

# 2020 Fusion Version 5

## New Features & Functions Pocket Guide

### Introduction

Crossing several disciplines, the common theme of Version 5's feature set is improved user experience, speed and optimisation; this follows on directly from one of Version 4's goals to make the overall design process quicker and more intuitive.

The most significant enhancement to the application lies in the areas of printing, exporting, movie creation and 360° panorama generation, in which 2020 Fusion is now able to take advantage of multi-core processing and place these time-consuming tasks on the 'background', thereby saving designers a significant amount of time and freeing them up to create or edit other designs in the meantime.

Continued attention has also been applied to the already highly regarded '360° Panorama' feature, with further enhancements delivered throughout the lifecycle of Version 5 and its Service Packs.

Other areas of development relate to dimensioning and annotation, pricing (specifically significant advances have been made in the speed and functionality of the Block Evaluation system) and integration/scripting (with the advent of a new and more efficient scripting mechanism).

This document is designed to represent only a basic guide to the new features which are present in 2020 Fusion Version 5. It is not intended to provide explicit details of each individual feature, but merely serves to provide a clear summary of what each feature delivers to the product and referencing any relevant configuration preferences.

In each case, the version in which the new requirement was implemented has been appended to the title.

### What's New?

In excess of 80 new requirements have been developed for 2020 Fusion Version 5 suite, delivered in not only the initial release, but also in its subsequent Service Packs. The following summaries will provide a basic overview of each feature or functional enhancement

If you wish to find out more about any of the features, please contact distributor support for more information.

Note: an asterisk "\*" next to a requirement's title denotes that there is no specification available for a given feature.

### When Is It Available?

2020 Fusion Version 5 has been available from July 2016. This has been followed by additional Service Packs delivered at quarterly intervals.

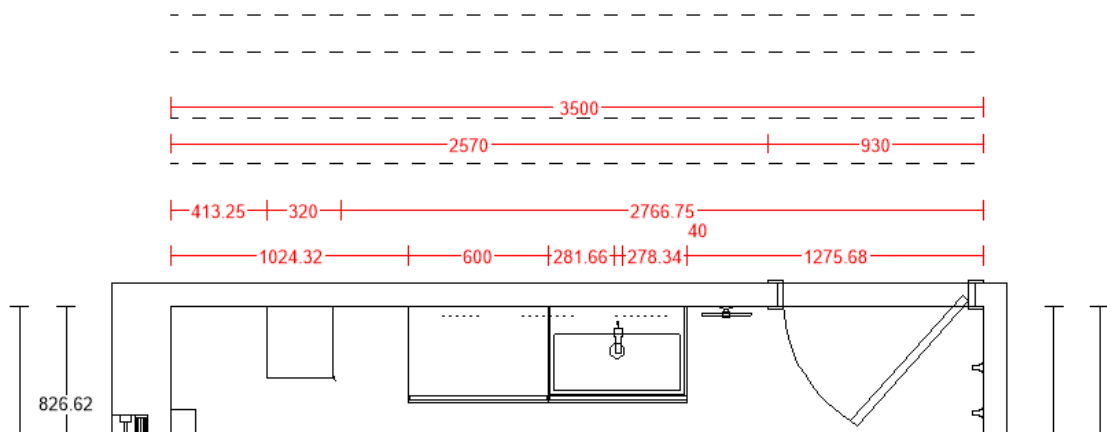
For information about delivery and deadline dates for all future 2020 Fusion releases, please refer to the Distributor Support Team.

## Dimensioning

### 85449 Ability to Move Multiple Dimension Rails (5.0)

2020 Fusion already has the ability for a designer to select multiple dimension rails which, for example, allows them to all be deleted via a single action.

Version 5 builds upon this functionality by now also allowing a designer to select and reposition (i.e. move in the same plane) multiple dimension rails, thereby avoiding the need to repeat the same action multiple times.

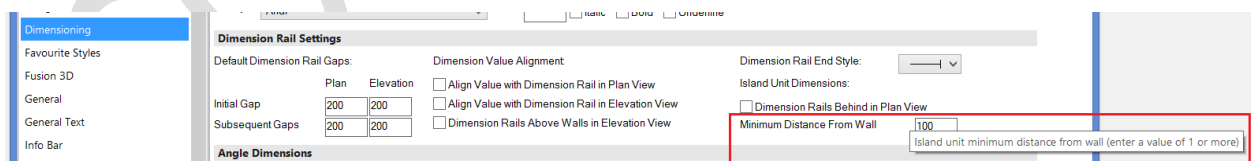


Please note that there is a companion feature for annotations (66126) later in this document.

### 122264 Island Dimensioning: 'Minimum Distance from Wall' Value to Also Apply to Elevation Views (5.1)

Fusion possesses a preference relating to island unit dimensioning called 'Minimum Distance from Wall'. This value is, essentially, a tolerance used to determine the minimum distance from a wall before which items placed in the middle of a design are treated as an island unit configuration and, as such, are then subject to different dimensioning rules to those placed on a wall.

In earlier versions of the application this value only affected plan view dimensioning; effective from Version 5, this preference will also apply to elevation views.

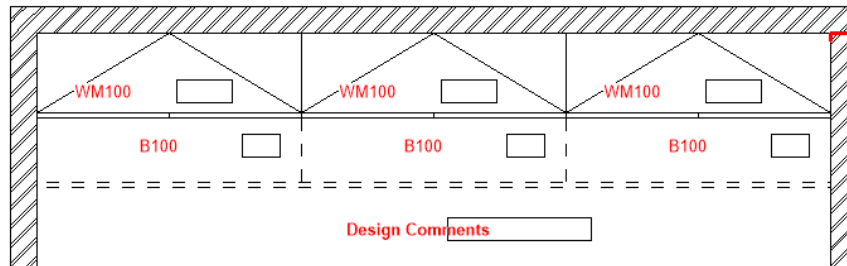


## Annotation

### 66126 Ability to Move (Drag & Drop) Multiple Annotations (5.0)

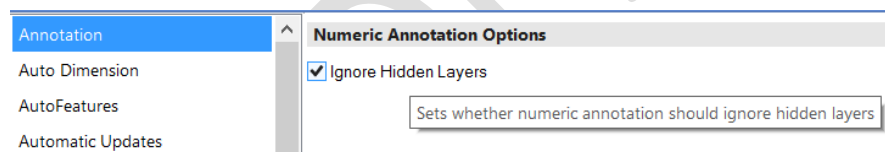
This is the companion feature of 85449. 2020 Fusion already has the ability for a designer to select multiple annotations, which – for example - allows them to be rotated or deleted collectively via a single action.

Version 5 builds upon this functionality by now also allowing a designer to select multiple annotations and reposition them in any direction.

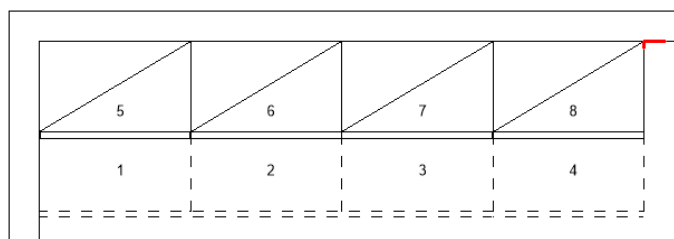


### 156111 Numeric Annotation to Ignore Hidden Layers (5.2)

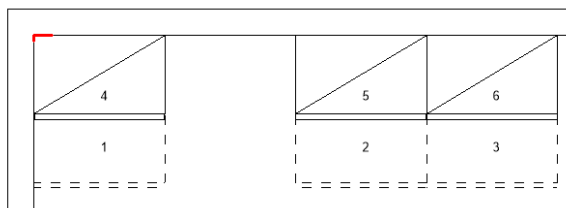
Following the addition of a new preference in the 'Annotation' section of 2020 Fusion's 'Options', it is now possible for numeric annotation to either consider (or ignore) the fact that some design items are currently residing in a hidden layer. The following example shows the effect of the preference:



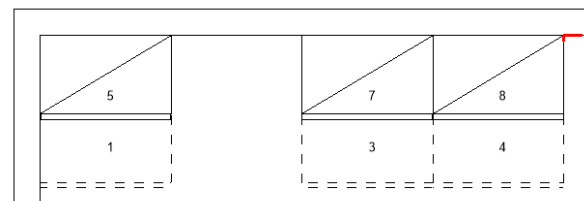
*All Items (Layers) Displayed:*



*Consider Hidden Layers (Unchecked)*



*Ignore Hidden Layers (Checked)*



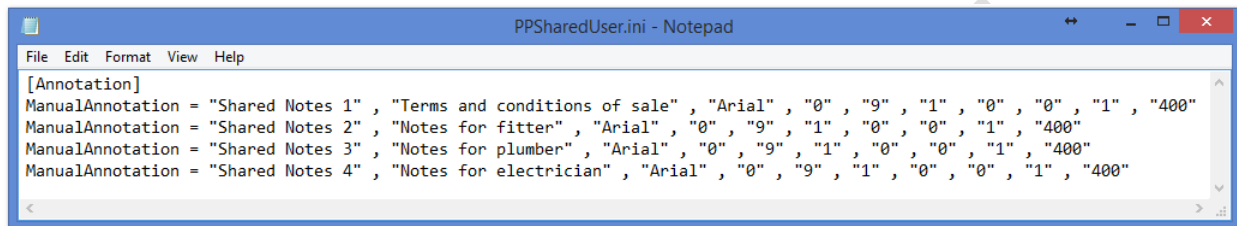
The default state of the preference reflects existing functionality – i.e. for hidden layers to be considered and annotation of items to change dependent upon what is hidden or not.

## 165413 Shared 'Non-Editable' Manual Annotations (5.3)

Fusion currently allows an end user to create, save and apply their own user-defined manual annotations; these are displayed in the 'Manage' area of the 'Annotations' section in the 'Annotate' tab. This new requirement reflects a desire for some organisations to standardise their use of manual annotations, operating to a consistency of language and content.

Effective from Version 5.3, it is now possible for Fusion to present predefined annotations across a variety of installations, emanating from a single, central, source.

To achieve this, solution providers/configurators will need to create a new file called "PPSharedUser.ini", the format of which is identical to the existing "PPUser.ini" file (used to store user-defined annotations).

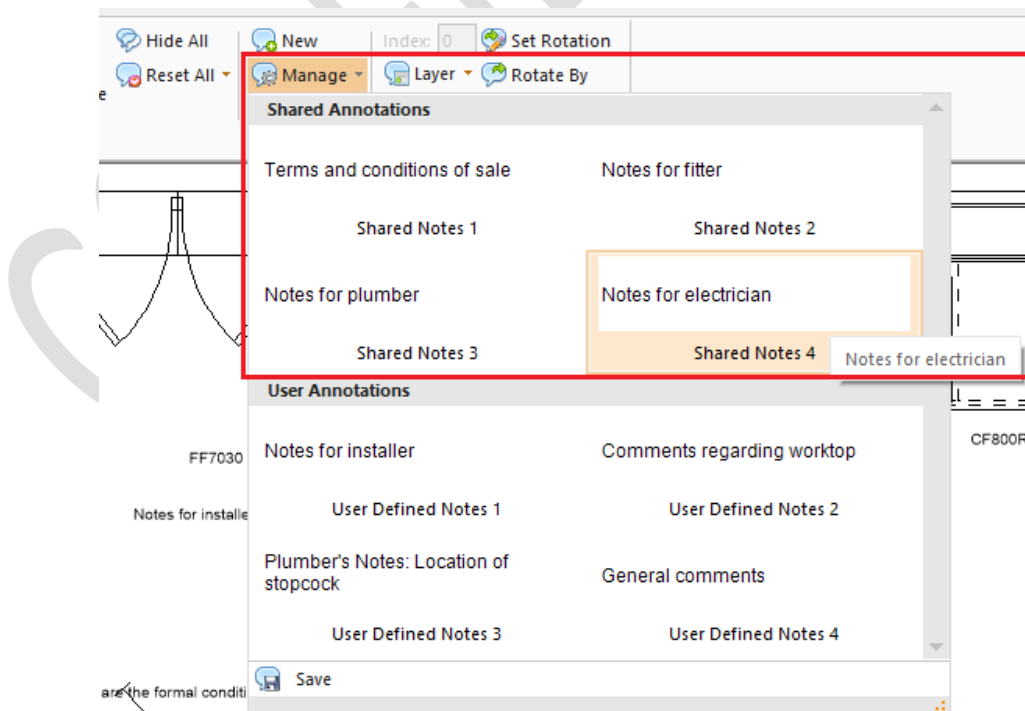


They will also need to reference the location of the PPSHaredUser.ini in the PPPrefs.ini file, which could be stored locally (as per the following example) or at a central (i.e. network) location:

[Customise]

SharedAnnotationLocation = "C:\2020 Fusion 5\_3"

Within Fusion itself, the annotations themselves are displayed in their own, dedicated 'Shared Annotations' section of the gallery and it will not be possible to add, modify, or delete these via the user interface in the gallery itself:



Please note that, once such an annotation has been added to a design, it will still remain possible to alter it using the 'Modify' (annotation) option.

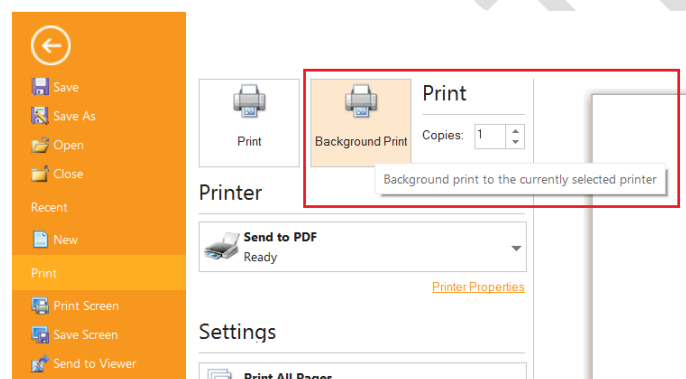
## Printing & Export

### 103271, 120375 & 120548 Background Processing System: Printing, Image Export (including 360° Panorama) (5.0) & Movie Generation (5.1)

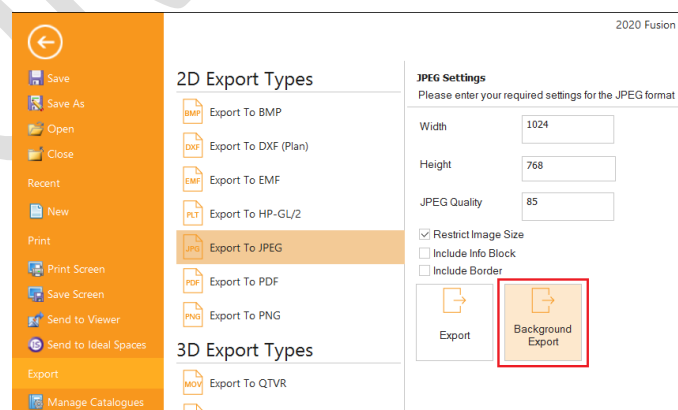
Printing designs, exporting images, generating movies and 360° panoramas within 2020 Fusion takes time, especially when performing these functions using higher quality render settings. In previous versions, these activities would fully occupy the application until they were completed; only afterwards would a designer be free to continue using 2020 Fusion for other tasks.

Version 5 introduces the concept of 'Background Processing' – this allows 2020 Fusion to take full advantage of multi-processor machines and for a designer to choose to generate any print, export, movie, or 360° panorama that is expected to take a long time as a background process - thereby allowing them to work on other design activities in the meantime.

