What's New in Impact / Enterprise 2019

Phil Spooner/Matt Hewitt

Document version: 1.0

This document contains details on the new features in Impact. This document applies to only the specified version of Impact.

ARDEN SOFTWARE

Contents

Overview 5
2D 6
Dimension Tools 6
General Drafting and Editing 7
Arrow key/cursor key nudges 7
New "To Layers" Tool 11
New Layer "Quick Duplicate" Tool 12
Entity Highlighter Improvements* 14
New "Snap Cursors" Indicators 16
Palettes* 17
General 19
Multi-page PDF Export* 19
PDF Export to Respect Drawing Order (for better CutCrease export support)* 23
Multi-Face Export* 25
PDF Library Update 25
DWG Library Update 25
Support for DDES3 (CGATS/SC6/WG3) IT8.6 Revision Import 25
Drag and drop from Outlook (or file locations) 26
Licensing/Nalpeiron V10* 28
Licensing/Dongleless Licence Server* 30
Script Security Modifications* 30
Parametrics & Standards* 31
Memory Handling Improvements - Large-Address Aware (LAA) 32
Document Relationships for Symbols and Templates* 32
Manufacturing 33
Stripper Tool Performance Improvements 33
Plotter Optimisation* 33
Symbol Position Reference When Plotting* 34
Automatic Creation of Symbol Patterns and Alternative Symbols 35
Blanker Frame Symbols Ordering* 35
Rotary Dieboard Workflow Improvements 36
Diemaking Auto Tasks and Value Mappings* 37
User Interface 38
Screentips for Enhanced Project Previews * 38

Enhanced 'Open Project' dialog, including custom field lookup 40
Icons for Visibility Toggles 41
Database 42
Many-to-many* 42
Database Structure (DBS) 43
Non-enforced Null Changes* 44
Archived or Active Items for Dynamic Lookups* 44
Table Display Names/Prompts 44
Translatable Table and Column Prompts* 45
Layer List Sorting 45
Improved Customer Selector and Customer Group handling* 46
Bill of Materials (BOM)* 48
New Project 'Open Copy' Action 48
Enhanced Database Windows* 48
Control Type Icons 48
New Control Types* 49
Picture Control* 49
Check Listbox* 50
Check ListView* 50
Check TwinList* 50
Table ListView* 51
Child Table ListView* 51
Database Window Test Mode 51
Advanced Formatting for Customer and Address Display Names** 52
Auto-Numbering Folder Creation 52
Simplified Custom Table Field Links 53
Friendly Field Prompts 54
Dynamic Image Generation (Reports)* 54
Create a new layer without completing required fields* 54
Double-click Browser Queries to Execute* 55
3D 56
Speed 56
Automation 56
Extended 3D File Format Import Support** 56
Drag & Drop 3D Import 57
Improved Collada Export Support for Sketchfab 57

Zipped/Archived 3D Export* 58
3DX Library Update 58
3DxWare (SpaceMouse) Library Update 58
Graphics 59
Illustrator Workflow 59
Standalone Plug-in for Improved Adobe Illustrator File Exchange 59
Enterprise 61
General 61
Auto-generated Enterprise Folders Enabled for Sync 61
Improved Options for Opening Projects at Site Databases 61
Coming Soon 62

Overview

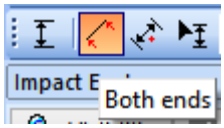
This document covers the new features introduced in Impact **2019** (internal build 11.0). Many of these features can be utilised out-of-the-box; however, several may require configuration changes, i.e., where an existing installation is to be upgraded. Such features are identified throughout this document by an asterisk (*). Certain features may have also been introduced towards the end of the Impact 2016 life-cycle, contained within patches or test builds. Such features are identified throughout this document by twin asterisks (**). Not all the features described within this document are applicable to all Impact licenses. Please consult Arden Software for further details.

2D

Dimension Tools

One-click dimensioning (Both Ends option)

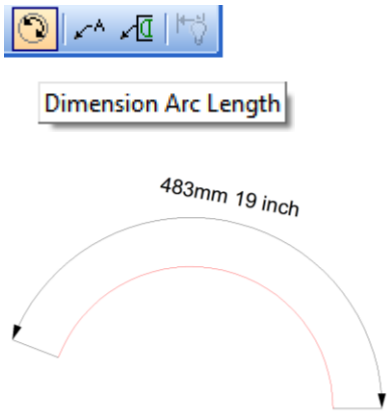
- A new **Edit Bar** option (**Both Ends**) has been added to the **linear** dimension tools (Dimension **Horizontal**, Dimension **Vertical**, Dimension **Aligned** & Dimension **Rotated**).



- When enabled, the option allows linear dimensions to be placed with fewer mouse clicks.
- As opposed to picking the start & end points for a linear dimension, and then setting projection line length via a 3rd mouse click, the new option simply requires a single click to identify an entity and a single click to specify the projection line length.
- The tool also works via click & drag – whereby a single click identifies the entity and the projection line length is set once the mouse button is released.

New "Dimension Arc Length" Tool/Entity Type

- A new Dimension tool/entity type has been added (**Dimension Arc Length**)**.** As expected, the tool will allow the dimensioning of the length of an arc and the usual radial dimension options are applicable (**Fixed Text**, **Text Mode**, **Text Width**, **Text Height**, **Dimension Setting**).

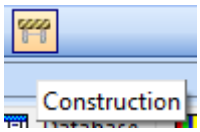


- The tool simply requires you to pick the arc (to be dimensioned) and to specify the projection line length.
- The new tool may also be used when creating parametric dimensions (for resizable designs).

General Drafting and Editing

Construction Entity Consistency

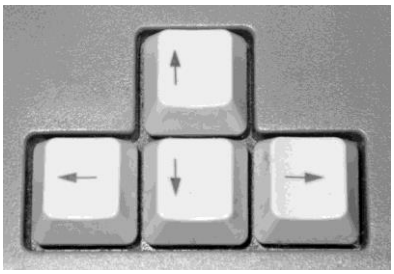
- The behaviour for persisting the **Construction** entity option across tools has been modified:

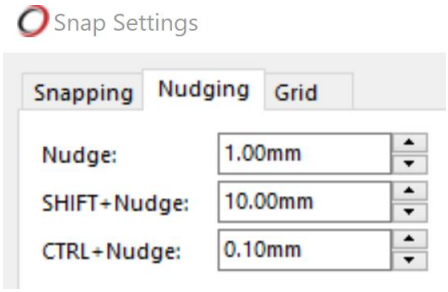


- In Impact **2016** and earlier, activating the **Construction** option when running the **Line Vertical** tool (for example) would also activate the **Construction** option for the subsequent **Line Horizontal** tool use.
- In Impact **2019**, all tools which make use of the **Construction** option will now persist the last-used value on a per-tool basis, and therefore not influence the behaviour of other tools.

Arrow key/cursor key nudges

- Over the last few Impact releases, the arrow/cursor keys (aka **Nudge** tools) have begun to control many basic tool options.





- The latest batch of tools to adopt this functionality include:

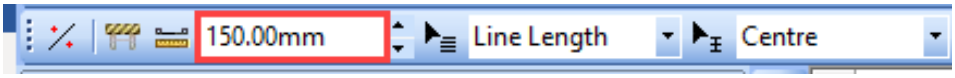
Drawing tools:

Multiple Lines & Arcs – in the **Arc Start End Radius** mode, the **Nudge** can be used to interactively modify the **Radius** value on the **Edit Bar**.

Line Axes - the **Nudge** can be used to interactively modify the **Line Length** value, on the **Edit Bar**.

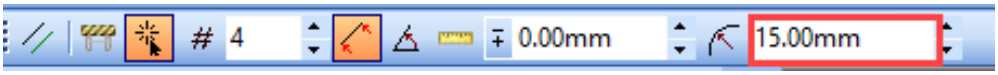
Line Vertical & Line Horizontal - the **Nudge** can be used to interactively modify the **Line Length** value, on the **Edit Bar**.

Bisect 2 Points - the **Nudge** can be used to interactively modify the **line length** value, on the **Edit Bar**.

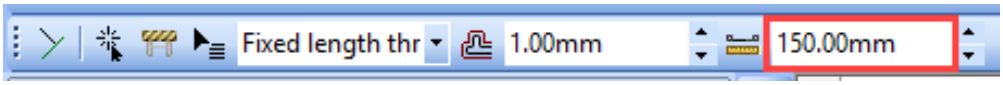


Line Angle Point - the **Nudge** can be used to interactively modify the **Line Length** value, on the **Edit Bar**.

Line Offset – when used **interactively**, the **Nudge** can be used to interactively modify the **Fillet Radius** value, on the **Edit Bar**.



Perpendicular Offset- the **Nudge** can be used to interactively modify the **Line Length** value, on the **Edit Bar**.

