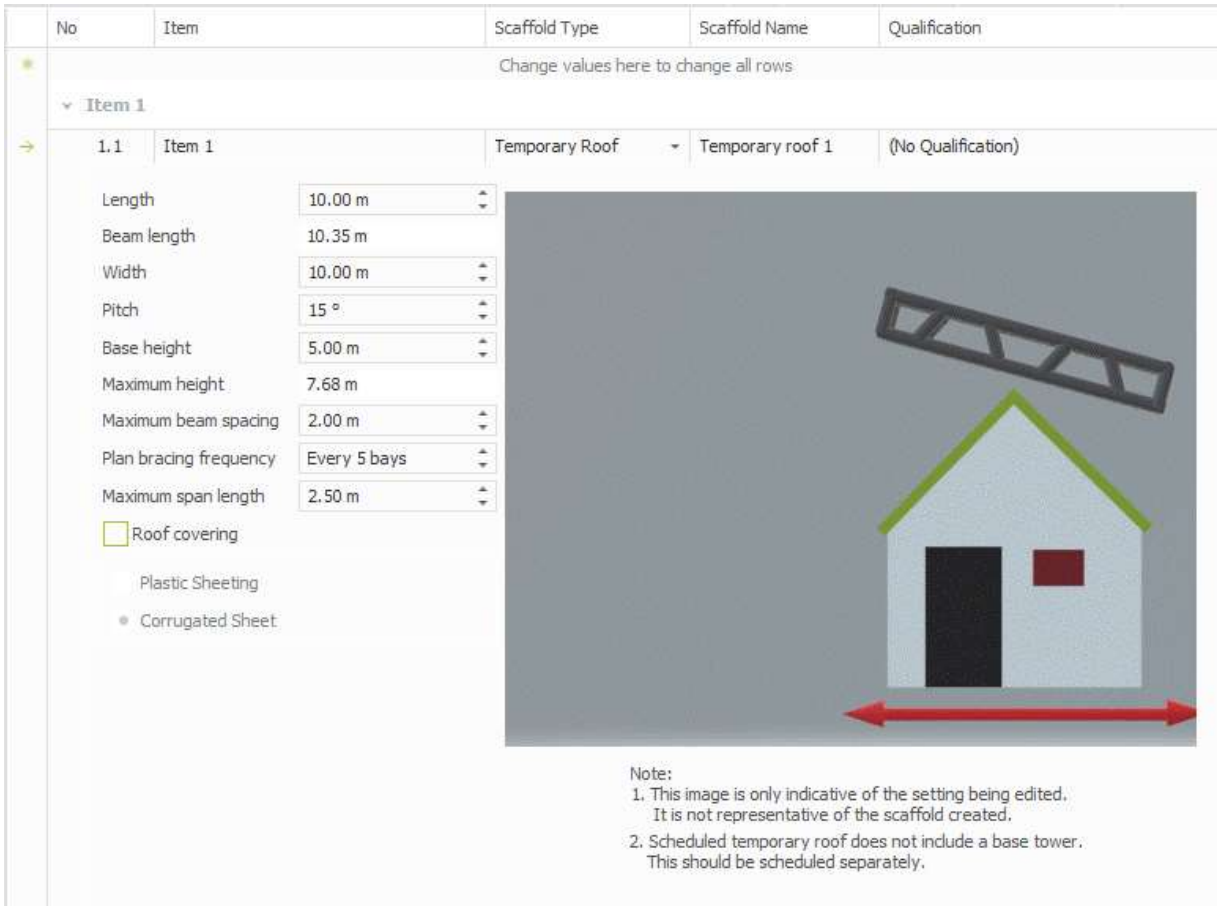
The properties available are:

Property	Description
Length	Length of the building's chimney stack. **Not** the length of the scaffold.
Height	Height of the building's chimney stack. **Not** the height of the scaffold.
Width	Width of the building's chimney stack. **Not** the width of the scaffold.
Chimney access	▶ Single side access Use the minimum scaffolding to access only the nearest face of the chimney stack. ▶ Three side access Scaffold to access the nearest face and the two adjacent sides. ▶ Four side access Scaffold all around the chimney stack. Note: for some dimensions of chimney stack scaffold it is not possible to access all of the sides you selected. SMART Estimator will automatically reduce the access as required.
Walkway length	The distance from the base tower (or independent) to the chimney stack.
Gable height	The height of the gable supporting the chimney stack.
Access direction	▶ Access from gable The base tower (or independent) is on the gable end. A walkway runs along the gable top to the chimney stack. ▶ Access from eaves The base tower (or independent) is on the eaves. A walkway runs up the slope of the roof to the chimney stack.
No. boards	Width of the chimney stack scaffold in boards.
Cladding	Select this option to add sheeting or debris netting.
Fully brickguarded	Select this option to add brick guards.

Remember, if you schedule a chimney stack scaffold, you should also schedule a base for it: usually a tied tower or an independent.

Temporary roof

After selecting a temporary roof row, some extra options will appear:



The properties available are:

Property	Description
Length	Horizontal length in the direction the beams run. **Not** the length of the sloped roof.
Beam length	The (sloped) length of the beams. Usually larger than **Length**. *Read only. To change this, edit **Length** and **Pitch**.*
Width	Horizontal width in the direction the beams do not run.
Pitch	How steeply the roof rises.
Base height	Height of the scaffold below the beams. Beams start at this height.
Maximum height	Height of the top of the beams. *Read only. To change this, edit **Base height** and **Pitch**.*
Maximum beam spacing	The largest gap allowed between beams. Beams may be closer than this, as beams are spaced evenly along the width.
Plan bracing frequency	How frequently bays are planned braced along the width (minimum).
Maximum span length	Maximum distance between ledgers along the beam length. Ledgers may be closer than this, as they are spaced evenly along the beam length.
Roof covering	Tick to add a covering over the top of the roof. Then choose the covering type.

Remember, if you schedule a temporary roof scaffold, you should also schedule a base for it: usually an independent.

Using the other SMART Estimator products

The best way to use the SMART Estimator products is to use them together. Every product is designed to enhance the rest of the suite.

SMART Estimator **Schedule IT** can be used with the rest of the SMART Estimator products:

Model IT

Use **Schedule IT** to quickly create a project full of scaffolds, and then use **Model IT** to lay the scaffolds out, create a quick set of quantities and create an image of the scaffold for presentation.

Report IT

Take your schedule of scaffolds and create instant reports of the components used, including the weight as well as technical drawings.

Price IT

Price the scheduled scaffolds using saved and fully customisable sets of rates, to rapidly estimate and check the pricing for the project.

Quote IT

Generate quotations for the project that are automatically updated as you change the details of the schedule.

BIM Toolbox

Create scaffolds more quickly, using information from an existing model, or export data from SMART Estimator to be used in other design software.

For more information about the other SMART Estimator products, please refer to their user guides, which are available from the Help tab.

Feedback

Thank you for choosing SMART Estimator.

We are always striving to improve the product so please contact us with your feedback. We are always keen to hear new ideas and if you experience any problems with the software, we want to hear about them so that they can be resolved.

You can contact us via:

- Our website support centre at www.smartscaffolder.com/support.html;
- Email on support@smartscaffolder.com;
- Telephone on +44 (0)1202 603733 from Monday to Friday between 09:30 and 17:00.