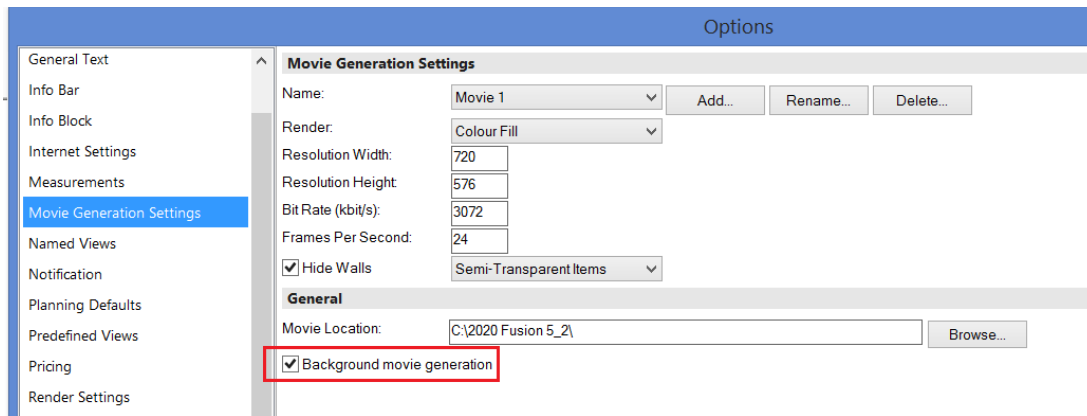
In the case of printing, an additional 'Background Print' button has been added to the backstage view and can be applied to all print types (standard, tiling, worktop, installation symbol and batch print sets (including on-demand batch prints).



The same approach has been applied to image exports, with an extra button being added to the 'Export' backstage view for all relevant export types:



For movie generation, these will now be processed in the background by default, although a preference can be unchecked in 2020 Fusion's 'Options' ('Movie Generation Settings') to make this run in the foreground, if preferred.

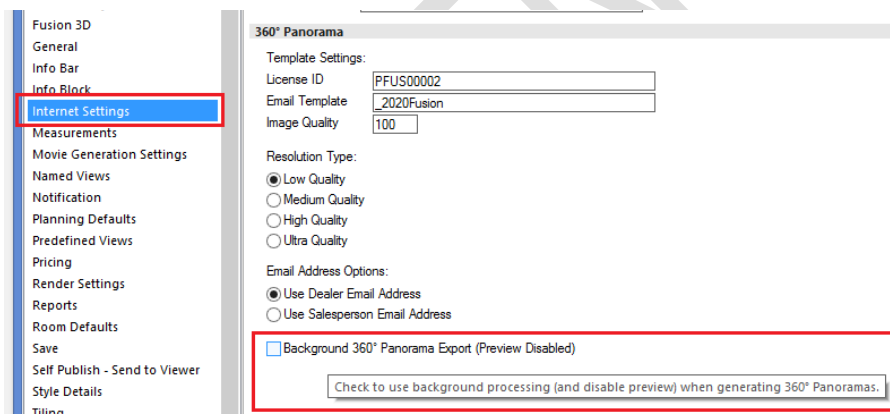


For 360° Panorama generation, the default is for foreground processing to apply. Between Version 5.0 and 5.2, a hidden preference could be added to the PPPrefs.ini file to always make this process operate in the background. This needed to be entered under the [Customise] heading:

[Customise]

Background360Panorama = "1"

Effective from Version 5.3, user interface was added for this preference, the functionality of which is also linked to the 360° Panorama 'preview' functionality also delivered in this version:

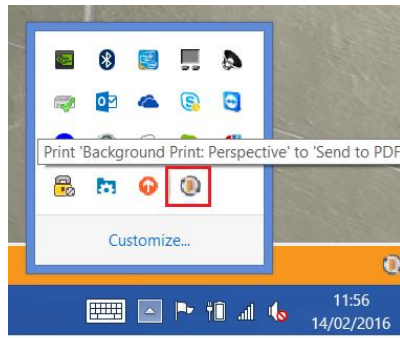
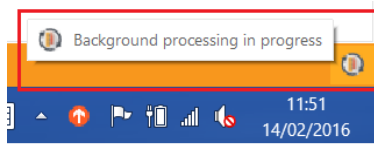


For Quick Print, the default is also for foreground processing to apply; however, a hidden preference can be added to the PPPrefs.ini file to always make this operate in the background. This will need to be entered under the [Customise] heading:

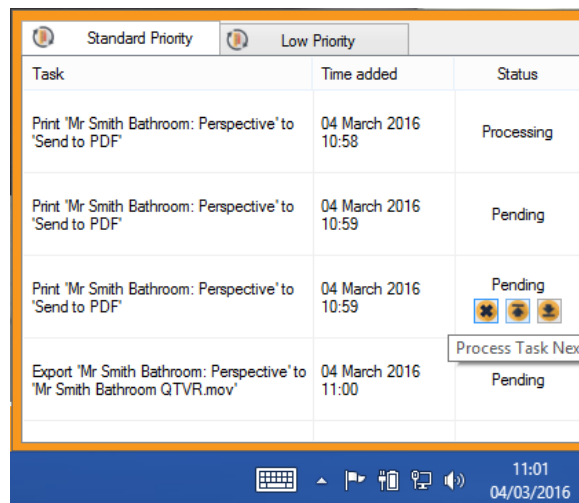
[Customise]

BackgroundQuickPrinting = "1"

Designers will be able to keep track of the progress of all prints, exports, movies and 360° panoramas via a complementary System Tray application found on the right hand side of the Windows taskbar. This can also be launched from within Fusion itself via the status bar at the bottom of the application.



If several background processing requests have been sent by the designer, the designer can manage the order in which they are processed via this interface – either moving tasks up or down the queue or deleting them altogether.

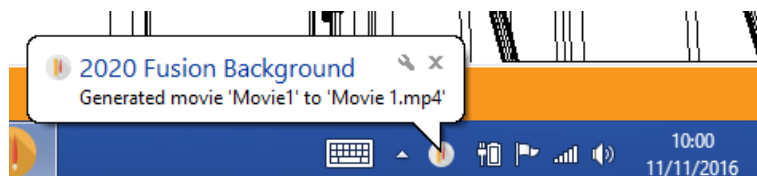


2020 Fusion automatically ranks some background processing tasks as higher than others: printing, exporting and 360° panorama tasks will be added to the 'standard priority' task queue; movie generation tasks will be added to the 'low priority' task queue.

## 166807 Background Processing Notification System Enhancements (Windows Balloons) (5.3)

This modest enhancement now means that the background processing notification balloons presented to a user will now appear only when a task has been completed, as opposed to when it has started.

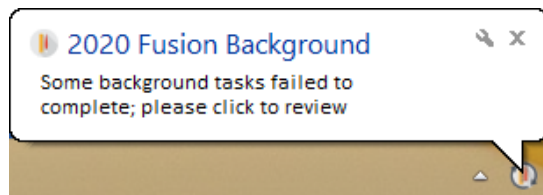
In the case of printing, the balloon will appear when the print job has spooled to the printer; in the cases of exporting, movie generation and 360° panoramas, the balloon will appear when the resulting file is fully generated.



### 179194 Notify User (Upon Fusion Launch) of Tasks in Background Processing Queue with an Error State (5.3)

It is sometimes possible that printing, exporting, movie and panorama generation activities being run as a background task could stall based upon a given error state or condition. Unless the user specifically checked the corresponding list of tasks in the Systray app, they may not even be aware of these error states and the failure to generate the required output.

Now, whenever the application is launched, 2020 Fusion will check the state of any pending background processing tasks and report to the user if any return an error state. With this information, the end user can then (manually) launch the task queue in the Systray app and take any necessary action.



### 145942 Support for '2020 VR (Virtual Reality) Viewer' (5.0)

The 'KRPano' engine which underpins the 2020 Fusion 360° Panorama Export feature has been updated to in order to accommodate support for '2020 VR Viewer' glasses. 360° Panorama exports from 2020 Fusion will now be fully compatible with this new technology, which means that - when viewing a 360° Panorama on a qualifying smartphone – there will be an additional viewing option that will allow customers an even more immersive experience when viewing a representation of their newly designed space, using the 2020 VR Viewer glasses, or equivalent.



There is no change in the means of generating 360° Panorama exports in 2020 Fusion, only the resulting panoramas themselves will possess the additional viewing functionality.

The minimum requirements to be able to take advantage of the 2020 VR Viewer functionality for Android, iOS or Windows-Phone mobile devices are as follows:

- The mobile device/browser must support WebGL.
  - Only Android Browser V5 onwards supports WebGL.
  - Only iOS Safari V8 onwards supports WebGL.
  - Only Windows IE mobile V11 onwards supports WebGL.
- The device needs to have accelerometer and gyroscope sensors.

If the minimum requirements listed above are not met, then the panoramic image will still be available to view and navigate on the mobile device, but the specific '2020 VR Viewer' option will not be accessible.

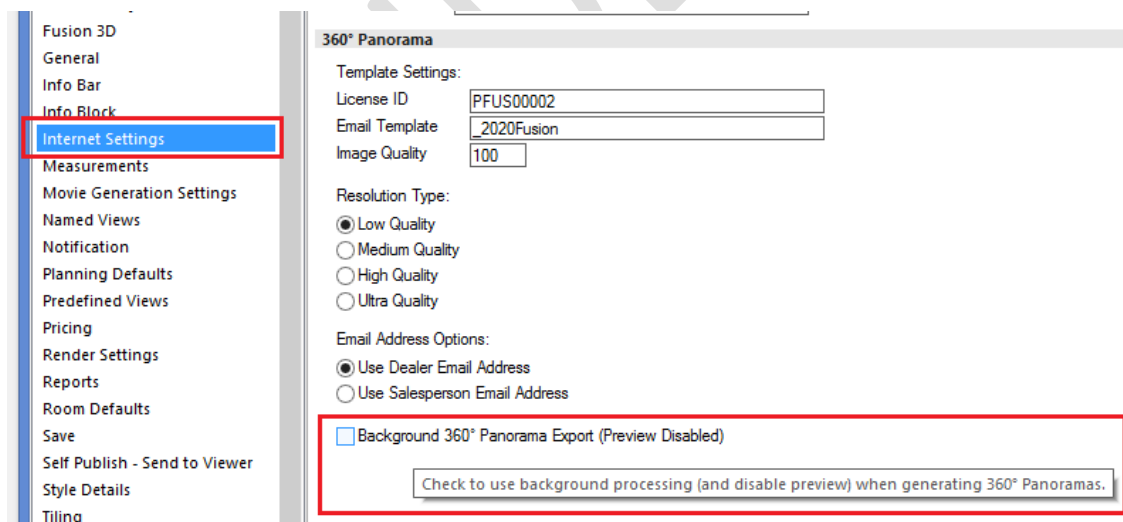
### **157798 360° Panorama Export Feature to only be subject to License Flag #41 (5.1)**

Following a change of approach concerning the entitlement method of the 360° Panorama Export feature, the 'Live Licensing' license flag (#61) is no longer relevant to this feature, effective from Version 5.1 of 2020 Fusion.

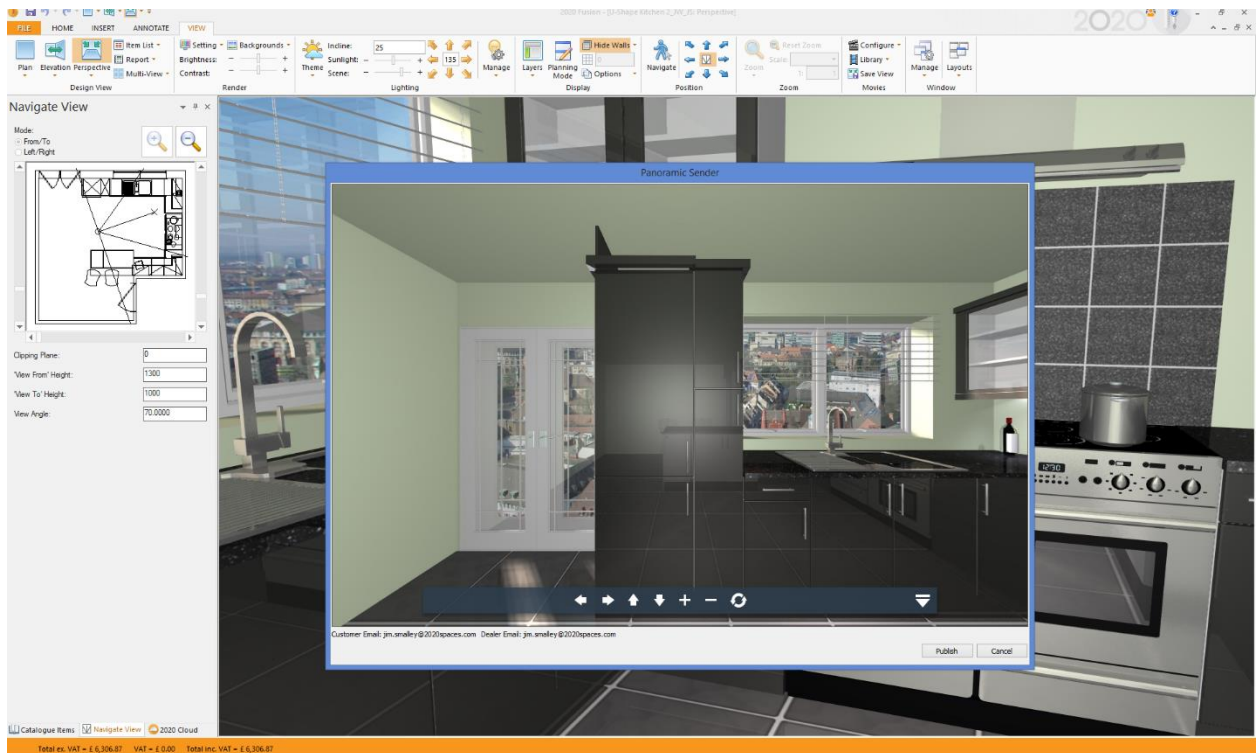
Therefore, now only flag #41 ('360° Panorama Export') will determine the availability of this feature.

### **142554 Ability to 'Preview' a 360° Panorama Prior to Publishing (5.3)**

Following the introduction of the 360° Panorama feature, many designers expressed a view that they would like to be able to preview the panorama before sending it to a customer. This is now possible, as long as the background generation of 360° Panoramas is not in operation.



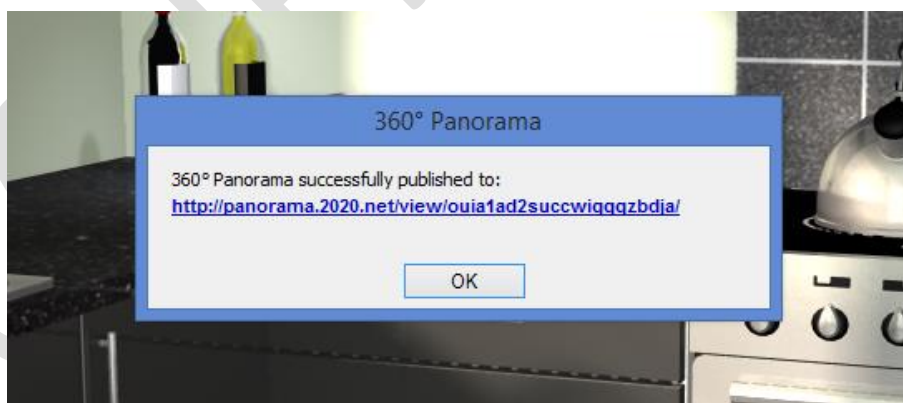
When a request to create a 360° Panorama is made with the above preference unchecked, the following preview window is displayed. The preview itself possesses exactly the same navigation controls available as when viewing using a browser. At the bottom of the preview, details of the customer and dealer/salesperson addresses to which the panorama will be sent are also included.



### 139663 360° Panorama: 'Successfully Published' Dialog to Include Hyperlink to HTTP Address of Published Design (5.3)

When a 360° Panorama is successfully published, the confirmation dialog presented to the end user now contains a hyperlink to the same URL as will be sent to the designer and customers by email.

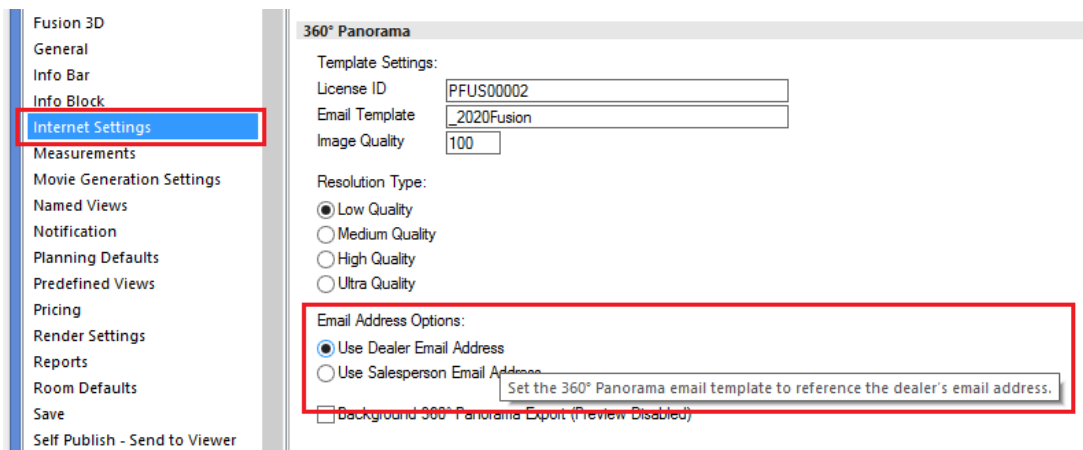
This allows designers to immediately view the generated image without the need to wait for the email to arrive.