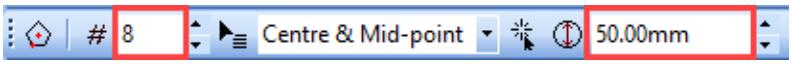


Line 2Point Offset – in non-interactive mode, the **Nudge** can be used to interactively modify the **Offset Distance** value (left/right arrows), and the **Number of Offsets** (up/down arrows) on the **Edit Bar**.

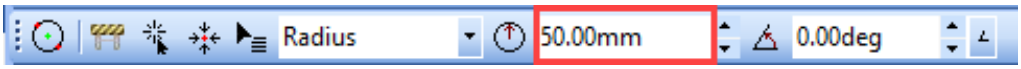
In interactive mode, the **Nudge** affects the **Number of Offsets** only.

Rectangle - the **Nudge** can be used to interactively modify the **Width** (left/right arrows) **& Height** (up/down arrows) **values** on the **Edit Bar**.

Polygon - the **Nudge** can be used to interactively modify the **number of sides** (for the polygon) and the **diameter** (of the polygon) the on the **Edit Bar.** The left/right arrows control the **diameter**, whilst the up/down arrows control the **number of sides**.

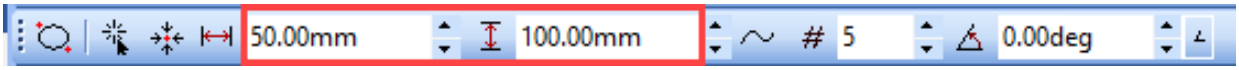


Circle 2 Points - the **Nudge** can be used to interactively modify the **Radius** value, on the **Edit Bar**.



Circle Radius Point Centre - the **Nudge** can be used to interactively modify the **Radius** value, on the **Edit Bar**.

Ellipse - the **Nudge** can be used to interactively modify the **Width** (left/right arrows) & **Height** (up/down arrows) distance values on the **Edit Bar**.

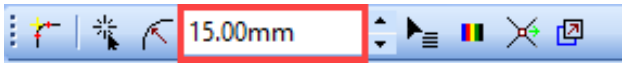


Dimension Tools:

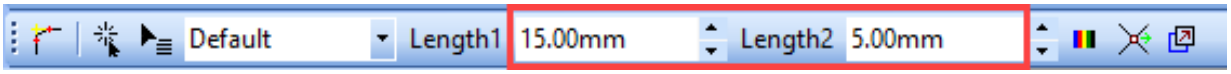
Dimension tools - the **Nudge** can be used to interactively modify the **width** (left/right arrows) & **height** (up/down arrows) values of the **Dimension Text** on the **Edit Bar.** If a **True Type/Open Font** is used, the left/right arrows have no effect, as the text width is scaled proportionally to height.

Edit Tools:

Trim Fillet – in non-interactive mode, the **Nudge** can be used to interactively modify the **Fillet Radius** value, on the **Edit Bar**.



Trim Chamfer – in non-interactive mode, the **Nudge** can be used to interactively modify the **Length 1** (left/right arrows) and **Length 2** (up/down arrows) values, on the **Edit Bar**.

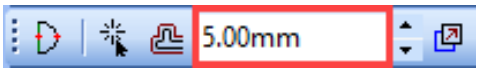


Trim Extend - the **Nudge** can be used to interactively modify the **Extend Length** value, on the **Edit Bar**.

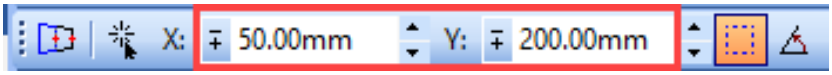
Trim Splitup - the **Nudge** can be used to interactively modify the **Number of Sections** value, on the **Edit Bar**.

Transform Tools:

Bend – the **Nudge** can be used to interactively modify the **Bend Offset** value, on the **Edit Bar**.



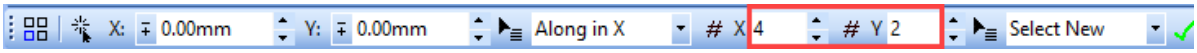
Stretch Entity – in non-interactive mode, **with no selection made**, the **Nudge** can be used to interactively modify the **X Offset** (left/right arrows) and **Y Offset** (up/down arrows) values on the **Edit Bar**.



In non-interactive mode, **with a selection made**, the **Nudge** can be used to interactively stretch entities the **entities**, modifying the **X Offset** (left/right arrows) and **Y Offset** (up/down arrows) values.

Array Tools:

Array and Rectangular Array – the **Nudge** can be used to interactively modify the **Number of Copies** that the array creates, on the **Edit Bar**.



Polar Array - the **Nudge** can be used to interactively modify the **Number in R** value (left/right arrows) and **Number in A** value (up/down arrows), on the **Edit Bar**.

General Nudge functionality:

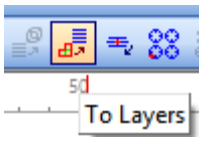
- Significantly the **Nudge** functionality is no longer dependent upon the viewed orientation (inside/outside or print-face/die-face). Using the **Select & Drag** tool as an example, a nudge via the **left arrow/cursor key** will move **selected** geometry from **right-to-left regardless of the viewed orientation**.

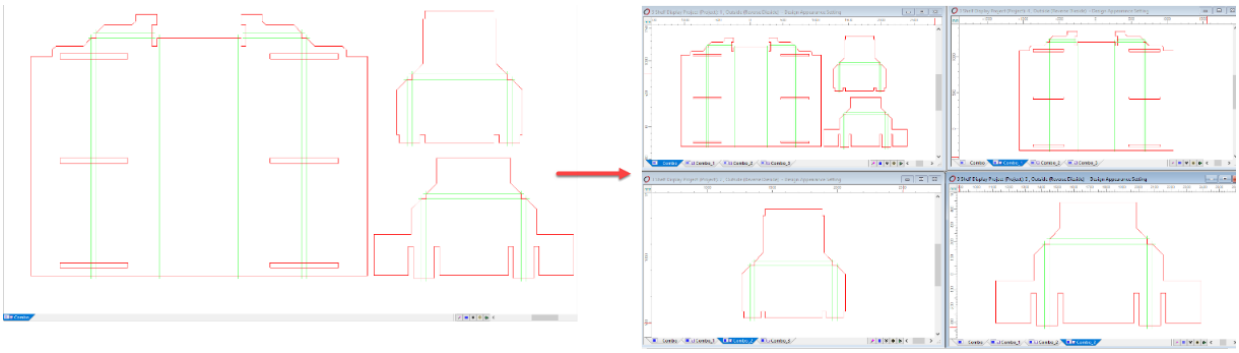
Note that certain caveats apply – such as the selected geometry being contained within a block, which may have been rotated….

- For an overview of the interactive concept, check the link here

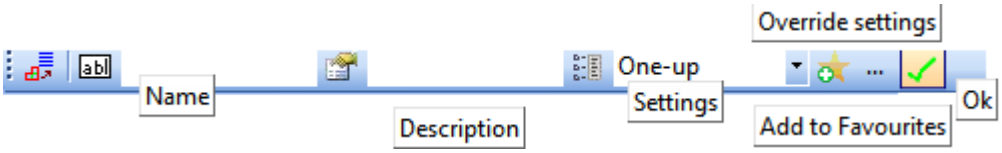
New "To Layers" Tool

- New **Block** tool (**Block>To Layers**) has been added, to simplify the process of breaking apart single-layer drawings, containing multiple parts, into separate layers.

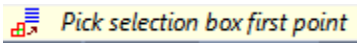




- The tool is used to generate new drawing layers from blocks or from 'flat' geometry. The tool itself works on **selected** entities and presents **Edit Bar** options for the name & description for the new layer, plus a pulldown list for available layer settings:



- If a selection hasn't been made **prior** to running the tool, the initial **Help Tip** on the **Status Bar** will prompt you to make a selection (by creating a marquee/selection box):



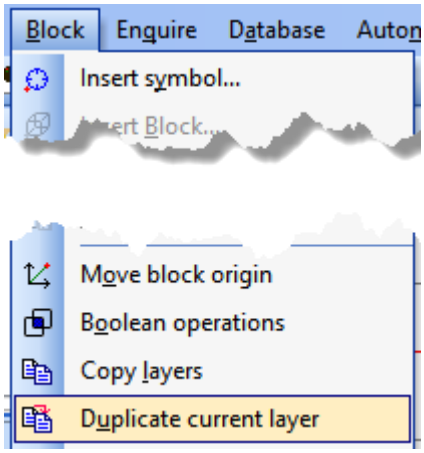
- Once a selection has been made, the new layer will be created automatically, in accordance with the **Edit Bar** options, with **no further action required**.
- If a selection has been made prior to running the tool, the new layer will be created in accordance with the **Edit Bar** options once the **OK** button has been activated.
- Note that the marquee/selection box uses the directional functionality found in tools such as **Select & Drag**, **Select Lasso** & **Edit Delete** - a left-to-right marquee/selection box will select entities **touched by** or **completely inside** the marquee, whereas a right-to-left marquee only selects entities which are **completely inside** the marquee/selection box.
- *The tool differs from the existing **Block>Blocks to Layers** tool in that it requires entities to be selected*

*and can create new layers from **flat geometry** as well as **Blocks**.*

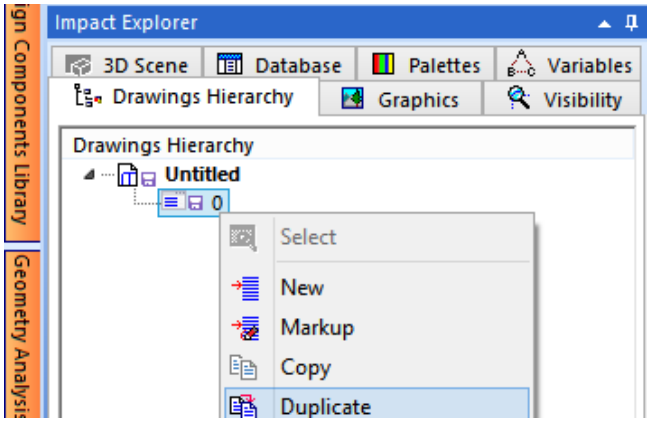
- Note that the tool will repeat (like most other Impact tools), so avoid creating unnecessary/accidental drawing layers, ensure that you cancel the tool once you have finished creating new layers!