### 175321 360° Panorama: Dealer Email - Ability to Choose Either Organisation Email or Salesperson (Resource) Email (5.3)

In previous versions of 2020 Fusion, it was only possible for the organisation's copy of the 360° Panorama email to be sent to the dealer email address held in 'Manage', 'System', 'Dealer Details' (Connect) or 'File', 'Options', 'Dealer Details' (Fusion standalone). For businesses with a large number of designers or salespersons, this was not always desirable.

As such, an additional preference has now been added, allowing either the dealer email address to continue to be used, or that of the specific salesperson associated with the customer/design.



### 175340 360° Panorama Export: Improved and Less Restrictive Error Notifications (5.3)

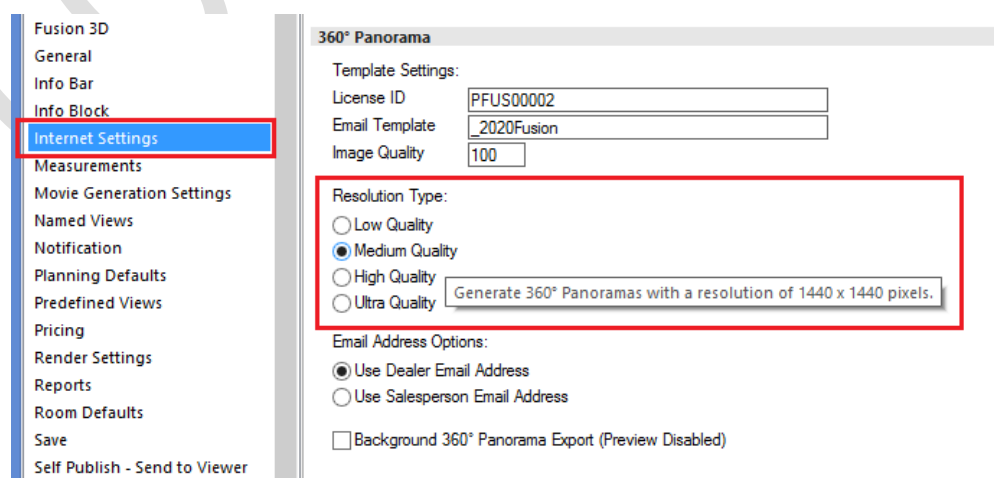
A review of all of the error messages associated with 360° Panorama generation was undertaken and a number of optimisations have been made in order to consolidate multiple error messages into a single dialog in the event of more than one error being identified. This will allow designers to identify and address all issues at the same time.

In addition, it is now no longer compulsory for both the customer AND the salesperson/organisation email address to be populated; a 360° Panorama can now be generated as long as EITHER email is present for the design.

### 175324 360° Panorama Export - 'Higher Resolution' Options (5.3)

Since its initial implementation, 360° Panorama images were all generated to a fixed resolution of 1024 x 1024 pixels. This allowed the panoramas to be generated quickly and to a reasonable quality level. However, some customers also wanted the possibility of generating panoramic images to a higher quality level, with the understanding that this would, of course, result in longer generation times.

Consequently, Fusion now offers four quality levels which can be set in its preferences as follows:



The resolution options are as follows:

- Low Quality (1024 x 1024 pixels), delivering the same level of quality as in previous versions.
- Medium Quality (1440 x 1400 pixels)
- High Quality (1920 x 1920 pixels)
- Ultra Quality (2880 x 2880 pixels)

*Example: Low Quality*



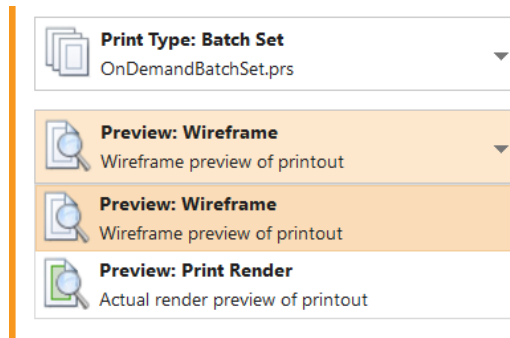
*Example: Ultra Quality*



## 121615 Batch Printing: Ability to Show a Wireframe Preview of a Batch Print Set (v5.2)

Previously, 2020 Fusion's 'Print' Backstage View only allowed the end user to view a batch print set showing the actual renders used in the views themselves. This had the potential for batch print previews to take a very long time to generate, especially if the print set contained a number of HQ renders.

Now, designers can apply the same functionality as already exists for standard views, which is to show a wireframe preview of the batch print set (both predefined and on-demand), but still giving the option to display the actual renders used, if required.



The default state of this option will be controlled by the same (existing) hidden preference used for standard print previews:

[fnRoom]

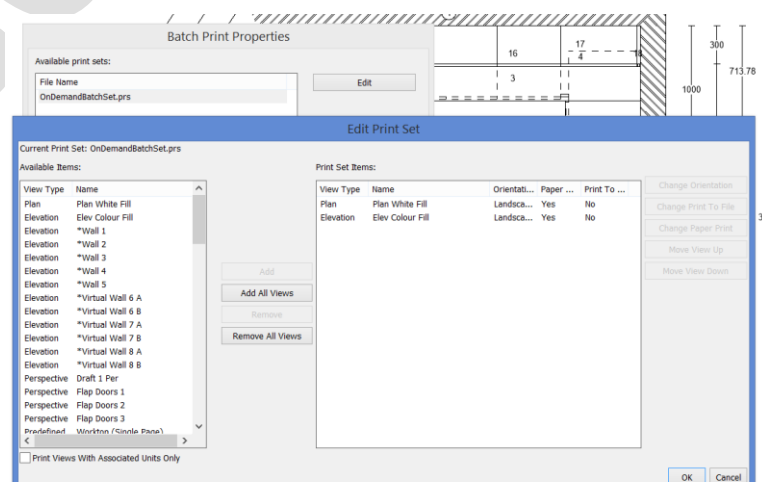
PrintPreviewWireframe = "0" or "1"

If the preference is not present in PPPrefs.ini, then the behaviour will default to displaying a wireframe preview (equivalent to PrintPreviewWireframe = "1").

## 126069 'Per Design' On Demand Batch Print Sets (5.2)

In Version 4 of 2020 Fusion, the original 'On Demand Batch Printing' feature (75444) was implemented. This allows the creation of a temporary, user-defined, batch print set that remains valid (i.e. available) for the duration of the session of the design in which it was created; when the design is closed, the on demand batch set is discarded.

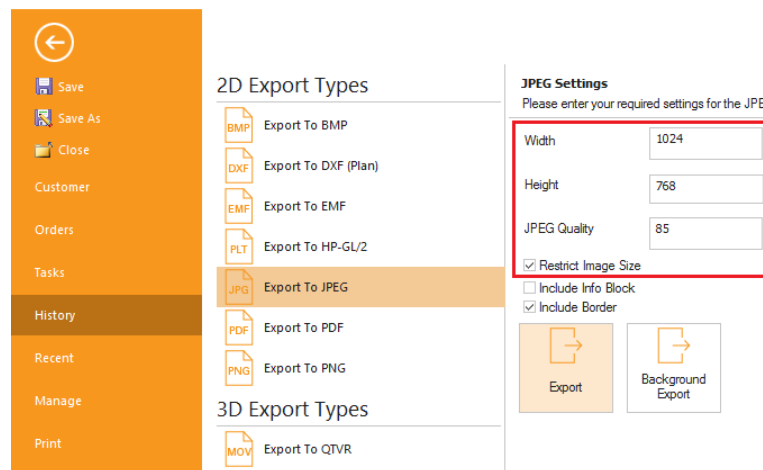
This requirement represents an extension to the original feature which allows an on-demand batch print set to be created and retained for each design currently open, thereby making each on-demand batch print set design-specific, as opposed to (previously) having a single on-demand batch print set being shared across all open designs.



### 175372 Export Backstage View: 'Sticky' Settings (5.3)

It is possible to export a 2020 Fusion design in a wide range of formats, each with their own settings – some unique and some shared. It had previously been the case that, for each respective export type, hard-coded default settings would be offered whenever the option was selected. For many users, this was a source of frustration as they would have to continually enter their preferred settings every time they performed such an export.

Now, each respective export format will have its own, dedicated settings. Fusion will not only save (to hidden preferences) any changes made to the settings for each format, it will also recall the export format most recently used when the user returns to the Export backstage view.



Note: some settings (such as 'Include Info Block' and 'Include Border') are already governed by existing preferences. This feature enhancement is only in respect of those settings that could not previously be defined.

### NO REF Retirement of QuickTimeVR (5.3)

Following Apple's announcement in April 2016 withdrawing its support of QuickTime on Windows-based platforms and the subsequent identification of associated (potential) security threats, 2020 has made the decision to retire the QuickTimeVR export feature in Fusion, effective from Version 5.3. As such, the license flag for this feature will be disabled in all 2020 Fusion editions for Version 5.

For full details of this issue and the decision made, please refer to the corresponding [bulletin](#) issued on this topic.

### 165631 Movie Generation - Implement Alternative to QuickTime Format (5.3)

Apple's (April 2016) support position regarding QuickTime for Windows has also meant that action was necessary in respect of 2020 Fusion's movie generation feature. In this case, the development undertaken was to replace the existing movie generation engine with a new one ('DirectShow') and thereby remove any dependency upon QuickTime within the application. The use of DirectShow has meant the introduction of a new file into the Fusion solution – 'ffmpeg.exe'.

For the end user, the movie creation and generation feature will operate in exactly the same way, with the only difference being in the actual output file – instead of a .mov file, Fusion movies will now be created in the .mp4 format.

With the removal of the QuickTime dependency from the application, Fusion's SysChecker will no longer check for and report against the installation of QuickTime.

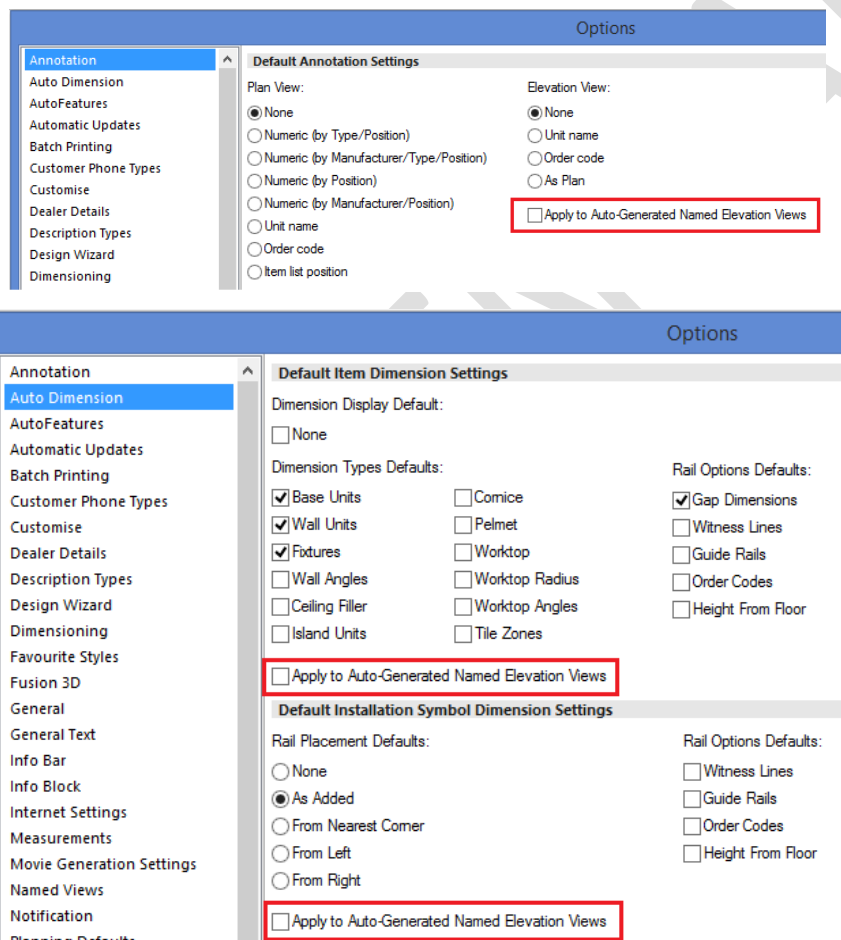
For full details of this issue and the decision made, please refer to the corresponding [bulletin](#) issued on this topic.

## Viewing, Lighting & Rendering

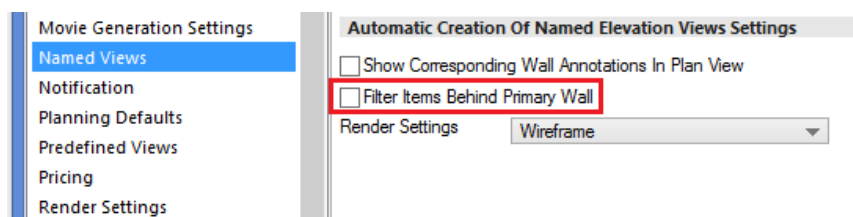
### 121487 Predefined Settings for Print Views - Named View Enhancements (Virtual Walls) (5.0)

New behaviour has been introduced for virtual wall named views, with newly created virtual wall named views now being effectively regarded as automatically generated named views and therefore behaving in a similar way to these.

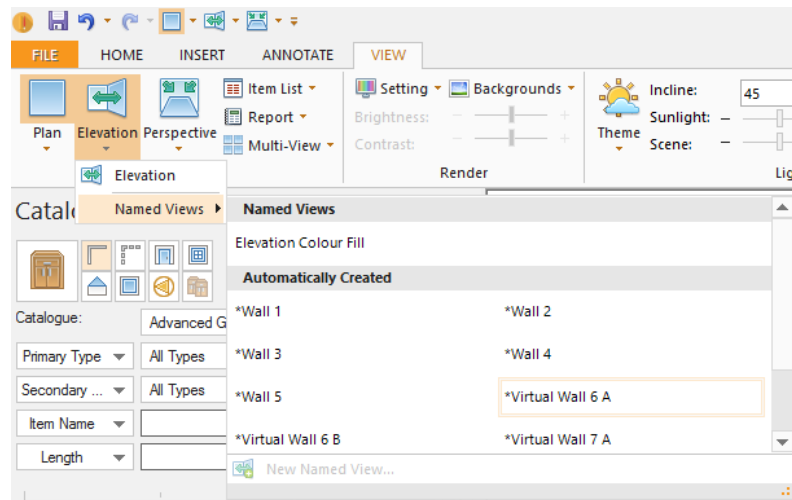
As such, the virtual wall names (numbers) will now be generated automatically and the numbers themselves synchronising with the numbering of 'real' walls. Virtual wall annotation and dimensioning will now follow the same preferences used for automatically generated named views (the previous virtual wall specific preferences have therefore been retired).



A new preference has also been added which applies to all automatically generated named elevation/virtual wall views - 'Filter Items Behind Primary Wall', which allows the user to not display items behind the automatically generated named view. The default is for this preference to be turned off.



In the elevation named views area, the virtual wall named views are now listed in the 'Automatically Created' section, directly underneath the auto generated named elevation views:



## 177309 Fusion 3D to support Direct X 11 (to work under Windows 10) (5.3)

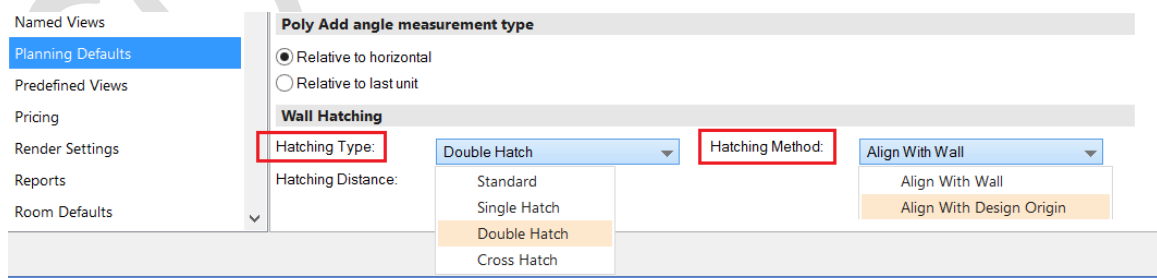
The Fusion 3D feature was updated to be able to function with DirectX 11 as opposed to DirectX 9, thereby allowing it to function under a Windows 10 operating system.

Because DirectX 11 is supported (preinstalled) from Windows Vista onwards, it is therefore also no longer necessary to check for the presence of DirectX; as such, this check has been removed from 2020 Fusion's SysChecker tool.

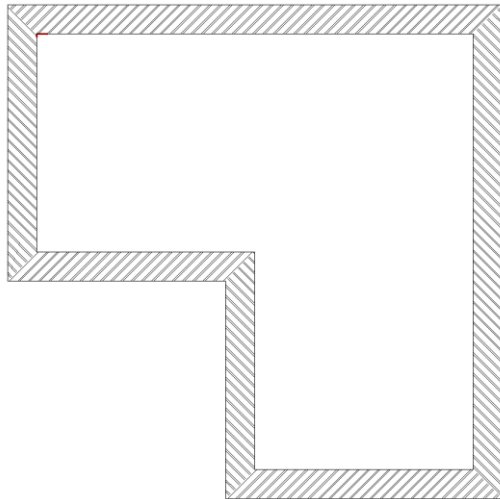
## Design Creation

### 119997 Hatched Walls Enhancements (5.0)

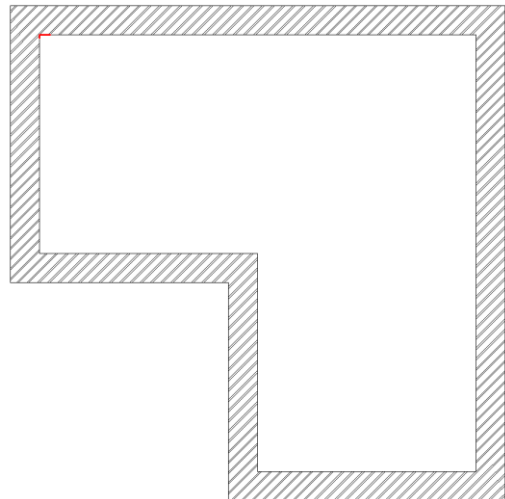
Further enhancements have been made to the existing hatched walls feature, as a result of which the designer is now able to define the default wall hatching type for a new design (standard, single hatch, double hatch, cross hatch), as well as the default hatching method - either to align the hatching to each individual wall (existing functionality) or to align all wall hatching to the design origin (new functionality).



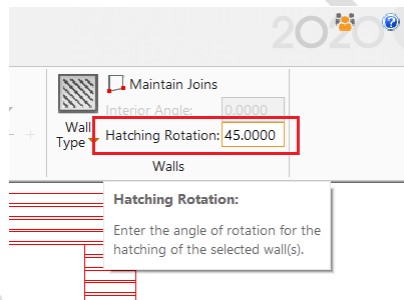
*Align to Wall*



*Align to Design Origin*



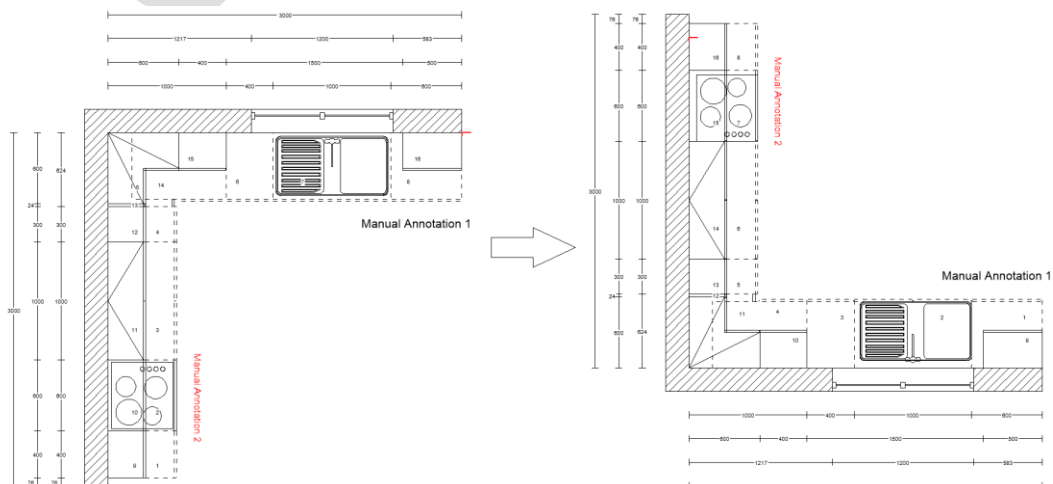
In addition, the designer can now change the hatching angle within any given design – simply type the desired angle into the 'Hatching Rotation' field and press 'Enter'.



## 107941 Mirror Design Enhancements (Print Areas, Annotations, Dimensioning) (5.0)

2020 Fusion already allows a designer to create a mirrored version of an existing design - either vertically or horizontally. In previous versions of the product there have been several limitations as part of this process and, as such, some aspects of the design were not transferred during the mirroring process.

In Version 5, the mirror design process is now also able to automatically mirror all 'Print Areas', 'Dimensions' and 'Annotations' present in the design, thereby eliminating the need to reapply these elements in the mirrored design.



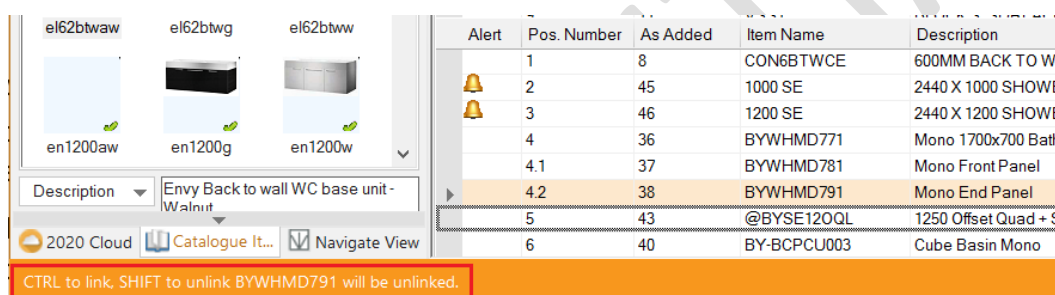
Note: it remains the case that 'autofeature' items are not transferred as part of the mirror design process; the designer will therefore still need to reapply autofeatures to the new version of the design after the mirroring process is complete.

## 110791 Ability to Un/Link Existing Design Items (5.0)

2020 Fusion possesses a variety of methods of linking one (or more) item to another (compulsory links, prompted links, manual links), but these only operate at the point of addition to a design. However, once any given item is present in a design, it has not been previously possible to select it and un/link it from/to another.

2020 Fusion Version 5 allows the designer to achieve this via new functionality available in the item list view.

Provided items are listed with 'Group by Links' turned on, any existing design item can be selected and linked to any other (at any selected point in the item list hierarchy). Or, if the design item is already linked to another - it can be unlinked from its existing parent to either become a main item in its own right, or it can even be linked to a completely different parent item.



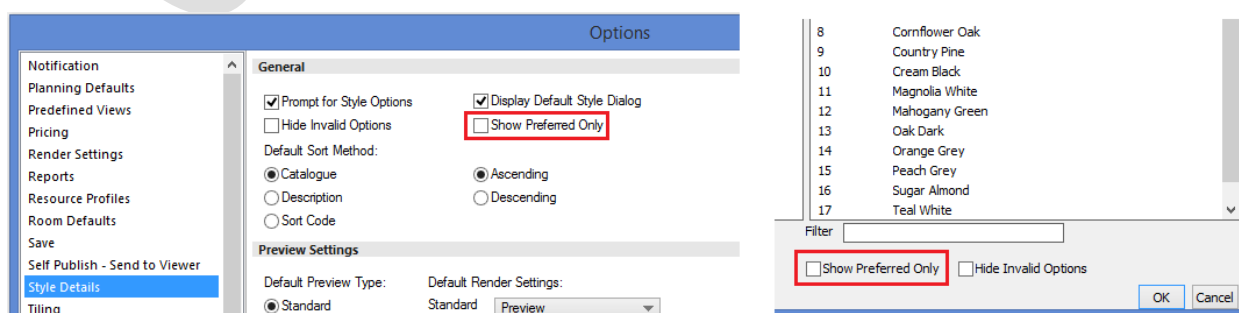
The designer is assisted during this process by the 'real time' guidance displayed on the status bar at the bottom of the screen.

Clicking and holding the CTRL key whilst dragging an entry in the item list allows the designer to link it to another item; clicking and holding the SHIFT key allows the designer to unlink an item from another.

When the linking/unlinking action is complete, the item list is rearranged according to the sorting method currently in use (e.g. type/position, order code, etc.).

## NO REF\* Ability to Set Default for 'Show Preferred Only' Checkbox in Style Details (5.0)

A new preference has been added to the 'Style Details' section of 2020 Fusion's 'Options' which allows users to set the default state of the 'Show Preferred' checkbox in the 'Style Details' dialog.



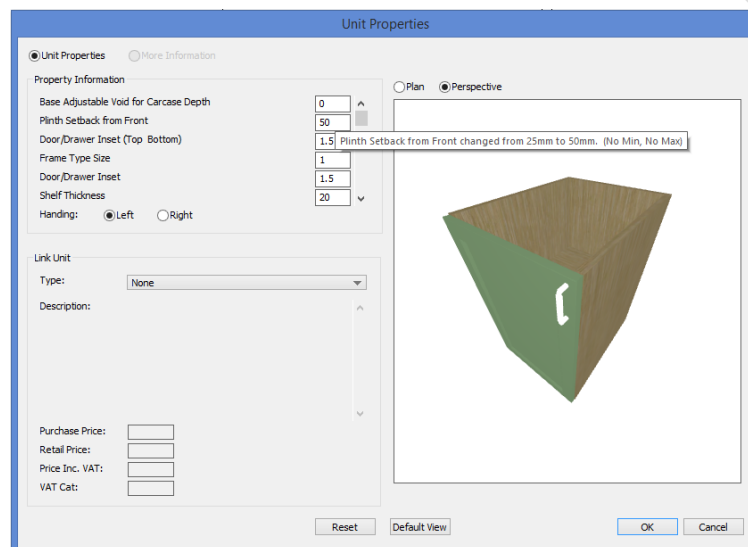
## 120680 Minimum/Maximum Parameters (Unit Properties) (5.1)

In 2020 Fusion, it is possible to change the parameters of a unit within the 'Properties' dialog.

In Version 5, tools have been added to Catalogue Editor allowing an analyst to define minimum or maximum values on a parameter at the Parameter level (not calculated), at the DLT override level, or at the Unit level.

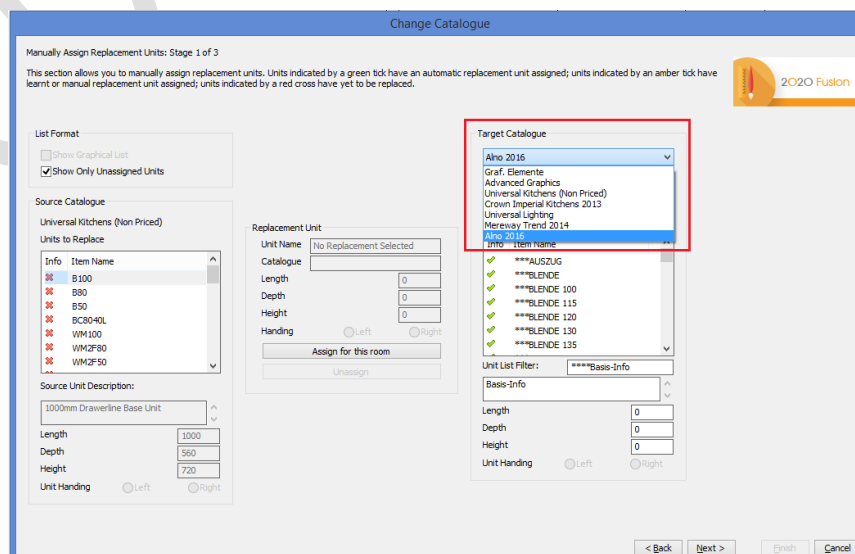
Within the existing Edit Unit Properties dialog, for items configured in this way, it will not be possible to update a parameter's value beyond its minimum and maximum values (if defined and that parameter is not calculated).

In terms of user-interface, the tooltip indicating both the original and the modified values will now also advise of the minimum and maximum values permitted, if defined.



## 152782 Change Catalogue: Improve performance with large number of installed catalogues (5.1)

The 'Change Catalogue' mechanism has been made significantly more efficient by now only adding the source (non-mapped) and target catalogues to the new design. As a result, the 'add palette' in the replacement area now only shows the new target and any non-mapped source catalogues, as opposed to all 'installed' catalogues, making the process much quicker and easier to navigate.



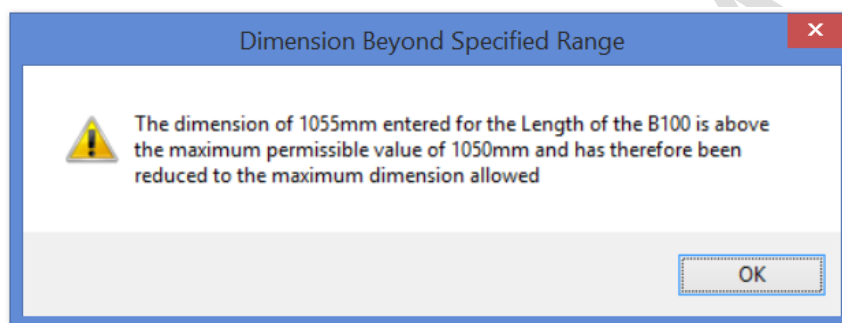
## **132129 Notification if minimum or maximum dimension for units is exceeded (5.2) & 185914 Notification if minimum or maximum dimension for units is exceeded - exception management (5.3)**

Within 2020 Fusion catalogues, some items will have minimum and maximum dimensions defined. If the user enters values outside of those limits the application automatically modifies the values to be within the valid range specified – i.e. it restricts them to the upper or lower limit of the range.

Although useful functionality, some users would prefer to always be notified on the occasions when this happens. Version 5 now includes hidden preferences that, when set, will result a notification dialog appearing every time such an automatic modification is made in the Add Palette or the 'Items' tab:

[Customise]

NotifyIfDimensionExceedsRange = "1"



2020 Fusion's default behaviour is not to use this notification mechanism; solution providers will therefore need to add this preference to the PPPrefs.ini file if they wish to use this functionality.

It is also possible to configure similar notifications when running 'Update room from catalogues' or as part of the room validation wizard. Please refer to the specification for further details of these preferences, if required.