New Layer "Quick Duplicate" Tool

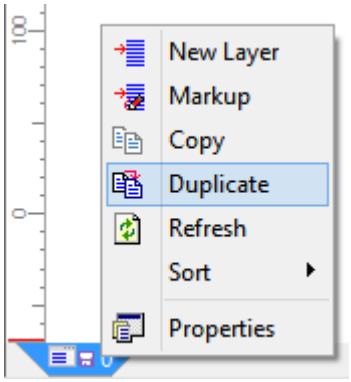
- A new **Edit** tool (**Block>Duplicate Current Layer**) allows the quick duplication of the **current** drawing layer.
- Many users make use of the **Copy Layer** functionality for this purpose – but the dialog that's displayed prompts you to copy *any layer* from *any open project*. This process can be quite long-winded if you only wish to copy the current drawing layer.
- The new tool requires no user input and displays no dialog boxes – it simply makes a copy of the current drawing layer – providing a significant time-saving
- The tool is available via the **Block** menu:



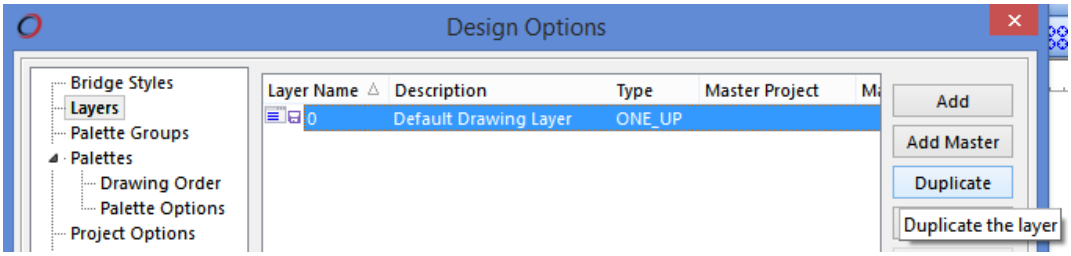
- Via the **Drawings Hierarchy** tab of the **Impact Explorer**:



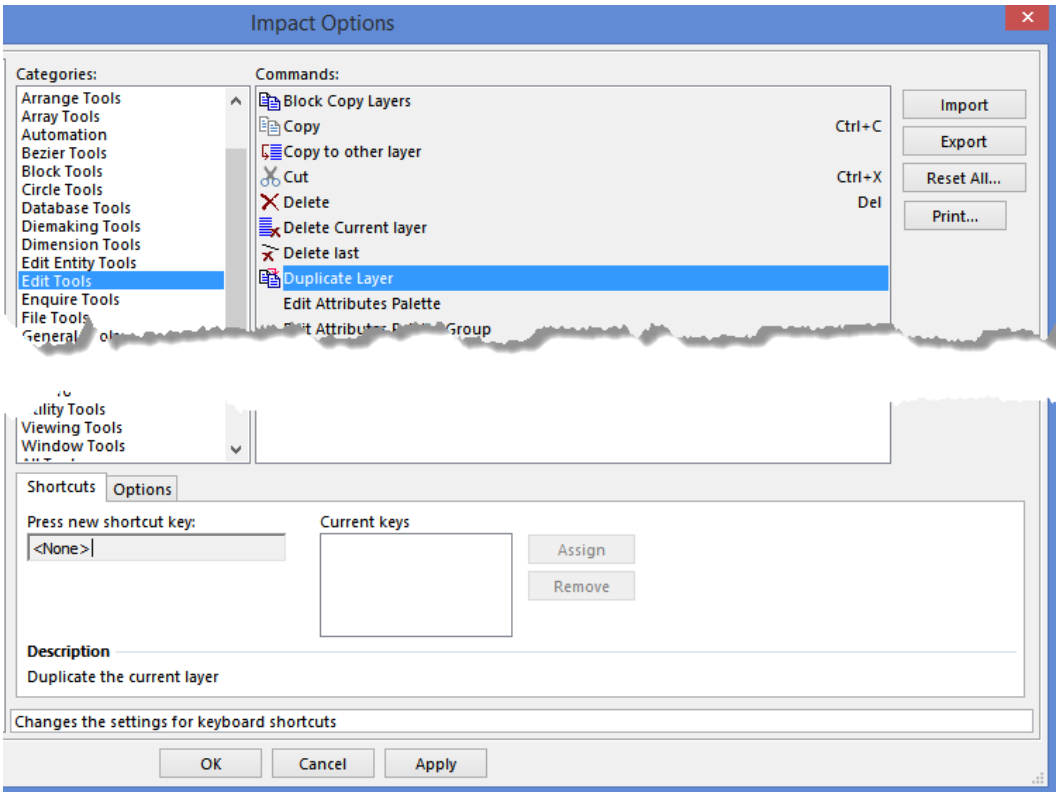
- Via the **Layer Tabs**:



- Via the **Design Options** (**Options>Project>Layers**):



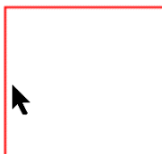
- And, via a user-definable hot-key. Note that the tool is listed within the **Edit Tools** category):



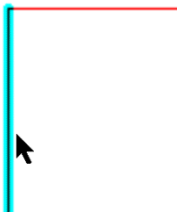
- In operation, the tool duplicates the current layer (and associated database information) and adds a **_1** suffix to the layer name.

Entity Highlighter Improvements*

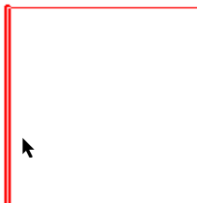
- Users now have greater control over when and how highlighters are applied to different draw and edit operations.
- The **Highlighting** & **Tool Selection Marker** functions have now been separated, in order to allow users to enable/disable **Highlighting** & **Tool Selection Markers** as required.
- To clarify the difference between **Highlighting** & **Tool Selection Markers**, consider the first click of a **TrimFillet** operation. With both options **disabled**, the following would be displayed:



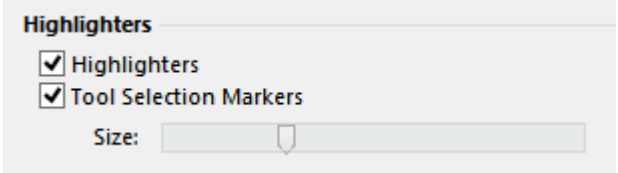
- With **Highlighting** enabled, the following would be displayed (the first entity would receive the user-defined **Highlight** colour):



- With the **Tool Selection Markers** enabled, the following would be displayed (the first entity would receive the user-defined **Tool Selection Marker** colour):