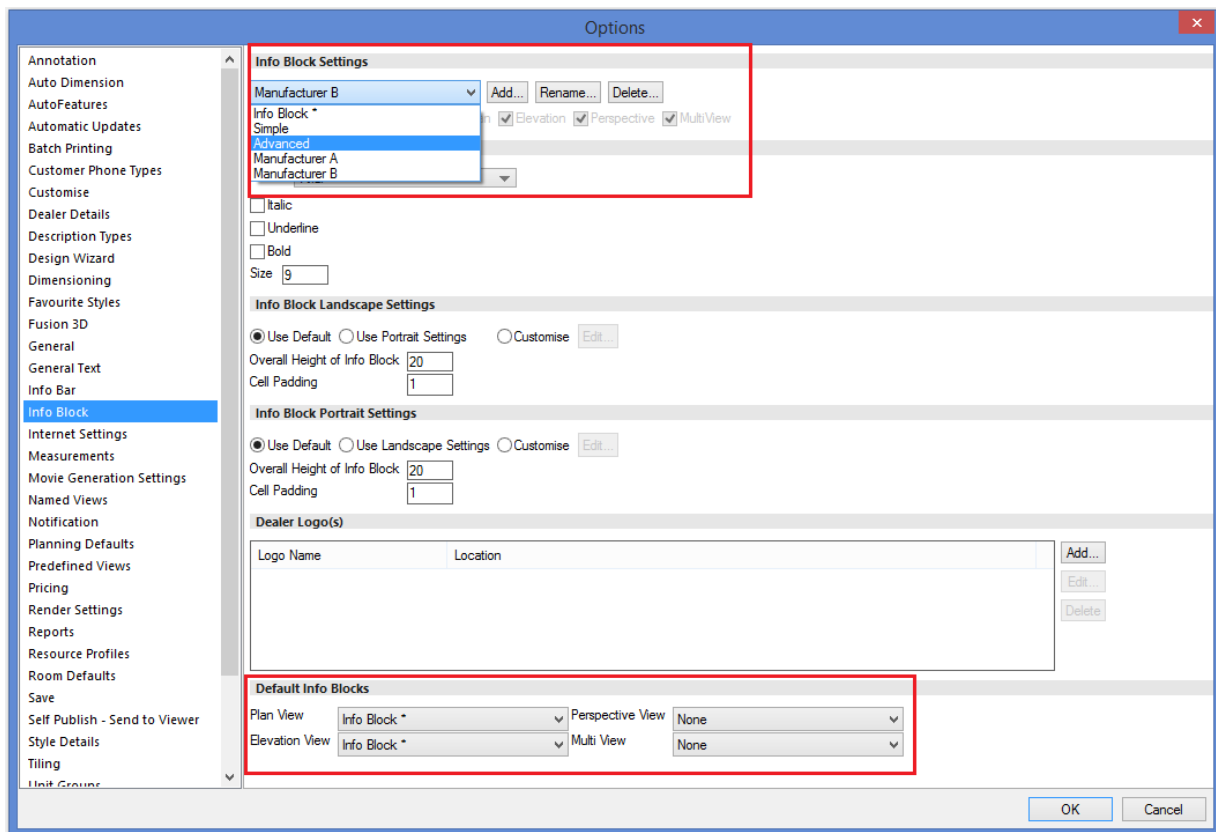
In Version 5.3, this feature was further enhanced in order to ensure that the dialog did not present itself inappropriately – i.e. when a piece of worktop is added immediately prior to launching autoworktops and when validating Block Items that have a status of 'replaced', 'deleted', 'set header', 'set added', 'set replaced', 'block header' and 'set deleted' when opening an existing design.

## **143892 Multiple Info Blocks (5.2)**

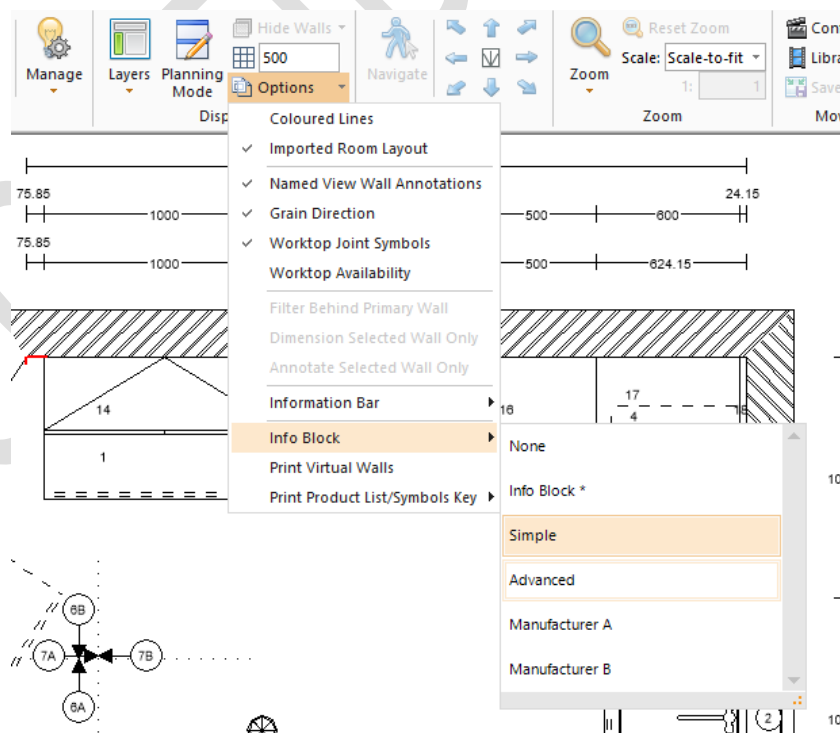
2020 Fusion already allows designers to create a customised Info Block for printouts in portrait and landscape but, until now, they have been restricted to creating and applying only a single instance of an Info Block.

Inspired by the existing user interface for the creation and management of Info Bars, Version 5 now allows a designer to create as many Info Block variations as they require – allowing them to configure Info Blocks for specific manufacturers or markets, or to create ones either displaying just basic or more detailed information.

Preferences have also been added allowing the designer to define the default Info Block to be displayed for each graphical view.



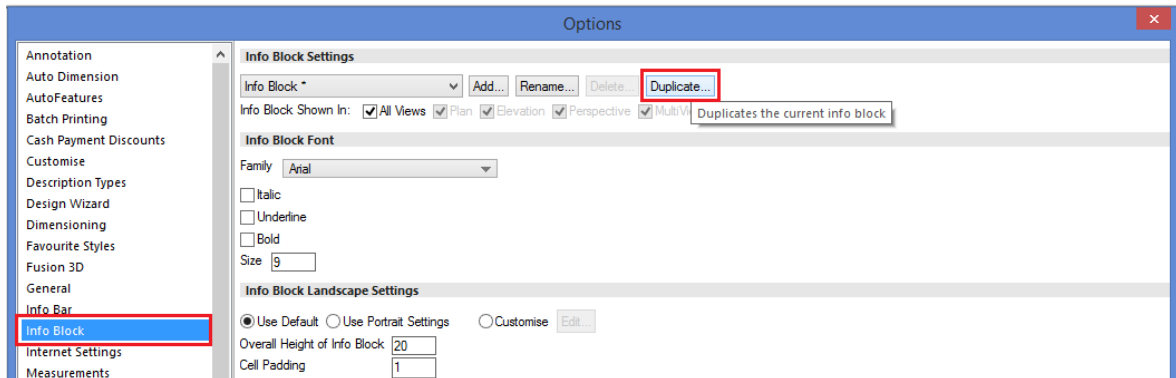
The user also has the ability to quickly and easily select between any of the available Info Blocks in each graphical view (Plan, Elevation, Perspective and Multi-View) in a given design. The selection made will be saved with the design and with any named views that are created using that specific Info Block.



Note: the process of creating customised Info Blocks themselves remains unchanged from previous versions and is documented in the Info Block Wizard specification.

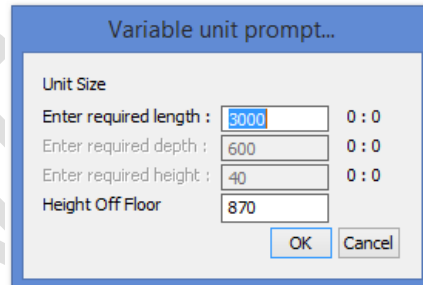
## 179142 Duplicate Info Blocks (5.3)

Following the delivery of the 'Multiple Info Blocks' feature in Version 5.2, feedback was received suggesting that a further time saving would be derived by allowing an end user to duplicate an existing Info Block (including the default one). Doing so would allow them to be able to select an existing Info Block and more easily produce variations, such as multiple copies each including different manufacturer's logo, and therefore removing the need to create each new Info Block from scratch.



## 175374 'Prompt for Variable Units' to Also Apply for Linked Items (5.3)

2020 Fusion has an existing preference called 'Prompt for variable units' (found in 'Options', 'Room Defaults', 'General') which, if enabled, presents the designer with a dialog allowing them to easily enter any variable values for length, depth and height. However, this functionality previously only extended to the addition of 'parent' items only.



With the implementation of this requirement, the variable unit prompt dialog will now appear for all graphically variable units, regardless of the method in which they have been added. This includes addition of units as a parent item, via any form of linking, as replacements, or as alternative items.

## User Interface/User Experience

### NO REF\* Speed and Stability Optimisation (5.0/5.1/5.2)

A number of activities have been undertaken in Version 5 that collectively contribute towards an improved general operating speed as well as higher levels of stability and performance.

#### *Compiler Optimisation*

Expected to yield a 10-20% general speed improvement over Version 4

#### *Cached reading of price table and units*

Improved speed of opening designs

#### *Caching of Complex Pricing for Block Evaluation*

An 80% speed improvement of this feature now makes us competitive with Compusoft in this area of functionality.

#### *Memory system adjustments*

Improved methods of allocating free memory.

#### *Single memory allocation on saving designs*

Improved speed and stability in this area.

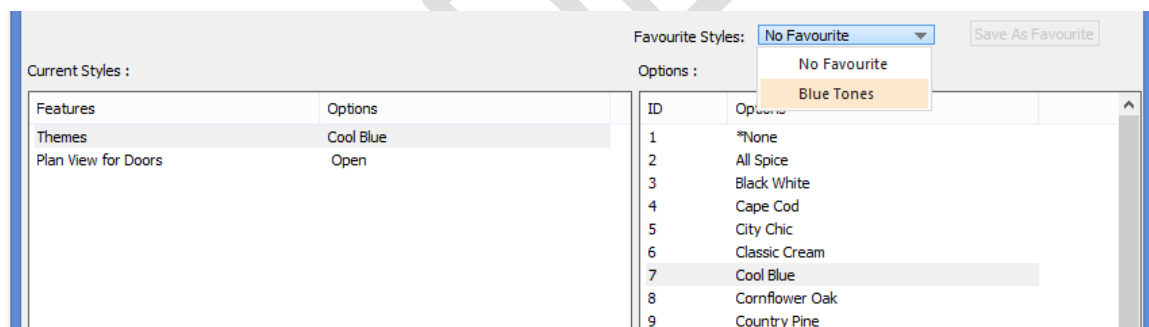
#### *Optimised model import/design export*

The export process is now quicker and the file sizes are generally smaller.

### **NO REF\* 'Favourite Styles' Active by Default (5.0)**

This long-established feature previously relied upon a solution provider setting a hidden preference to expose it to end users.

From Version 5 onwards, the default will be for the feature to be 'active', so applying the preference is no longer a prerequisite.



Should a solution provider not wish to offer this functionality as standard, then the preference will need to be set as follows:


[Customise]  
StyleDetailsFavourites = "0"

For more information about this feature, please refer to the Default Catalogue Selection DLTs specification.

## NO REF\* Item List View: Simplified Column Removal (5.1)

Historically, the addition and removal of Item List column headings has only been possible by launching the 'Field Chooser' pop-up and dragging the column headings between this and the Item List view itself.

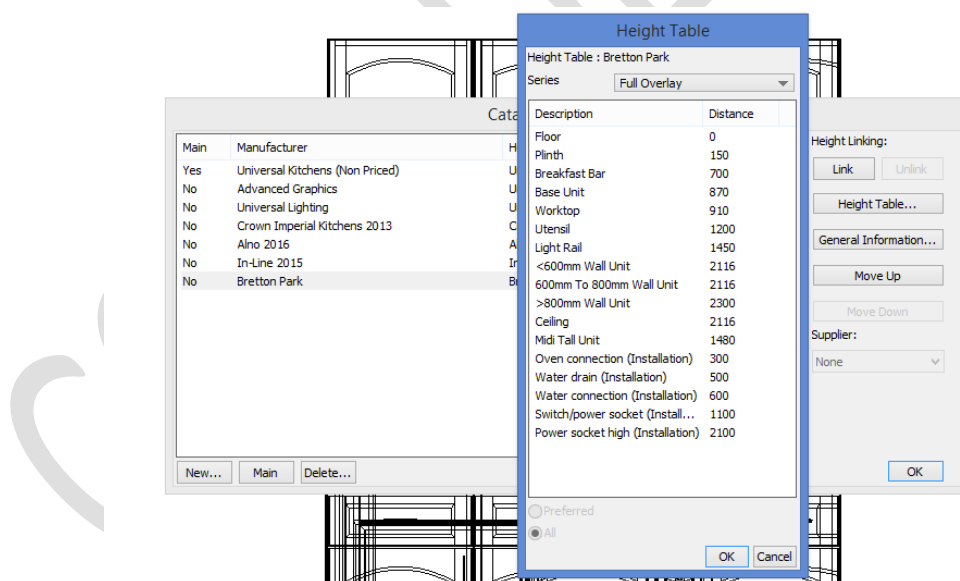
In version 5 it is now possible to remove unwanted column headings without the need to recall the field chooser first – simply click and drag the option no longer required away from the other headings and release the mouse once a cross appears on top of the heading name.

| Alert   | Pos. Number | As Added | Handing | Item Name | Description                                    |
|---|-------------|----------|---------|-----------|--|
|  | 1           | 10       |         | B100      | 1000mm Drawerline Base Unit                    |
|   | 2           | 11       |         | B50       | 800mm Drawerline Base Unit                     |
|   | 3           | 12       | Right   | B50       | 500mm Drawerline Base Unit                     |
|   | 4           | 83       |         | B2DP10IF  | 1000mm 2 Drawer Base In-Frame                  |
|   | 5           | 13       | Left    | BC8040L   | 800mm Drawerline Corner Base Unit (400mm Door) |
|   | 6           | 21       |         | BS100     | 1000mm Drawerline Sink Base Unit               |
|   | 7           | 22       | Right   | B30       | 300mm Drawerline Base Unit                     |

Note: it is still necessary to launch the field chooser in order to add column headings.

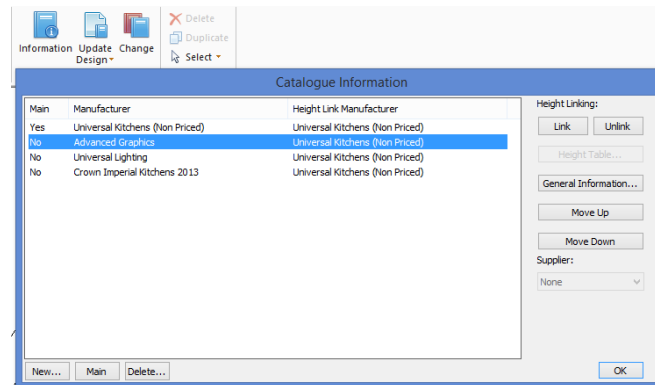
## 160139 Height Table Dialog: Display Current Series from Default Style Block for Each Manufacturer (5.1)

When the Height Table dialog is opened from 'Catalogue Information', 2020 Fusion will now initially display the default series applicable to the selected style block. In addition, the dialog has been made wider in order to clearly display all information both in the drop-down menu and in the description/distance areas of the table itself.



## 160989 Catalogue Info/Height Tables Dialogs - UI/UX Improvements (5.2)

A number of minor changes were made to this dialog in order to improve the user interface and user experience of managing catalogue information. Most significantly, the height link manufacturer is now always displayed, as opposed to (previously) only being shown when clicking on a checkbox.

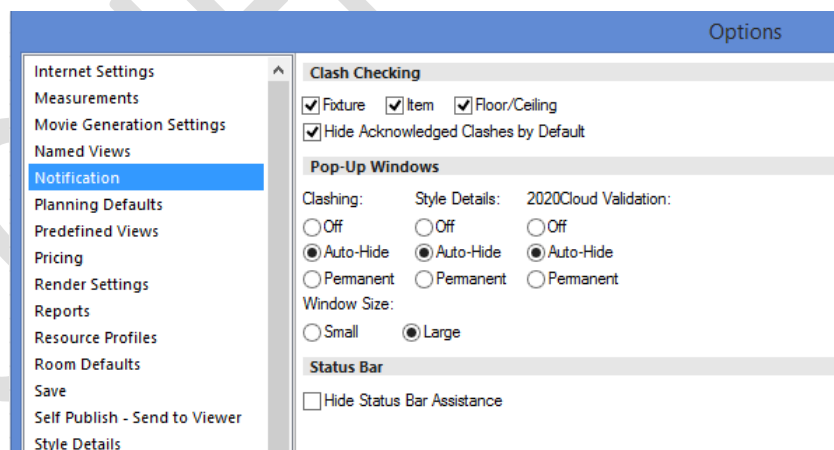


## 160141 Enhancements to Pop-Up Notifications Mechanism/Access Style Options Alerts via Style Details (5.2)

Several changes have been made to 2020 Fusion's notifications system to provide the user with greater control and flexibility in managing and responding to clashing and product availability alerts. These are as follows:

### *Options: New 'Notifications' Section*

This new section of 2020 Fusion's 'Options' allows the user to specifically define the way in which pop-up notifications are presented for each of clashing, style details validation and 2020 Cloud item validation; three options are available in each case – 'Off', 'Auto-Hide' or 'Permanent'.



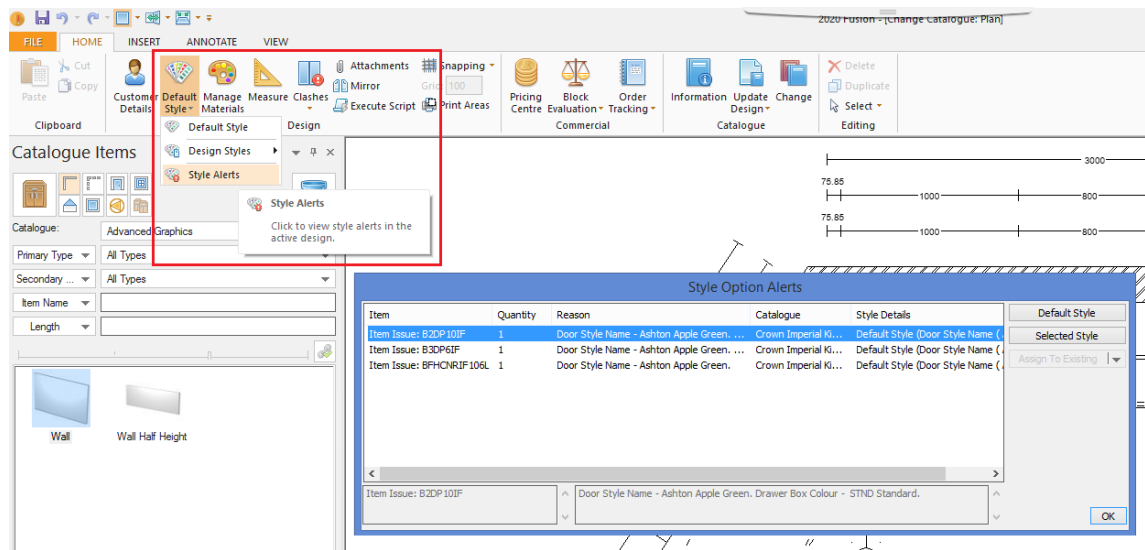
The notifications pop-ups can also be set to be large (providing more detail) or small (providing just summary information).

The new notifications section now also contains the existing preferences relating to clash checking and status bar assistance, both previously found in the 'General' section.

### *Style Options Alerts via Style Details*

The style options alerts dialog was previously only accessible when clicking on the corresponding pop-up notification, there was never an alternative means of generating this in the same way as is possible for the other notification types.

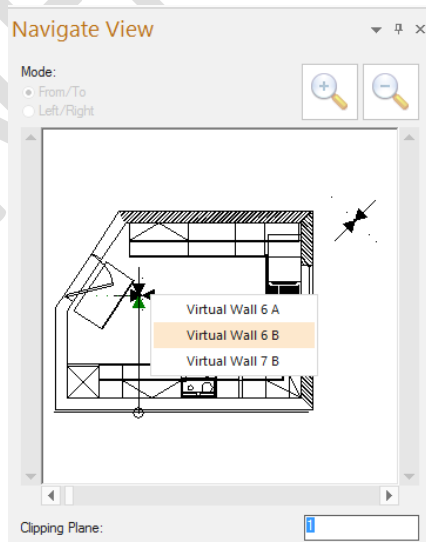
In Version 5, there is a new option under the 'Default Style' heading to display this dialog as and when required, allowing the designer to address issues relating to unavailable items as and when most convenient.



## 124959 Navigation Palette Mini-Plan: Improved Means of Selection of Virtual Walls in Elevation (5.2)

In designs containing several intersecting Virtual Walls, it is sometimes difficult for the user to select the exact wall required using a left-click in the Navigation Palette – this can lead to the incorrect wall being displayed in the Elevation View.

Version 5 introduces right-click functionality allowing a list of the intersecting walls to be presented; the user can then click on the required wall number and the elevation view of the corresponding virtual wall will be displayed.



## Customer Management

### **101883 & 149152 Connect Support for SQLite/Retirement of MS-Access (Including Version 5 Installer Enhancements) (5.0) & 184126 SQLite: Optimisation & Enhancements (5.3)**

2020 Fusion uses a customer management mechanism called 'Connect'. Connect provides businesses who use 2020 Fusion with a convenient means of creating customer records and attributing them to specific members of their sales or design teams (aka 'resources'). Against each customer record, new designs can be created, many variations made and saved against the same customer. Other activities, such as tasks and history entries can be recorded against a customer record as part of Connect's general functionality.

The Connect solution was originally created using an MS-Access database and this has been the basis for a significant majority of 2020 Fusion customer installations. With the passing of time, using MS-Access for the Connect database now has two key disadvantages for both 2020 Fusion itself and its customers:

- It only has a 2GB limit which, for many of our long-standing customers, results in the need to undertake regular archiving or deletion of old records.
- MS-Access databases are only supported in the 32-bit version of 2020 Fusion and 2020, as an organisation, wishes to provide solutions to match the needs of the increasing proportion of 64-bit machines and operating systems in the marketplace. Moreover, effective from Version 6 of 2020 Fusion, we will soon only develop the software as a 64bit application.

In the meantime, in Version 5, the MS-Access database will be automatically replaced with a SQLite database in both the 32bit and 64bit variants of the product. SQLite is a more robust platform and is not limited in terms of its maximum size.

To the end user, the user interface and user experience when using Connect will be no different to before. Indeed, customers can expect improved speed of accessing records and opening/closing designs, as well as a greater underlying level of stability and robustness.

When upgrading from an older version to Version 5 using the standard 2020 Fusion installer, the process of conversion will be fully automated, with the end result being customer's database migrating to the new SQLite format without the need for direct intervention.

Important points to consider when performing the MS-Access to SQLite migration:

- Ensure that no users are currently logged into the database (i.e. ensure that no one is currently using Connect/2020 Fusion).
- Ensure that nothing is currently checked out of the database.
- When migrating a multi-user database, it is recommended to initially migrate just one user, validate that the process has been successful and then, once confirmed, update the rest of the users.
- For older (and, by extension, larger) databases, the process may take a long time, so users will need to exercise a degree of patience.
- Once the migration is in progress, the installer should neither be interrupted, nor should the database utility tool be launched, nor should Connect/2020 Fusion be used at all.
- In the event of any doubts or concerns, end users should contact their local Support Team for advice.

Please note that any archived customers/designs can still be restored after a migration has taken place, so no specific action is required in this respect.

In Version 5.3, the SQLite solution was further enhanced with speed improvements to the user login process, the design preview mechanism and the underlying functionality behind 'find customer'.

## 138512 Fusion Standalone to Support Multiple Telephone numbers (5.0)

Users of 2020 Fusion in 'Standalone Mode' (i.e. those not using the 'Connect' customer management system) now have the ability to enter multiple telephone numbers for their customers. The telephone numbers required can be defined in a new section of the 'Options' area, called 'Customer Phone Types'; the phone types available are identical to those offered in Connect mode.

The phone types selected in the Options are then displayed as a 'drop-down' menu entries in the Customer Details dialog, allowing the designer to enter all required telephone contact information in this single dialog.

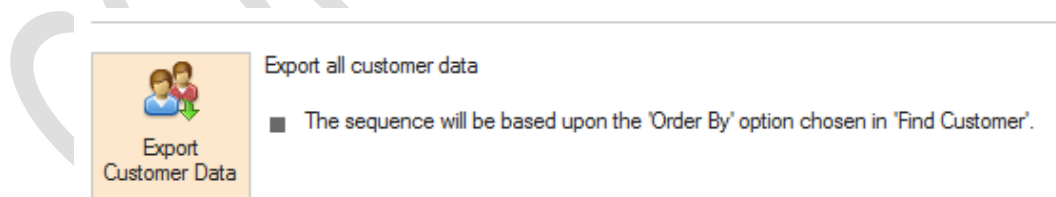
The image shows two screenshots from the 2020 Fusion software. The left screenshot displays the 'Options' menu with 'Customer Phone Types' selected. The right screenshot shows the 'Customer Details' dialog box. In the 'Customer Details' dialog, the 'Telephone' field is highlighted with a red box, and a dropdown menu is open showing the following options: Home, Business, Company, Home2, HomeFax, Mobile, Pager, Delivery, DeliveryFax, Installation, InstallationFax, Invoice, InvoiceFax, Other, and OtherFax. The 'Home' option is currently selected.

In addition, any of the phone types can be referenced in Info Blocks and Report Wizard reports.

For Connect users, any phone types defined for the customer in Connect will also be displayed against the drop-down menu, but as read-only entries.

## 143959 Export Customer Information From Connect (5.3)

2020 Fusion now has the capacity to export all customer information from Connect via a new 'Export Customer Data' option available in the 'Manage', 'Customer' backstage view area.



In the case of Phone Numbers and Email Addresses, the file will contain entries for all those that have been set as 'active' (i.e. checked) via the 'Phone Types' and 'Email Types' configuration areas of Connect.

The export process will generate a .csv file, which can be saved to a location of the user's choice and the customer sort order will be based upon that which is currently set in the 'Find Customer' dialog.

Find Customer

Salesperson: Admin Customer Status: ANY ☐ Current Customers Only

Search:

Order By: Customer ID, Ascending

- Customer ID, Ascending
- Customer ID, Descending
- Surname then Forename, Ascending
- Surname then Forename, Descending

| ID | FirstName | Surname | 2nd FirstName | 2nd Surname | Ref   | Sales Person | HomeAddr1      | HomeAddr2  | HomeAddr3 |
|----|-----------|---------|---------------|-------------|-------|--------------|----------------|------------|-----------|
| 1  | John      | Smith   |               |             | ADM/2 | Admin        | 15 High Street | Ashford    |           |
| 2  | Anthony   | Johnson |               |             | ADM/3 | Admin        | 66 The Halt    | Herne Bay  |           |
| 3  | Tom       | Clark   |               |             | ADM/4 | Admin        | 23 London Road | Canterbury |           |
| 4  | Joe       | Johnson |               |             | ADM/5 | Admin        | 23 The Halt    | Canterbury |           |

The .csv file can then be opened, edited and manipulated in other software such as Excel, for example.

## Pricing & Ordering

### 107896,107898 & 155185 Real Time Block Evaluation & Block Evaluation: Technical Changes/New User Interface (5.0)

Extensive changes have been made to 2020 Fusion's 'Block Evaluation' solution across a variety of areas; these include the following:

- Improved User Interface
- Significant speed improvements in Block calculation
- 'Real Time' background calculation of the best available block
- Enhanced support for IDM data standards.
- Balance group threshold management
- Easy to use searching/filtering mechanism
- Ability to show blocks outside of the valid date range
- Automatic removal of blocks when changing catalogue
- Corresponding changes made in both Catalogue Editor and Cat Admin

Block Evaluation

Choose block to use ... ☐ Show Field Chooser

| Unit Name                    | Advantage  | Advantage%         | Möbel / Arbeitsplatten | Zubehör verrechenbar | Elektrogeräte | Start Date | End Date  |
|------------------------------|------------|--------------------|------------------------|----------------------|---------------|------------|-----------|
| Enter unit name to search... |            |                    |                        |                      |               |            |           |
| B163367L1012                 | £ 1,878.00 | 64.32 %            | (£ 81.00)              |                      |               | 1/10/15    | 31/12/16  |
| Overview Exchange Groups     |            |                    |                        |                      |               |            |           |
| Group                        | Room Value | Block Value        | Unused                 |                      |               |            | Surcharge |
| Möbel / Arbeitsplatten       | £ 2,920.00 | £ 3,001.00         | (£ 81.00)              |                      |               |            |           |
| Overview Totals              |            |                    |                        |                      |               |            |           |
| Block value                  | £ 3,001.00 | Room value bef...  | £ 2,920.00             |                      |               |            |           |
| - Block price                | £ 1,042.00 | - Price advantage  | £ 1,878.00             |                      |               |            |           |
| = Max. price advantage       | £ 1,959.00 | = Total block c... | £ 1,042.00             |                      |               |            |           |
| - Unused value               | £ 81.00    | = Room total af... | £ 1,042.00             |                      |               |            |           |
| = Total price advantage      | £ 1,878.00 |                    |                        |                      |               |            |           |
| B163367ZL1012                | £ 1,713.00 | 58.66 %            | (£ 81.00)              | (£ 179.00)           |               | 1/10/15    | 31/12/16  |
| Overview Exchange Groups     |            |                    |                        |                      |               |            |           |
| Group                        | Room Value | Block Value        | Unused                 |                      |               |            | Surcharge |
| Möbel / Arbeitsplatten       | £ 2,920.00 | £ 3,001.00         | (£ 81.00)              |                      |               |            |           |
| Zubehör verrechenbar         |            | £ 179.00           | (£ 179.00)             |                      |               |            |           |
| Overview Totals              |            |                    |                        |                      |               |            |           |
| Block value                  | £ 3,180.00 | Room value bef...  | £ 2,920.00             |                      |               |            |           |
| - Block price                | £ 1,207.00 | - Price advantage  | £ 1,713.00             |                      |               |            |           |
| = Max. price advantage       | £ 1,973.00 | = Total block c... | £ 1,207.00             |                      |               |            |           |
| - Unused value               | £ 260.00   | = Room total af... | £ 1,207.00             |                      |               |            |           |
| = Total price advantage      | £ 1,713.00 |                    |                        |                      |               |            |           |
| B163359L1012                 | £ 1,642.00 | 56.23 %            | +£ 403.00              |                      |               | 1/10/15    | 31/12/16  |
| B163375L1012                 | £ 1,613.00 | 55.24 %            | (£ 779.00)             |                      |               | 1/10/15    | 31/12/16  |
| B163367ZL1012                | £ 1,560.00 | 53.42 %            | (£ 81.00)              | (£ 357.00)           |               | 1/10/15    | 31/12/16  |
| B163359ZL1012                | £ 1,478.00 | 50.62 %            | +£ 403.00              | (£ 179.00)           |               | 1/10/15    | 31/12/16  |
| B163375ZL1012                | £ 1,449.00 | 49.62 %            | (£ 779.00)             | (£ 179.00)           |               | 1/10/15    | 31/12/16  |
| B163383L1012                 | £ 1,408.00 | 48.22 %            | (£ 1,425.00)           |                      |               | 1/10/15    | 31/12/16  |
| B163359ZL1012                | £ 1,325.00 | 45.38 %            | +£ 403.00              | (£ 357.00)           |               | 1/10/15    | 31/12/16  |
| B163375ZL1012                | £ 1,296.00 | 44.38 %            | (£ 779.00)             | (£ 357.00)           |               | 1/10/15    | 31/12/16  |

☒ Collapse all rows ☒ Show Blocks With An Invalid Date Range ☐ Show Trade Prices

As not all items within the design are available, block evaluation will not produce optimum results.