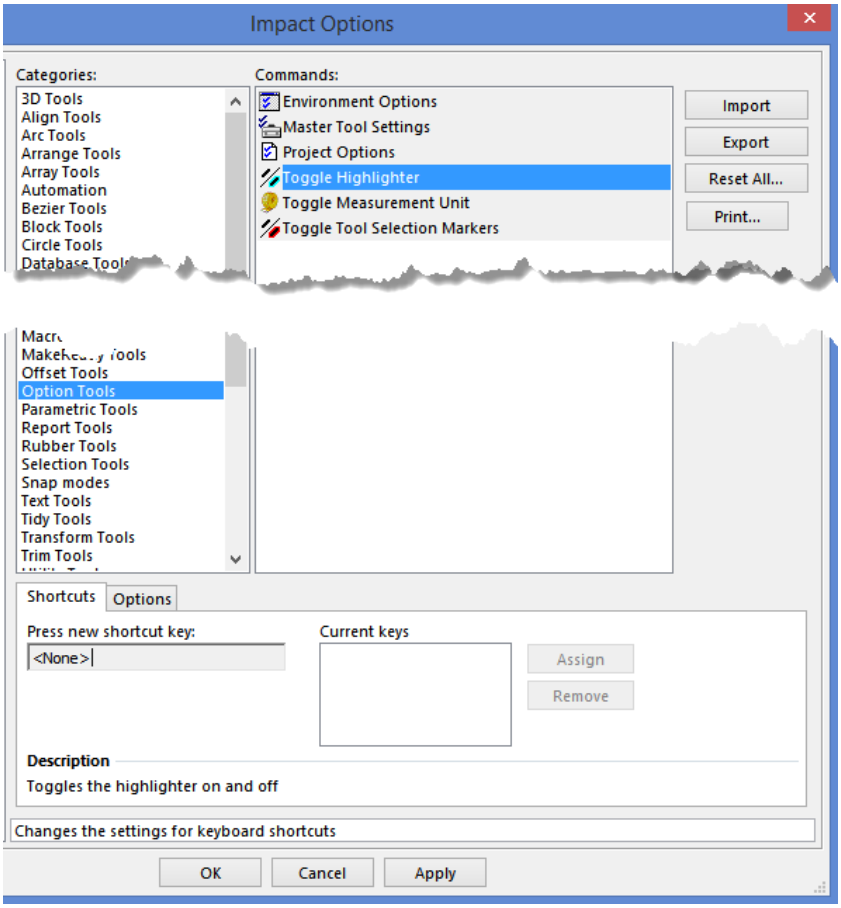


- Within **Options>Environment>Display**, you'll now find toggles for both options:



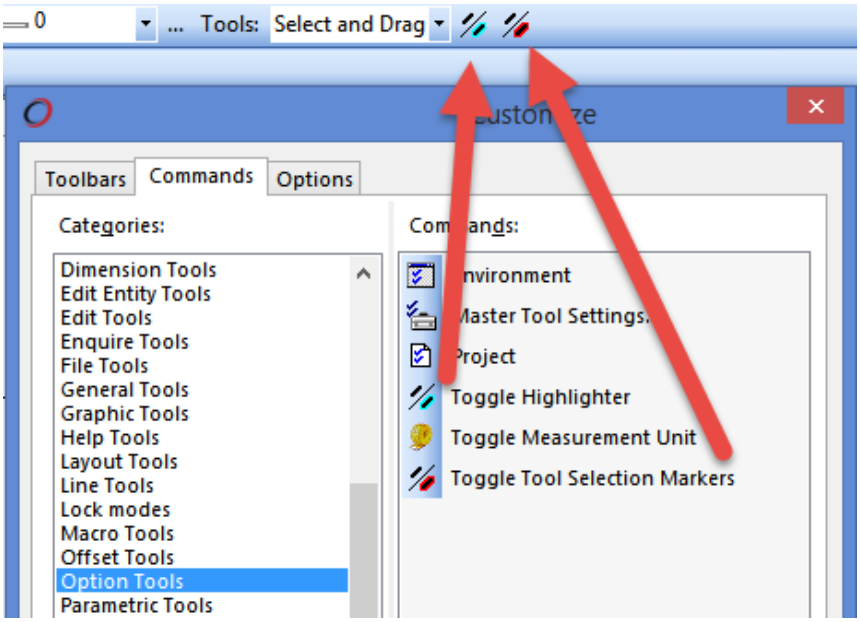
- *For users wishing to configure Impact to resemble Impact **2015** & earlier, simply disable both options.*

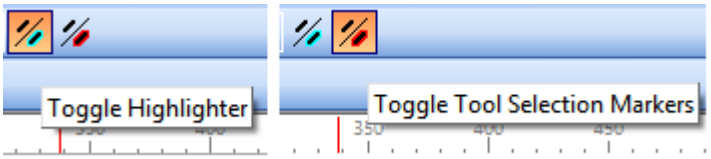
- The functions may now be toggled via user-definable keyboard shortcuts/hot-keys. Follow **Options>Environment>Environment>Keyboard** (or **Customise Mode>Keyboard**) and look for the **Options Tools** category:



- You can configure the toggles for **Highlighter** and **Tool Selection Makers** as you would any other hot-key.

- Additionally, visual confirmation of the status of either function is provided by optional icons which may be added to a toolbar (such as the **General Toolbox**):

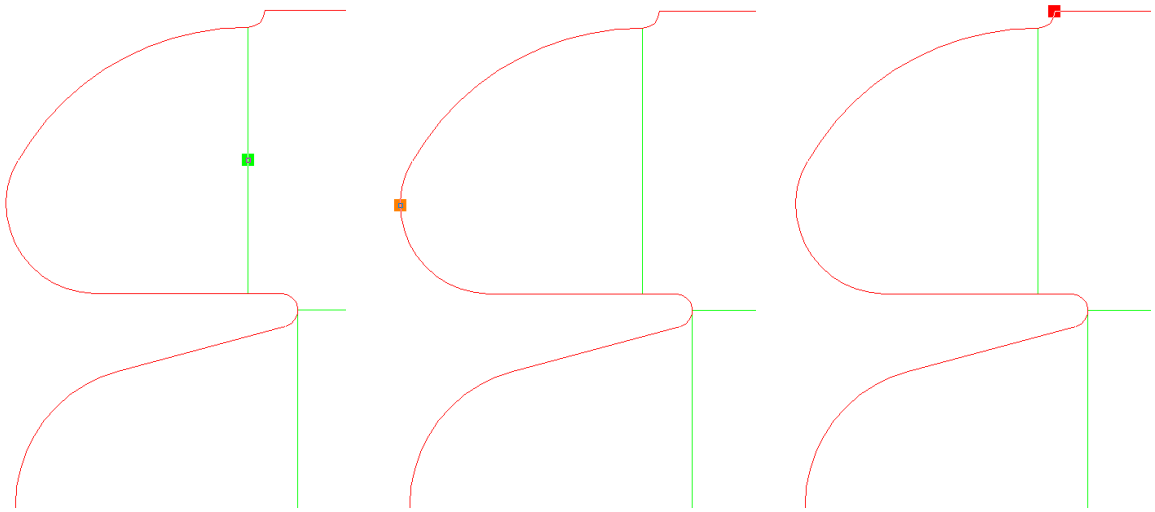




- The screengrab on the left shows **Highlighting *enabled*** and **Tool Selection Markers *disabled***, whilst the screengrab on the right shows the inverse.

New "Snap Cursors" Indicators

- To aid with accurate snapping during draw and edit operations Impact can now offer coloured-coded indicators on the cursor which reflect the type of snap being made, before you even click. This feature is enabled by default on upgrade.
- Here we see the snapping cursor feedback in action, indicating (from left to right), Mid, Quadrant and End snap modes.

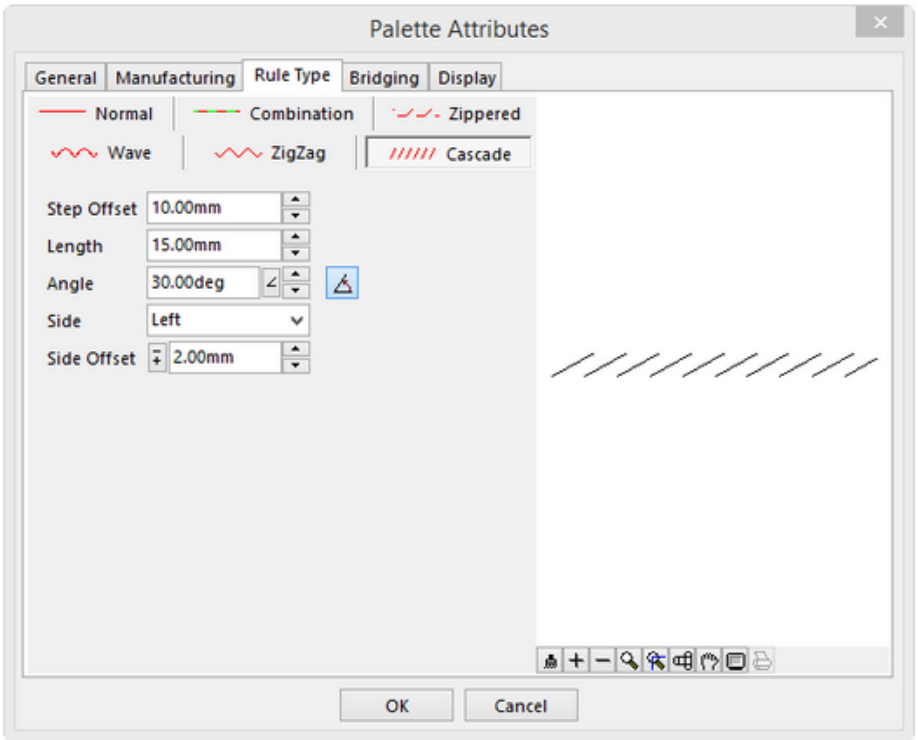


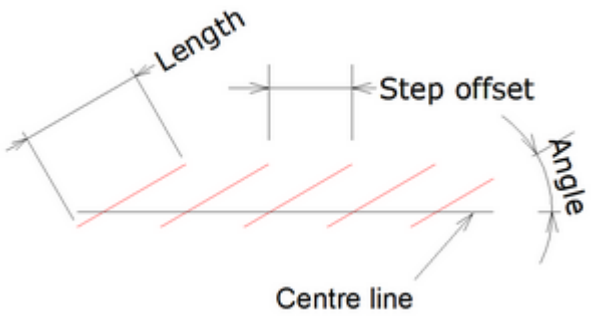
- The size and colour of the cursors to indicate the various snap modes can be customised (see **Options** > **Environment** > **Environment** > **Cursors**) and either be a solid fill (default) or outline only display option, and you can customise the colours as required (see **Options > Environment > Environment > Colours**).
- The default colours are as follows:

Name	Database
Snap Cursor - Block Insert	
Snap Cursor - Bridge End	
Snap Cursor - Bridge Mid	
Snap Cursor - Centre	
Snap Cursor - End	
Snap Cursor - Entity	
Snap Cursor - Grid	
Snap Cursor - Intersection	
Snap Cursor - Mid	
Snap Cursor - Quadrant	

Palettes*

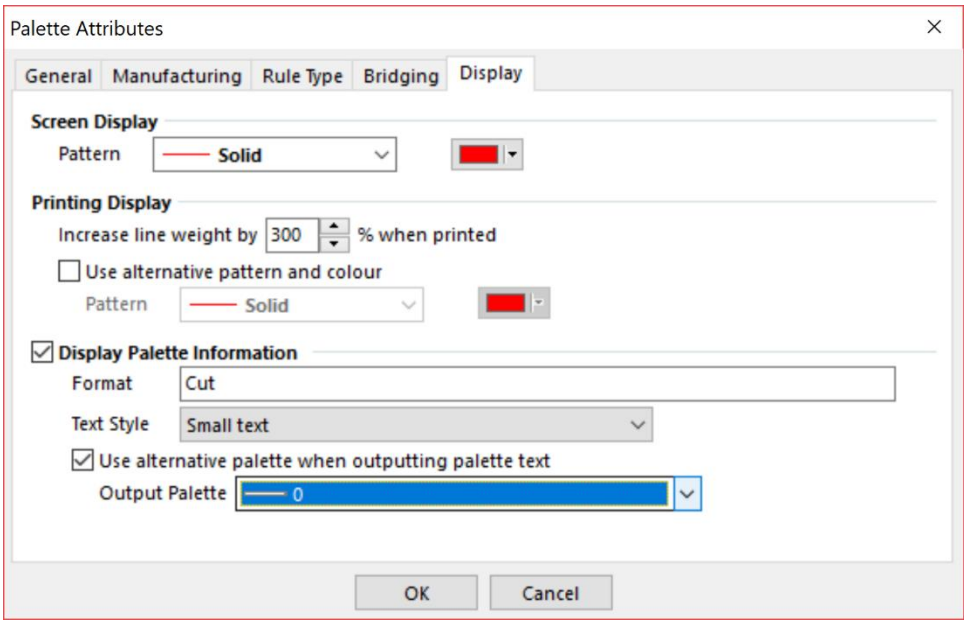
- New **Rule Type** (**Cascade**) has been added, with the following configurable properties:





- **Step Offset** – the distance between each entity.
- **Length** – the length of each entity.
- **Angle** – the angle of the entities relative to the centre line.
- **Side** - the side of the centre line to which the entities will be offset (left or right).
- **Side Offset** – the distance that the entities should be offset from the centre line.

- **Palette Text** can now have an alternative palette (note that palettes may be edited within a drawing, within a template or within the Master Template, via **Design Options>Palettes**):

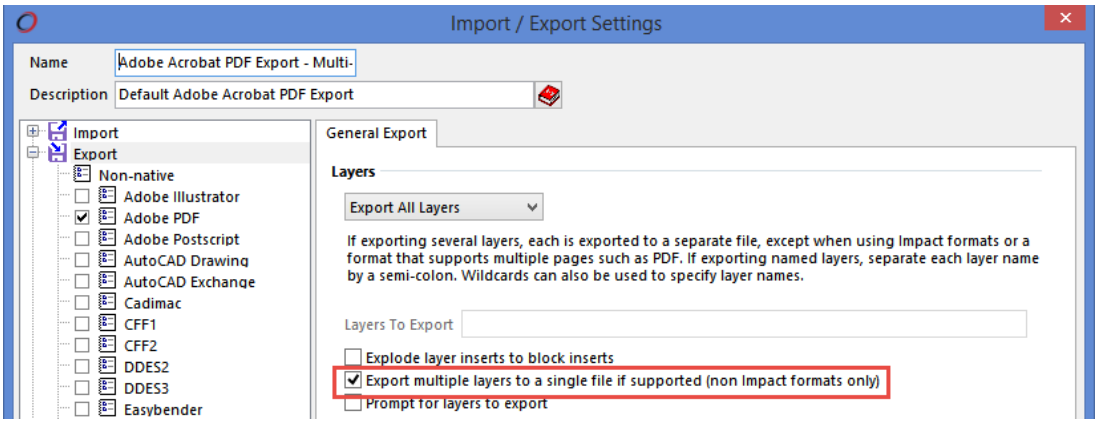


- This allows palette text to be output in a non-manufacturing palette, for example.

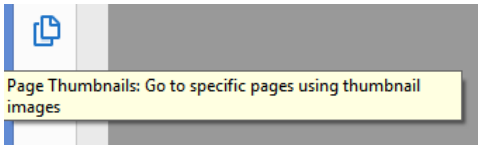
General

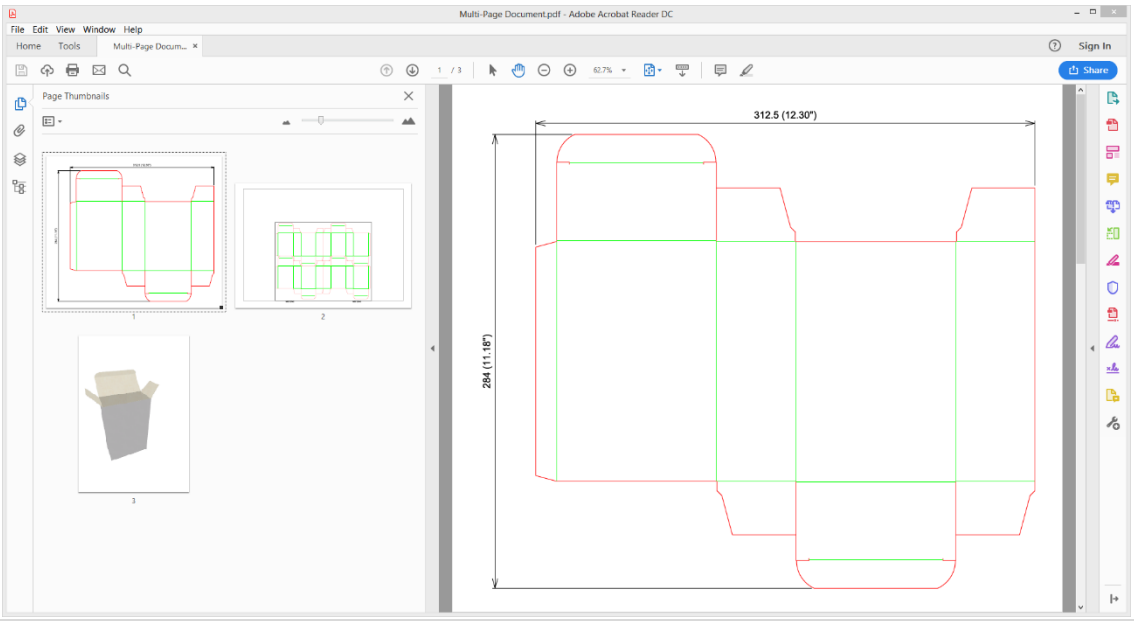
Multi-page PDF Export*

- It's now possible to create multi-page PDF exports – allowing you to export multiple **layers** from a single project into a **single** PDF document. This also allows you to output multi-page report **templates** into a **single** PDF document (these developments are also compatible with the **BOM** (Bill of Materials) developments).
- A new option has been added to the **General Export** tab of the **Export Master Tool Settings**: (**Export multiple layers to a single file if supported (non-Impact formats only**):