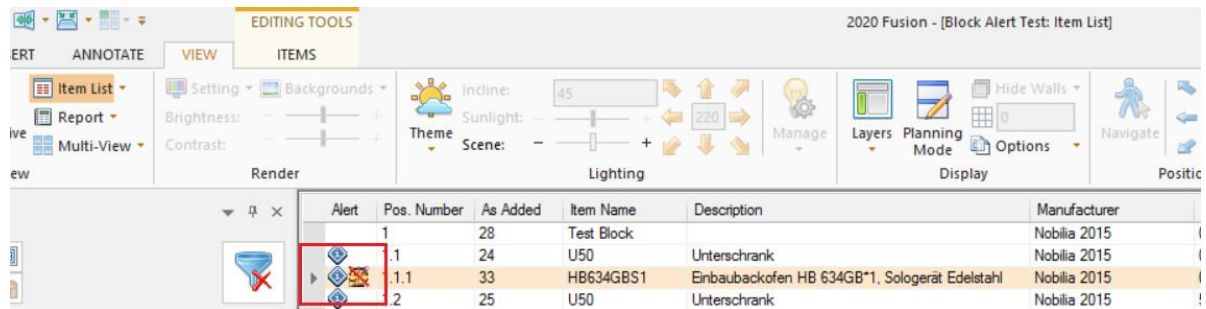
Finish Cancel

There are a number of new preferences that relate to the configuration of the new functionality – please refer to the specification for full details.

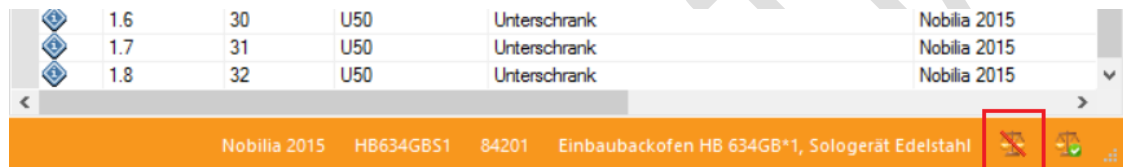
## 121489 Alert Symbol for Non-Balanced Units in a Block (5.0)

If a design item is linked to a unit that forms part of a block, but is not directly used by the block (i.e. it is non-balanced) 2020 Fusion will now display an alert symbol to the user in two areas of the application:

In the item list against the unit in the 'alerts' column:



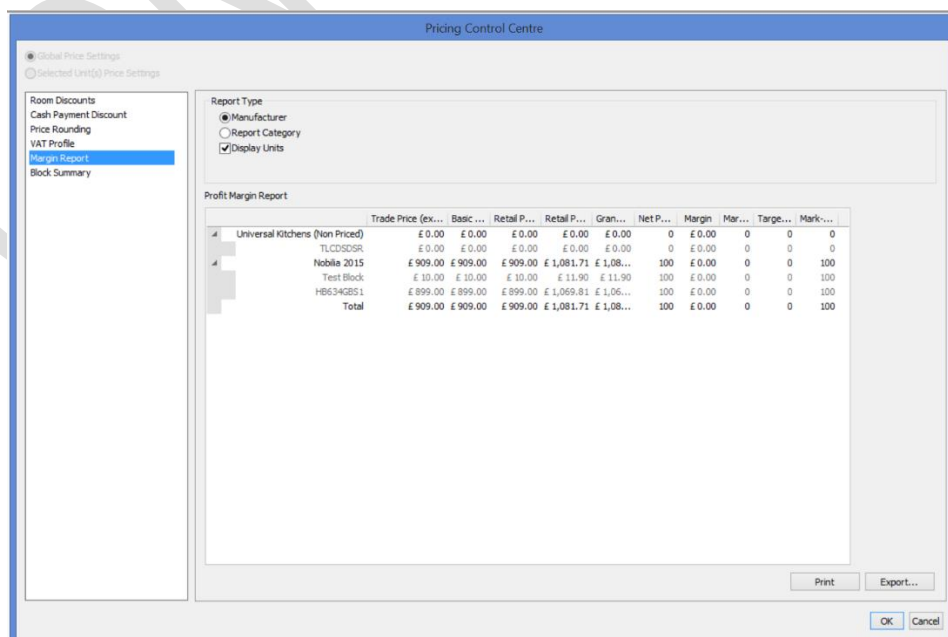
On the status bar, if the corresponding alert is set to be displayed, whenever a non-balanced design item is selected:



## 121455 Enhancements to 'Margin Report' in Pricing Control Centre (5.0)

The following changes have been made to the Margin Report view/printout in the Pricing Control Centre:

- Report data displayed in the form of a table.
- Addition of a grand total column.
- Ability to resize and reorder column headings (these will be saved to user preferences).
- New 'Export...' to HTML option.
- Format changes to the report header and footer.



## 124212 Enhancement to CatAdmin Export Copy/Paste (to include Series) (5.0) & 108087 Enhancements to CatAdmin (Series support in UI and Complex Pricing) (5.1)

A unit and its related prices can appear in multiple series. Previously, Cat Admin only allowed the editing of a single series (either the neutral or the 'first valid' series, if one is defined). Price editing was also very restricted (to allow editing only for units with a single price table [of basic/trade/retail], and also not allowing editing when multiple DLT types are used within a price table).

In Version 5, with a hidden preference set, a user of Catalogue Admin can now view and edit complex pricing structures, including multiple price tables per price table type and price tables based on multiple DLT types. The user will also be able to edit multiple series information for each unit so that the values for the different series can be edited; they will be able to view the unit list based on a single series. The hidden preference required to activate 'Expert Pricing' is as follows:

[Customise]

ExpertPricing = "1"

In addition, Version 5 Cat Admin now also supports the use of copy and paste of a product's series information between Catalogue Admin and Excel.

## 155072 No Trade Block: Enhancement for Pricing Control Centre (5.1)

A number of changes have been made the 'Change Price' area of the Pricing Control Centre, including:

- It will now be possible to change the trade price of replacement items that relate to a 'no trade block'.
- When a design contains a 'no trade block', the 'Block Prices' section will no longer display or allow a user to modify the blocks total trade price.
- When selected units in design include a 'no trade block', but do not include non-block units, then 'Unit Prices' will not display old or new retail price fields.
- The addition of a user string which will indicate if a report category is not available within the margin area owing to a no trade block.

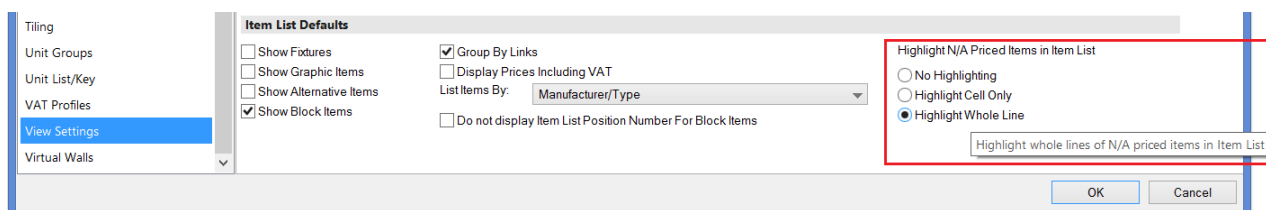
## 160531 Item List View: Highlight Whole Line When Item Has Price of 'N/A' (v5.2)

Following on from the functionality implemented in Version 4.2 (108416) to highlight an individual N/A (Not Available) 'price cell' in the Item List view, a further enhancement now gives the user the ability to highlight the entire row for such items.

This draws even greater attention to items that may require changes to ensure that a price is correctly applied and also overcomes scenarios in which the 'Price' column may be hidden by the end user.

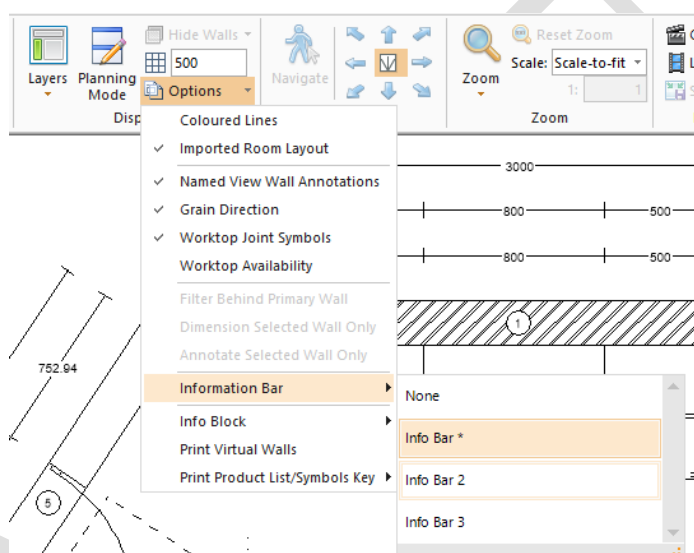
| Pos. Number | As Added | Item Name | Handing | Description                                    | Price  |
|-------------|----------|-----------|---------|--|--------|
| 1           | 10       | B100      |         | 1000mm Drawerline Base Unit                    | £ 0.00 |
| 2           | 11       | B80       |         | 800mm Drawerline Base Unit                     | £ 0.00 |
| 3           | 12       | B50       | Right   | 500mm Drawerline Base Unit                     | £ 0.00 |
| 4           | 83       | B2DP10IF  |         | 1000mm 2 Drawer Base In-Frame                  | N/A    |
| 5           | 13       | BC8040L   | Left    | 800mm Drawerline Corner Base Unit (400mm Door) | £ 0.00 |
| 6           | 21       | BS100     |         | 1000mm Drawerline Sink Base Unit               | £ 0.00 |
| 7           | 22       | B30       | Right   | 300mm Drawerline Base Unit                     | £ 0.00 |

The existing preference in 'View Settings' has also been extended to reflect this enhancement – changes made to the preference results in a 'live' update for all designs:



## 164750 Enhancements to Info Bar (5.2)

The existing Info Bar selection interface has been updated to also include a 'None' option, making it easier for a designer to turn Info Bars on or off for given views.



In addition, the asterisk used to denote the default Info Bar has now been made a non-editable element of the Info Bar name to ensure that this indicator is always displayed. An asterisk is now also, itself, an invalid character when entering an Info Bar name.

## 168047 Additional/Exposed Blocks Preferences (5.2)

The Block Evaluation development undertaken in Version 5.0 has been further extended by the exposure and addition of a number of user interface preferences relating to block balance group information; these are as follows:

- The ability to show/hide the block balance group column.
- The ability to indicate block balance group surcharges/unused allowances using +/- symbols.
  - A hidden preference facilitates the reversal of the meaning of the +/- symbols
- The ability to indicate block balance group surcharges/unused allowances using red/blue text.
- The ability to indicate block balance group surcharges/unused allowances using braces (brackets).
- The ability to show a user defined string (default 'T+') when the block balance group threshold is exceeded.
- The ability to show coloured text when the block balance group threshold is exceeded.
- The ability to show bold and italic text when the block balance group threshold is exceeded.

Block Evaluation

Choose block to use ... ☐ Show Field Chooser

| Unit Name                | Advantage  | Advantage%         | Möbel / Arbeitsplatten | Zubehör verrechenbar | Elektrogeräte | Start Date | End Date |
|--------------------------|------------|--------------------|------------------------|----------------------|---------------|------------|----------|
| B163367L1012             | £ 1,878.00 | 64.32 %            | (£ 81.00)              |                      |               | 1/10/15    | 31/12/16 |
| Overview Exchange Groups |            |                    |                        |                      |               |            |          |
| Group                    | Room Value | Block Value        | Unused                 |                      |               |            |          |
| Möbel / Arbeitsplatten   | £ 2,920.00 | £ 3,001.00         | (£ 81.00)              |                      |               |            |          |
| Overview Totals          |            |                    |                        |                      |               |            |          |
| Block value              | £ 3,001.00 | Room value bef...  | £ 2,920.00             |                      |               |            |          |
| - Block price            | £ 1,042.00 | - Price advanta... | £ 1,878.00             |                      |               |            |          |
| = Max. price advantage   | £ 1,959.00 | = Total block c... | £ 1,042.00             |                      |               |            |          |
| - Unused value           | £ 81.00    | = Room total of... | £ 1,042.00             |                      |               |            |          |
| = Total price advantage  | £ 1,878.00 |                    |                        |                      |               |            |          |
| B163367ZL1012            | £ 1,713.00 | 58.66 %            | (£ 81.00)              | (£ 179.00)           |               | 1/10/15    | 31/12/16 |
| Overview Exchange Groups |            |                    |                        |                      |               |            |          |
| Group                    | Room Value | Block Value        | Unused                 |                      |               |            |          |
| Möbel / Arbeitsplatten   | £ 2,920.00 | £ 3,001.00         | (£ 81.00)              |                      |               |            |          |
| Zubehör verrechenbar     |            | £ 179.00           | (£ 179.00)             |                      |               |            |          |
| Overview Totals          |            |                    |                        |                      |               |            |          |
| Block value              | £ 3,180.00 | Room value bef...  | £ 2,920.00             |                      |               |            |          |
| - Block price            | £ 1,207.00 | - Price advanta... | £ 1,713.00             |                      |               |            |          |
| = Max. price advantage   | £ 1,973.00 | = Total block c... | £ 1,207.00             |                      |               |            |          |
| - Unused value           | £ 260.00   | = Room total of... | £ 1,207.00             |                      |               |            |          |
| = Total price advantage  | £ 1,713.00 |                    |                        |                      |               |            |          |
| B163359L1012             | £ 1,642.00 | 56.23 %            | +£ 403.00              |                      |               | 1/10/15    | 31/12/16 |
| B163375L1012             | £ 1,613.00 | 55.24 %            | (£ 779.00)             |                      |               | 1/10/15    | 31/12/16 |
| B163367ZL1012            | £ 1,560.00 | 53.42 %            | (£ 81.00)              | (£ 357.00)           |               | 1/10/15    | 31/12/16 |
| B163359ZL1012            | £ 1,478.00 | 50.62 %            | +£ 403.00              | (£ 179.00)           |               | 1/10/15    | 31/12/16 |
| B163375ZL1012            | £ 1,449.00 | 49.62 %            | (£ 779.00)             | (£ 179.00)           |               | 1/10/15    | 31/12/16 |
| B163383L1012             | £ 1,408.00 | 48.22 %            | (£ 1,425.00)           |                      |               | 1/10/15    | 31/12/16 |
| B163359ZL1012            | £ 1,325.00 | 45.38 %            | +£ 403.00              | (£ 357.00)           |               | 1/10/15    | 31/12/16 |
| B163375ZL1012            | £ 1,296.00 | 44.38 %            | (£ 779.00)             | (£ 357.00)           |               | 1/10/15    | 31/12/16 |

☒ Collapse all rows  
☒ Show Blocks With An Invalid Date Range  
☐ Show Trade Prices

As not all items within the design are available, block evaluation will not produce optimum results.

Finish Cancel

All of these preferences are accessible in the 'Pricing' options area and will have a 'live' effect upon the representation of the values concerned.

Options

Annotation  
Auto Dimension  
AutoFeatures  
Automatic Updates  
Batch Printing  
Customer Phone Types  
Customise  
Dealer Details  
Description Types  
Design Wizard  
Dimensioning  
Favourite Styles  
Fusion 3D  
General  
General Text  
Info Bar  
Info Block  
Internet Settings  
Measurements  
Movie Generation Settings  
Named Views  
Notification  
Planning Defaults  
Predefined Views  
Pricing  
Render Settings  
Reports  
Resource Profiles  
Room Defaults  
Save  
Self Publish - Send to Viewer  
Style Details  
Tiling  
Unit Groups

Access Rights  
Standard Pricing Access Rights   
Master Pricing Access Rights

Factor Collection Checking  
☐ Out of date factor set  
☐ No factor collection  
☐ Factor collection with single zero valued factor set  
☐ Invalid factor collection

Price Rounding (Room Default)  
☒ No Rounding  
☐ Round Retail excluding VAT Prices  
☐ Round Retail including VAT Prices  
Round to nearest

Block Evaluation  
☐ Show Blocks with an Invalid Date Range by Default.  
☒ Enable Real Time Block Evaluation by Default.  
Minimum Price Required for Real Time Blocks to be Evaluated   
☐ Show Block Balance Group Column in the Block Evaluation dialog.  
Block Evaluation Balance Group surcharge/unused  
☐ Show Block Balance Group Surcharge/Unused using '+/-'  
☐ Show Block Balance Group Surcharge/Unused using colour text red/blue  
☐ Show Block Balance Group Surcharge/Unused using braces.  
Block Evaluation Balance Group room price exceeded threshold  
☐ Show T+  
☐ Show text colour to identify if a balance group exceeds its threshold.  
☐ Show bold/italic to identify if a balance group exceeds its threshold.

OK Cancel

## 168020 Block Evaluation Dialog - Balance Group Column Values to Be Column Aligned/Collapse Best Block Preference (5.2)

Information displayed within the 'Balance Groups' and 'Balance Groups Points' columns will appear to the user as nested columns and each nested column will relate to a balance group.

By default, the best available block will now be collapsed; however, for those solution providers who would prefer this to be expanded for their customers, this can be set as such via a hidden preference:

[Customise]

ExpandBestAvailableBlock = "1"

## NOREF Block Evaluation - N/A Warning Dialog Enhancement (5.2)

The existing warning message indicating that Block Evaluation is being run with some design items currently unavailable is now appended with a warning triangle:



This minor user interface enhancement is documented in the Real Time Block Evaluation & Block Evaluation: Technical Changes/New User Interface specification.

## 167626 Realtime Block Evaluation: Solution for Keyboard Usage (5.2)

Following the original implementation of Real Time Block Evaluation (107896), it was identified that keyboard only (or keyboard-centric) usage sometimes did not result in the system going into an 'idle' state and, as such, the 'trigger' to run real time block evaluation did not always take effect.

To resolve this situation, a hidden preference is now available allowing a solution provider to define the frequency that 2020 Fusion will check for real time block events:

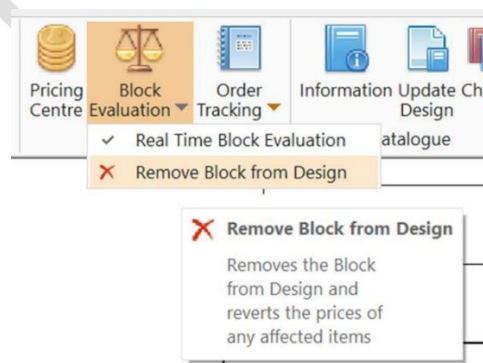
[Customise]

RealTimeBlockEvaluationTimerDelay = "n" (where "n" is a value in seconds).

The default frequency is every 2 seconds. Should solution providers wish to use a different value, then this preference will need to be added to the PPPrefs.ini file.

## 172810 New Functionality for 'Delete Block' (5.2)

A new entry has been added to the Block Evaluation menu, allowing designers to be able to easily remove a block from design and revert the prices of all affected design items without the need to (re)initiate the Block Evaluation process first.



## 177295 Block Evaluation: Extend Trade/Retail Display Preferences (5.3)

This requirement has led to an extension of an existing Block Evaluation preference which previously allowed the solution to either display just retail prices (= "0"), or to display both trade and retail prices (= "1"). The extension of the functionality now allows for two additional scenarios, details of which are as follows:

[Customise]

BlockEvalTradePrices = ""

- "0" - Display retail prices only within block evaluation (the current default if the preference is not defined).
- "1" - Display both retail and trade prices, with retail shown by default.
- "2" - Display trade prices only within block evaluation.
- "3" - Display both retail and trade prices, with trade shown by default.

## 179171 Block Evaluation: Invalid Date Range Interface Enhancements (5.3)

At the beginning of a new year, it is commonplace for many manufacturers to allow (expired) blocks from the outgoing year to still be ordered at the beginning of a new year. However, in earlier versions of Fusion, the functionality did not exist to allow this to happen.

This requirement delivers two new elements, as follows:

- Blocks with invalid date range will now have their Unit Name field highlighted in red in the Block Evaluation dialog, when displayed.

| Unit Name      | Block Type | Advantage  | Advantage% | Room Price | To...  | To... | Start Date | End Date |
|----------------|------------|------------|------------|------------|--------|-------|------------|----------|
| B158121Z1L1012 | Alle       | £ 1,002.69 | 54.64 %    | £ 832.29   | £ 6... | £...  | 1/10/15    | 31/12/16 |
| B158123Z1L1012 | Alle       | £ 969.85   | 52.85 %    | £ 865.13   | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B158121Z2L1012 | Alle       | £ 849.18   | 46.28 %    | £ 985.80   | £ 6... | £...  | 1/10/15    | 31/12/16 |
| B171843Z1L1012 | Alle       | £ 842.52   | 45.91 %    | £ 992.46   | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B163829L1012   | Alle       | £ 841.33   | 45.85 %    | £ 993.65   | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B158123Z2L1012 | Alle       | £ 816.34   | 44.49 %    | £ 1,018.64 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B158119L1012   | Alle       | £ 815.51   | 44.44 %    | £ 1,019.47 | £ 5... | £...  | 1/10/15    | 31/12/16 |
| B171843Z2L1012 | Alle       | £ 689.01   | 37.55 %    | £ 1,145.97 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B163829Z1L1012 | Alle       | £ 675.92   | 36.84 %    | £ 1,159.06 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B158119Z1L1012 | Alle       | £ 650.10   | 35.43 %    | £ 1,184.88 | £ 5... | £...  | 1/10/15    | 31/12/16 |
| B163831L1012   | Alle       | £ 603.33   | 32.88 %    | £ 1,231.65 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B163829Z2L1012 | Alle       | £ 522.41   | 28.47 %    | £ 1,312.57 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B158119Z2L1012 | Alle       | £ 496.59   | 27.06 %    | £ 1,338.39 | £ 5... | £...  | 1/10/15    | 31/12/16 |
| B163831Z1L1012 | Alle       | £ 437.92   | 23.87 %    | £ 1,397.06 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B163833L1012   | Alle       | £ 393.89   | 21.47 %    | £ 1,441.09 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B165590E1012   | Alle       | £ 285.12   | 15.54 %    | £ 1,549.86 | £ 6... | £...  | 1/10/15    | 31/12/16 |
| B163831Z2L1012 | Alle       | £ 284.41   | 15.50 %    | £ 1,550.57 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B165592E1012   | Alle       | £ 258.23   | 14.07 %    | £ 1,576.75 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B163833Z1L1012 | Alle       | £ 228.48   | 12.45 %    | £ 1,606.50 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B171666E1012   | Alle       | £ 149.94   | 8.17 %     | £ 1,685.04 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B163835L1012   | Alle       | £ 140.42   | 7.65 %     | £ 1,694.56 | £ 0... | £...  | 1/10/15    | 31/12/16 |
| B165590Z1E1012 | Alle       | £ 119.71   | 6.52 %     | £ 1,715.27 | £ 6... | £...  | 1/10/15    | 31/12/16 |

- Setting the following hidden preference will allow the silent trade block process to also consider expired blocks as well as active ones:

[Customise]

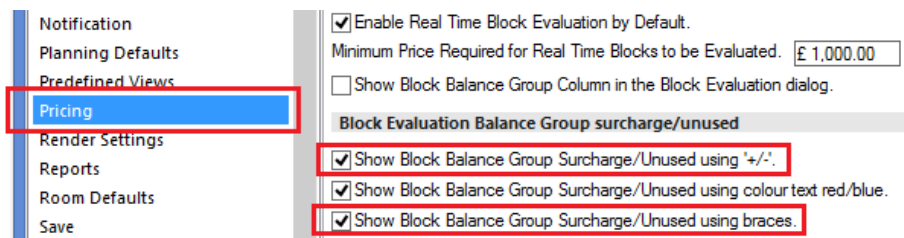
EvaluateSilentTradeBlocksWithInvalidDateRange = "1"

The default behaviour is for this preference not to be applied.

## 179189 Info Bar Representation of Block Balance Groups to Reflect Block Evaluation Formatting for Surcharges & Unused Allowances (5.3)

In Version 5.2, requirement 168047 (Additional/Exposed Blocks Preferences) enabled a user to provide additional visual indicators to represent block balance group surcharges/unused allowances. This resulted in the creation of new user accessible preferences found in the 'Pricing' section of 'Options'.

In Version 5.3, a request was made for some of these preferences to also control the representation of the corresponding information in Fusion's Info Bar. As such, it is now possible indicate the corresponding values in the Info Bar with +/- and or brackets.



Note: The colour preference does not extend to the Info Bar, as it has its own colour choice mechanism.

## Scripting & Integration

### 125411 New 2020 Fusion Scripting Language (5.0)

The 2020 Fusion scripting system has been rewritten using the .NET Framework. This basis for this was twofold:

- The existing scripting language used by 2020 Fusion has many restrictions, the most significant being that it is difficult to debug and it is non-standard. It also does not (readily) support common features such as web service connections or complex dialogs. The new system possesses a richer feature set, has fully integrated debugger support and will result in more robust solutions being possible.
- The new scripting system complements the plan for 2020 Fusion to become a 64-bit only application, effective from Version 6.0.

All existing functionality provided by the legacy scripting solution, including any appropriate interactions with the Fusion user interface will be perpetuated in the new solution. This includes user-run scripts, scripted reports, modifier scripts, scripted Info Bar changes and open/create/close room hooks.

Users of the 'Fusion.Scripting' system will be subject to the same licensing as 2020 Fusion, i.e. it will require either a Physical, network or soft license to function.

### 108286 Export materials changed from 'Change Material' to XML (5.2)

2020 Fusion's XML generation facility has been updated so that the exported content also includes details of any changes of material made for individual products. The output will include both details of the original colour/material and that of its replacement.

This new functionality is of specific value to the 2020 Fusion-Insight solution, but will equally benefit other users of the application's XML export facility.

## 155831 Scripted Addition and Modification of Customer Data in Connect Mode (5.3)

A new command line option now makes it possible to add or edit customer information held within the Connect database using Fusion's scripting tools. This includes customer name(s), phone numbers, email addresses, salesperson, customer status, customer reference, opening date, address lines for each address type, customer notes and customer general data.

In addition, it will be possible to add new customers via this mechanism.

This new functionality is available via both the old and new (.NET) Fusion scripting mechanisms.

## 156522 Ability to Identify if a Catalogue (or its children) has Blocks via Scripting (5.3)

A new scripting function has been added which now makes it possible to identify if a given catalogue (or any of its child catalogues) has a block or not. This will include a check for block clearing systems.

This new functionality is available via both the old and new (.NET) Fusion scripting mechanisms.

## Content Production & Deployment

### 154145 Ability to export a model's cut out information (5.1)

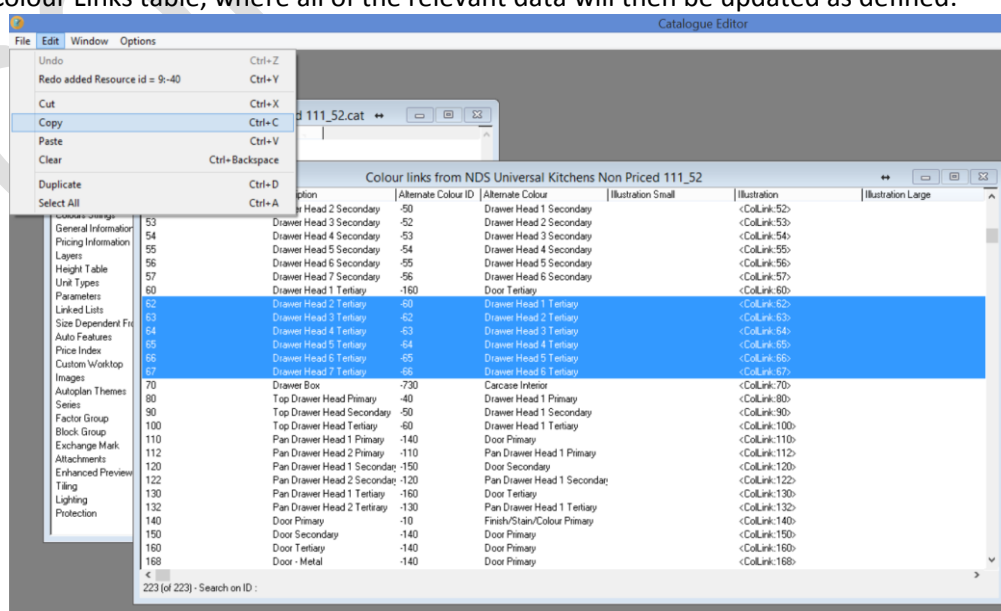
The CiCExport script is a content creation tool that allows analysts to export manufacturer information from 2020 Fusion catalogues so that equivalents can be created and hosted in the '2020 Cloud'.

This new requirement delivers an extension to the script, allowing it to also export the cut out information from relevant 3D models in a manner compatible with the new cloud-based method for defining cutout information.

This is a 2020 internal script and not for general distribution.

### 166364 Copy/Paste Support for Colour Links (5.2)

Consistent with other requests implemented in previous versions of Catalogue Editor, Version 5 now allows content producers to copy and paste data from the Colour Links table and paste it into an external program (such as Excel). There it is possible to modify the data, copy it to the clipboard and paste it back into the Colour Links table, where all of the relevant data will then be updated as defined.



## 154051\* XML Format Compatibility required for IPDS Conversion script (5.2)

The IPDS conversion script is used by the 2020 Content Team to convert SHD sourced manufacturer catalogues from German into other languages using a target language/market IDM file. Historically, the IDM files have always been provided in .CSV format.

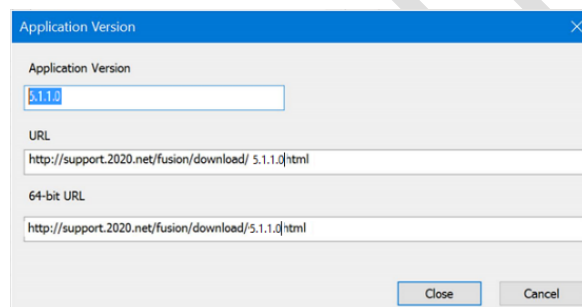
It is now the case that an increasing number IDM files are being presented by manufacturers in the .xml file format and, as such, the script has been rewritten to be able to accommodate both .csv and .xml files.

Note: The script itself has been rewritten using the new 2020 Fusion .NET based scripting framework and, as such, can only be used in a 64bit environment.

## Miscellaneous & Non-Coded

### 152717 FOMS Application update to allow 32 and 64 bit installers (5.1)

An update to the 2020 Fusion FOMS tool has been made which allows a link to be entered for each a 32-bit and 64-bit variant of the Version 5 installer.



This means that once Version 5 installed on an end user's system, for subsequent updates, they will be directed to the correct download location based upon the automatic detection of their operating system.

### 156982\* Windows 10 Certification (5.1)

20-20 Technologies Ltd currently enjoys the position of being a 'Microsoft Gold Certified Partner' and, as such, we continuously endeavour to pursue and attain all relevant testing certification from Microsoft for the 2020 Fusion product.

As a previous recipient of Windows XP, Windows Vista, Windows 7 and Windows 8 certifications, 2020 Fusion has also been submitted for, and has achieved, the status of 'Windows 10 Compatible'.

This success has been achieved against version 5.1 of 2020 Fusion using our standard installer and, as a result, we are able to display this logo on our installation media. All materials relating to the 'Windows 10 Compatible' can be found in a corresponding folder on OneDrive.



### **145436\* 2020 Fusion to Support Windows Server 2016 (5.1)**

Following a full process of testing and validation, active support is now provided for the use of 2020 Fusion on Windows Server 2016 'with Desktop Experience' (64 bit). Please note that Windows Server 2016 'Nano-Server' is not a supported variant of this platform.

No specific development was necessary in order to achieve this.

For full details of all supported operating systems for use with 2020 Fusion Version 5, please refer to the 2020 Fusion (Version 5) Supported Operating Systems document, hosted on OneDrive.

### **145432\* 2020 Fusion to Support SQL Server 2016 (5.1)**

Following a full process of testing and validation, active support is now provided for the use of 2020 Fusion with SQL Server 2016 (Standard & Express editions), 64-bit. No specific development was necessary in order to achieve this.

For full details of the conditions of SQL Server support for 2020 Fusion, please refer to the 2020 Fusion (Connect) and Microsoft SQL Server document, hosted on OneDrive.

### **171895\* Retirement of 'Import Virtual Studio Pack' Feature (License Flag #76) (5.2)**

Also known as 'Import Virtual Studio Lead', this was a mechanism that formed part of our, now redundant, Virtual Studio integration strategy. This specific function once allowed a designer to import 'Room Plan Data' directly into the Fusion application (such a design would have been generated/modified by a consumer using a Virtual Planner solution online).

However, this tool/solution has not been supported or has been viable for some time and, effective from Version 5.2, the facility to import such files has been removed and the license flag controlling this no longer has any effect.