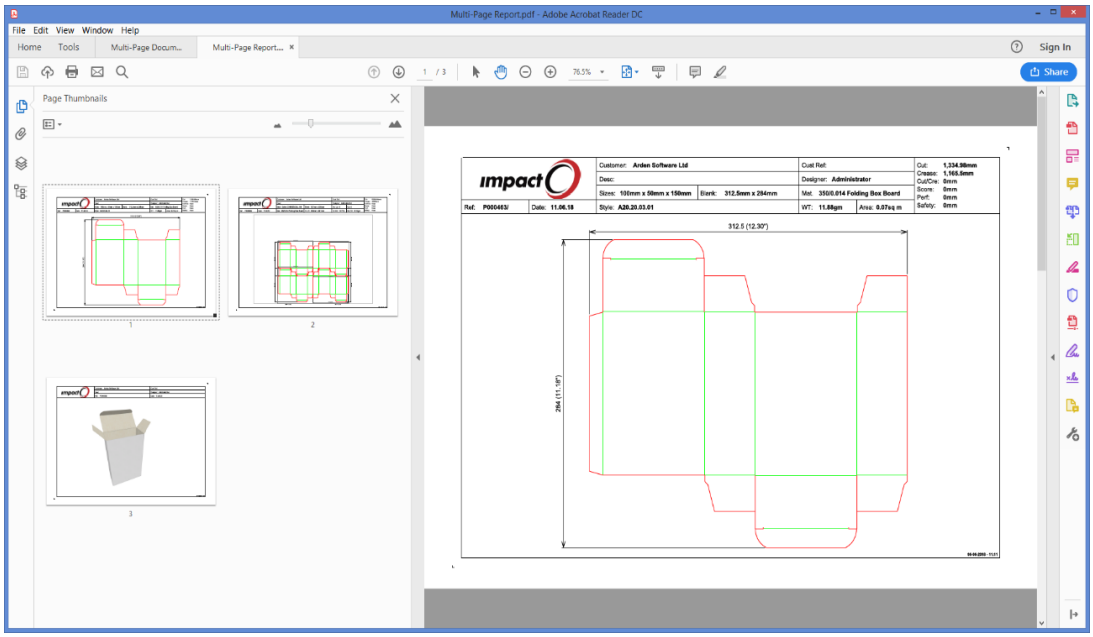


- As a result, it's possible to generate a multi-page **PDF** document from a multi-layer **Impact** project, like the following (note that **Adobe Reader's** *Page Thumbnails* option was used to display the thumbnails):

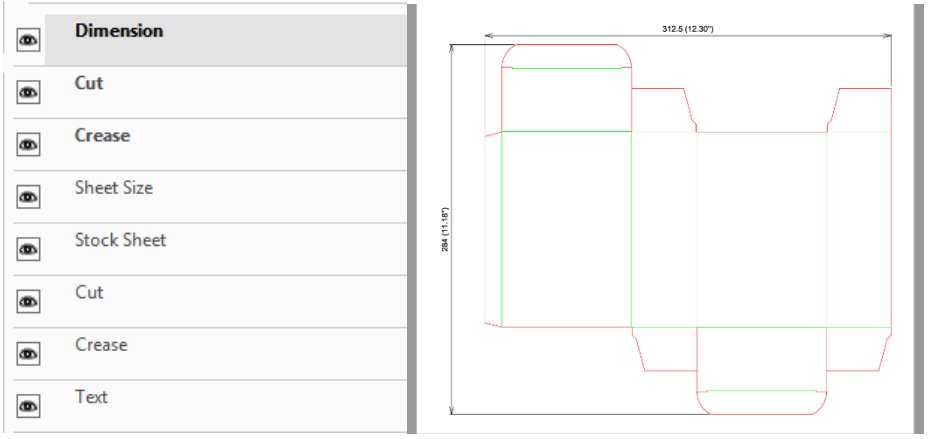




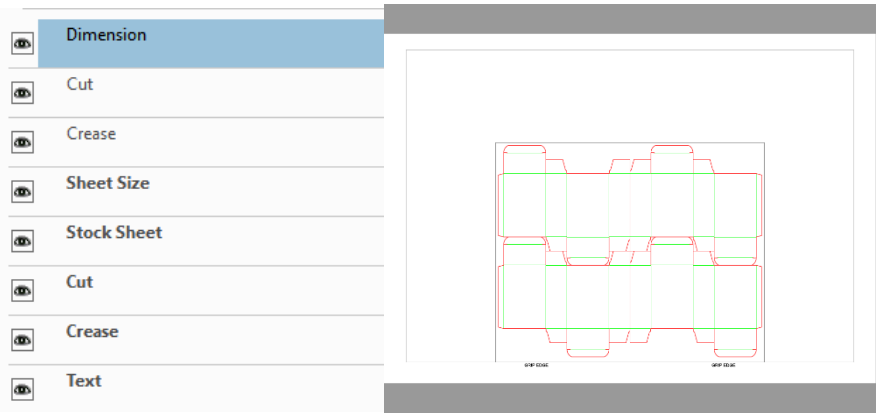
- The following PDF was generated from a multi-page **Report Template (**again, **Adobe Reader's** Page Thumbnails option was deployed to display the thumbnails):



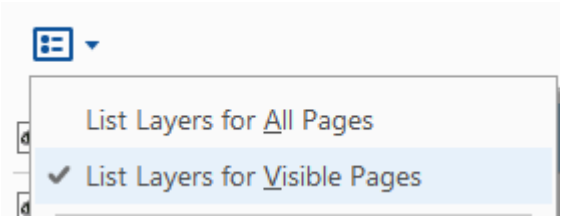
- **Currently** this option applies **solely** to the **Adobe PDF** format. *The option was added to the **General Export** tab (as opposed to the **Adobe PDF** node) to allow multi-page support for any future formats supporting multiple pages.*
- Note that the page names displayed in **Adobe Reader** are numerical – it's not possible to replace these labels with Impact layer names.
- Note also that if you are using an export filter which creates **PDF Layers for each exported palette**, you'll create several instances of palettes which are common to each layer (e.g. **Cut**, **Crease** etc).
- **Layers** within the *visible* page will always be listed in **bold type** within **Adobe Reader's Layer** list.
- In the following screenshot, the **Dimension**, **Cut** & **Crease** palettes are contained within the *visible page*:



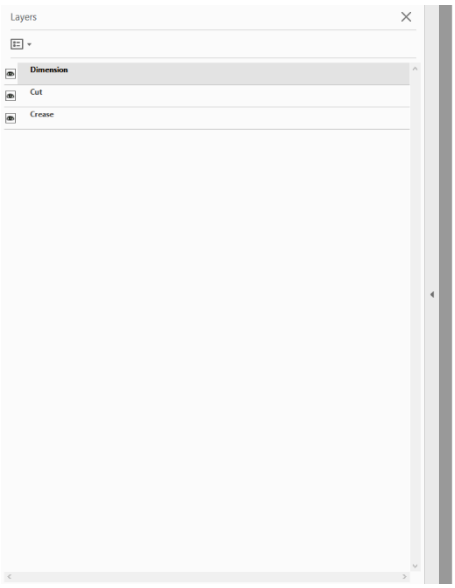
- In the following screenshot, **Dimension**, **Sheet Size**, **Stock Sheet**, **Cut**, **Crease** & **Text** palettes are contained within the *visible page*:

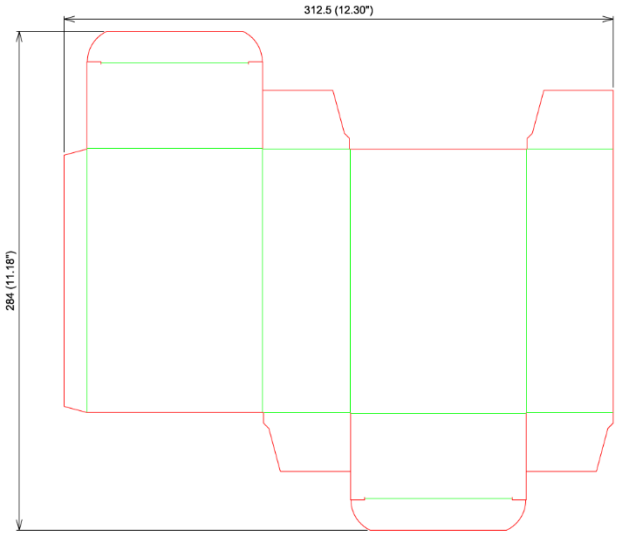


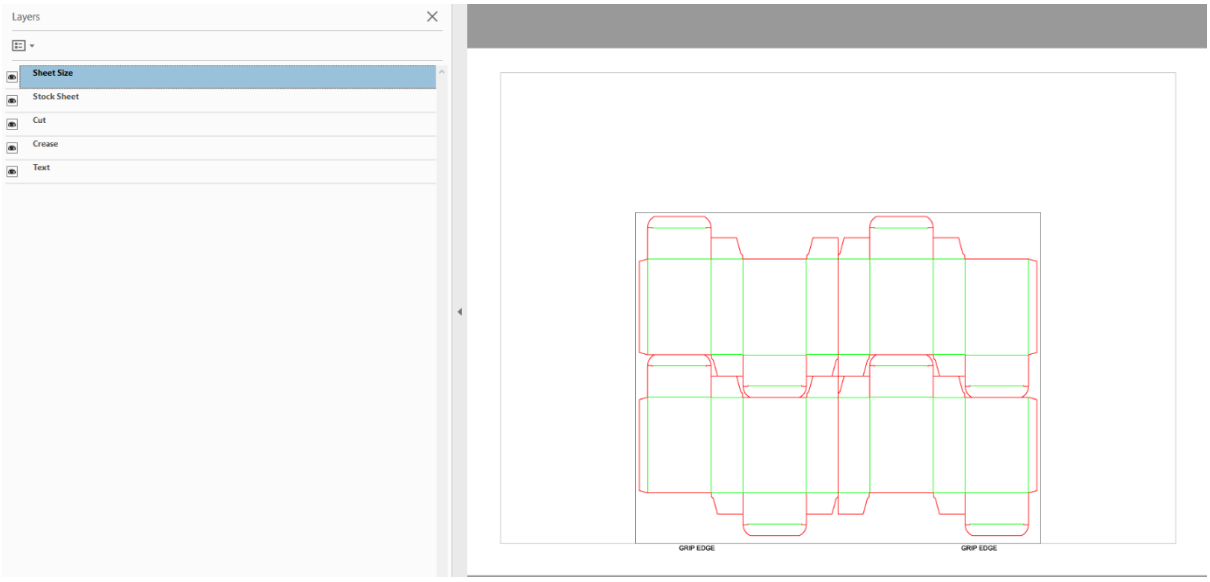
- **Adobe Reader** also provides an option to show layers only for the **Visible Page(s):**



- As expected, this would present the following:

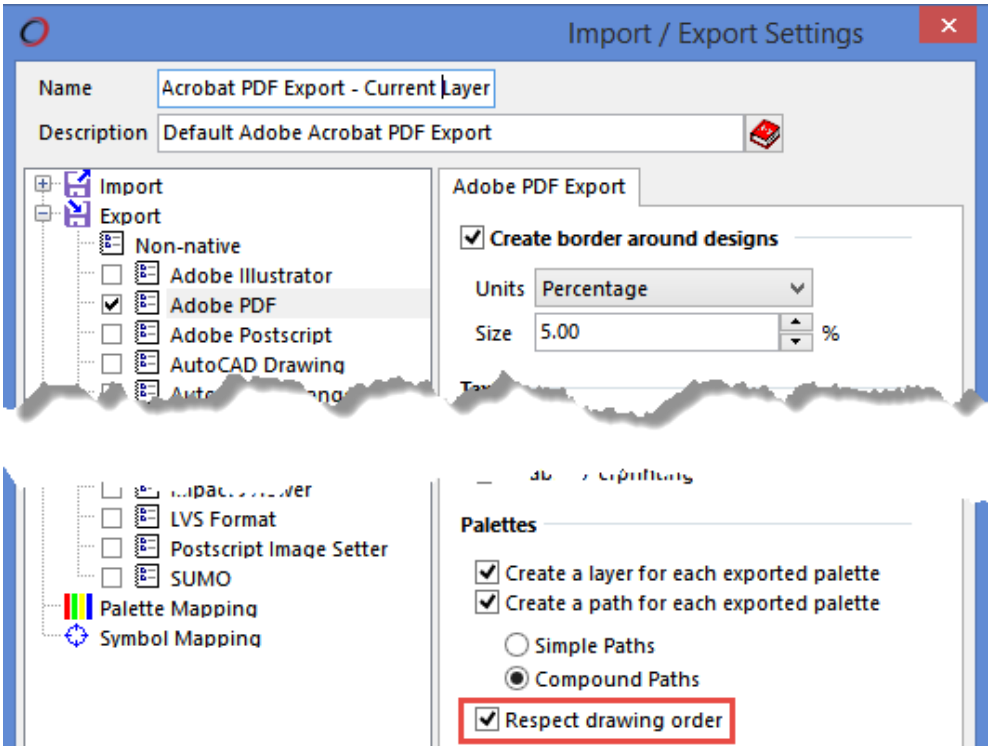




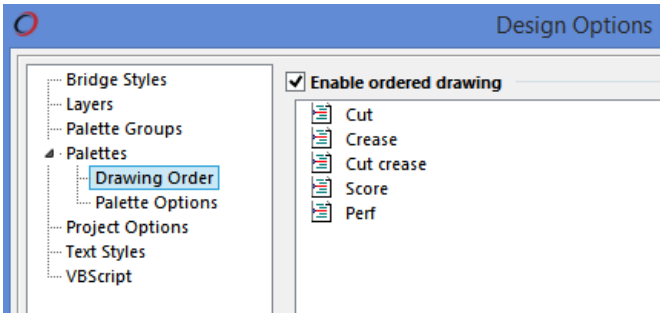


PDF Export to Respect Drawing Order (for better CutCrease export support)*

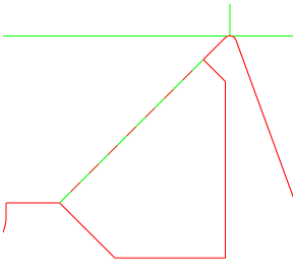
- To aid the export of **CutCrease** lines to the **PDF** format, a new option has been added to the **Adobe PDF** branch of **the Export Master Tool Settings**:



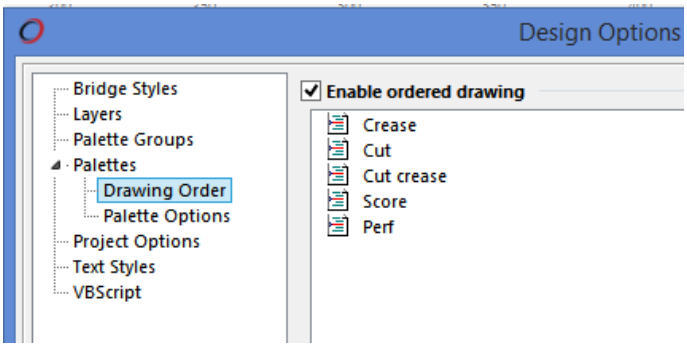
- The **Drawing Order** can be defined on a **Project**, **Template** or **Master Template** level via **Options>Project>Palettes>Drawing Order**, and allows palettes to be displayed *in front of/above* other palettes when they overlap:



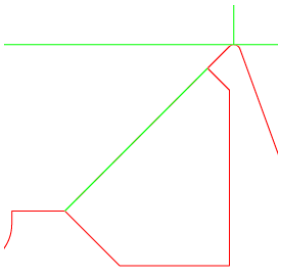
- In the above example, the **Cut** palettes would be 'drawn' after the **Crease** palette. Therefore, exporting a drawing to the PDF format, **respecting** drawing order would guarantee that a **CutCrease** line, (where the **Crease** palette is configured *not* to explode into segments) would export to the **PDF** format as shown below:



- In contrast, exporting palettes using the following drawing order:

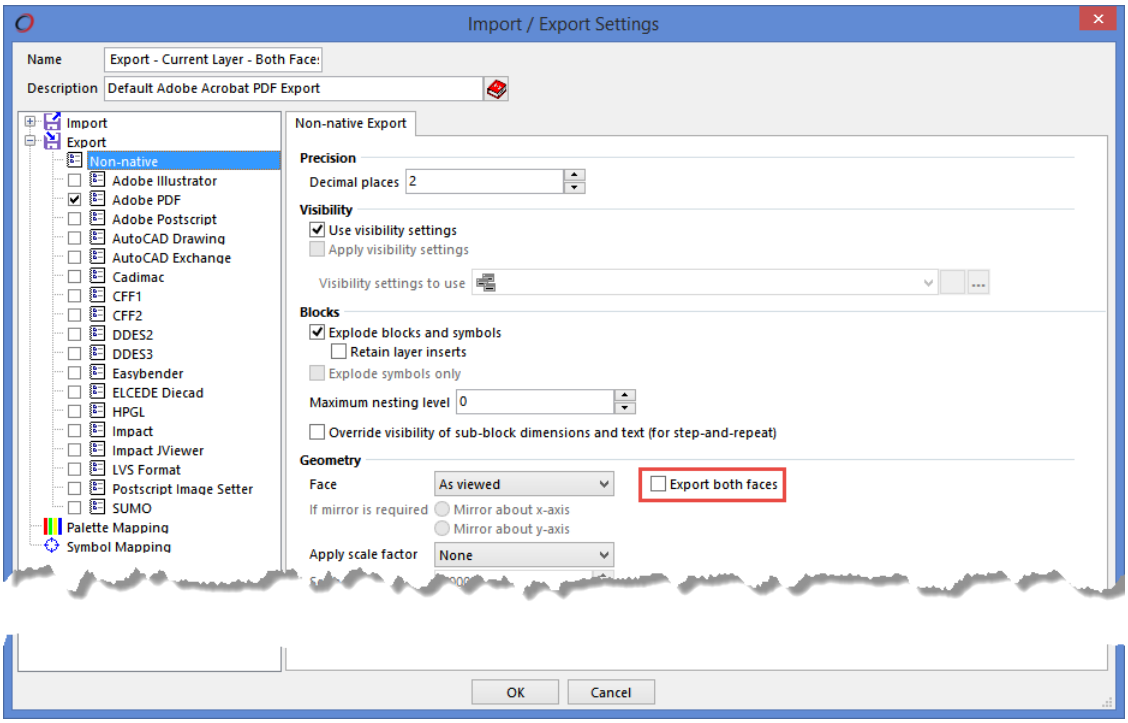


- Would result in:



Multi-Face Export*

- It's now possible to export both faces of a **2D** drawing layer, with a single export action (which compliments the improved multi-page PDF export support).
- A new option (**Export both faces**) has been added to the **Non-native** branch of the **Export** node of an **Import/Export Master Tool Setting**:



- If the file format **doesn't** support multiple layers in a single file, *enabling this option would generate one file, per face*.
- For applicable formats (such as **Adobe PDF**), enabling this option would allow you to generate a single file, containing both faces of a drawing layer.

PDF Library Update

- Routine update to the latest version of the 3rd party Datalogics PDF library.

DWG Library Update

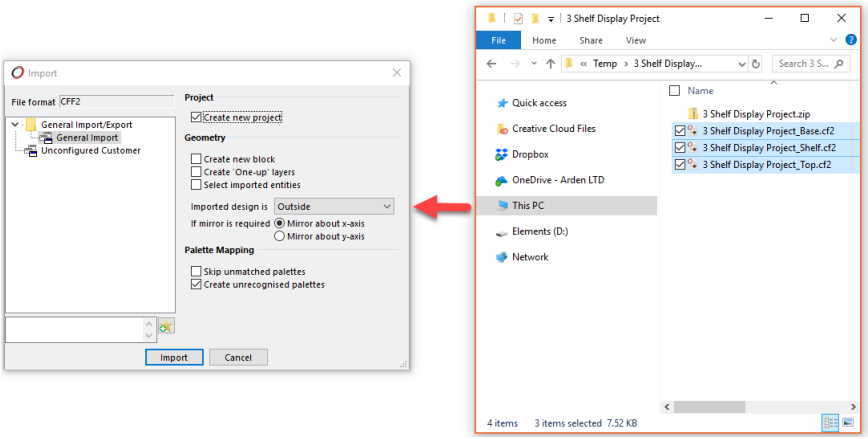
- Routine update to the 3rd party Open Design Alliance DWG library.
- Impact **2019** is now able to import version **2018** of the **DWG** and **DXF** file formats.

Support for DDES3 (CGATS/SC6/WG3) IT8.6 Revision Import

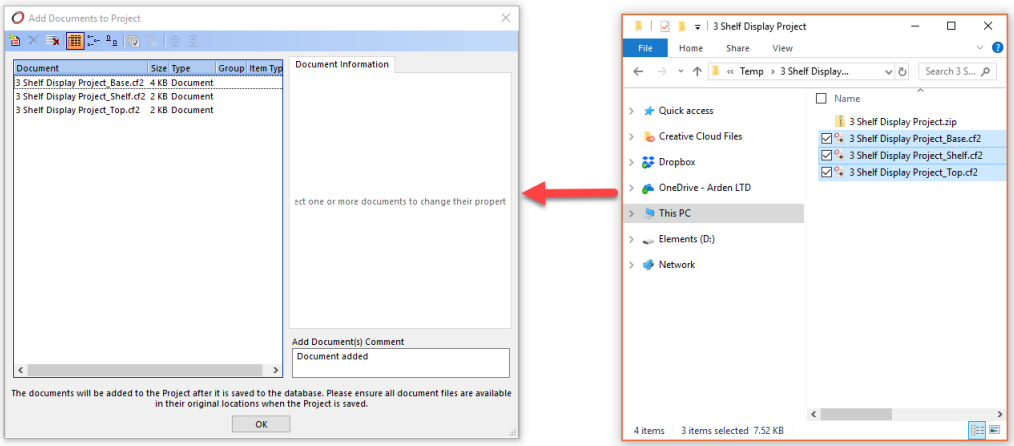
- Impact **2019** supports the import of DDES 3.1 files

Drag and drop from Outlook (or file locations)

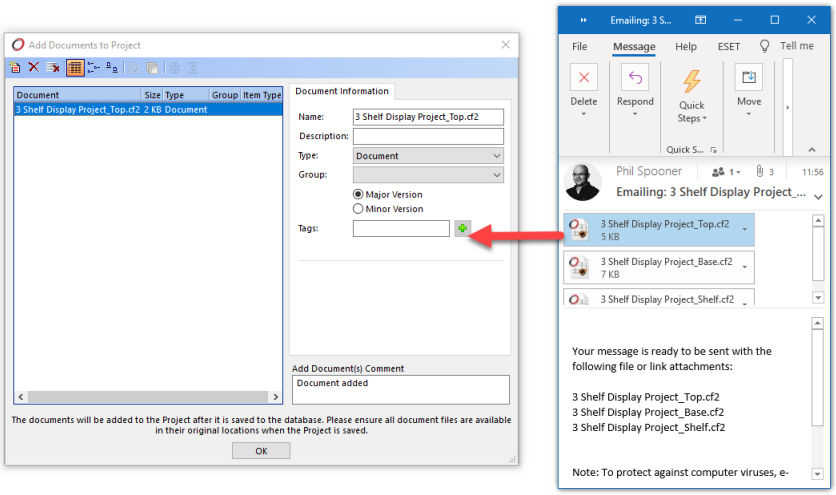
- Drag & drop support (from **Outlook** & file locations) has been significantly improved. In most cases, it is now possible to drag **multiple files** or a **single Outlook message** into Impact, without needing to first save the attachment, the message or the Impact project.
- Single or multiple vector-based files may be dragged from the desktop (or any file location) onto an Impact **canvas** and the **Import** dialog will be displayed for each file.

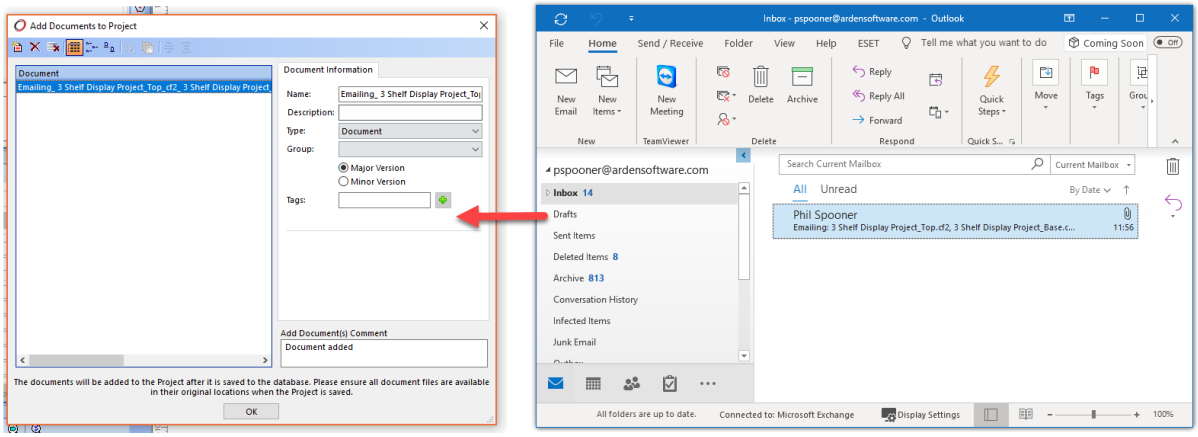


- Multiple files (of any format) can be dragged from the desktop (or any file location) onto the **Project Documents** or **Customer Documents** window, and the **Add Documents** window will be displayed.



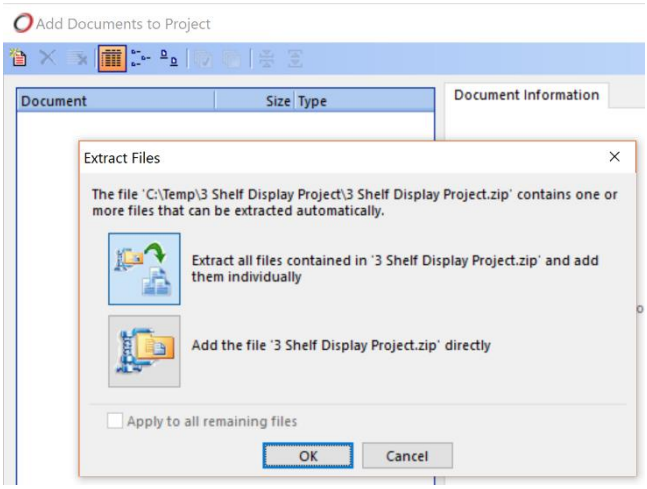
- Single **Outlook** messages (and individual files contained in an **Outlook** message) can be dragged onto the **Project Documents** window or **Customer Documents** window and the **Add Documents** window will be displayed:





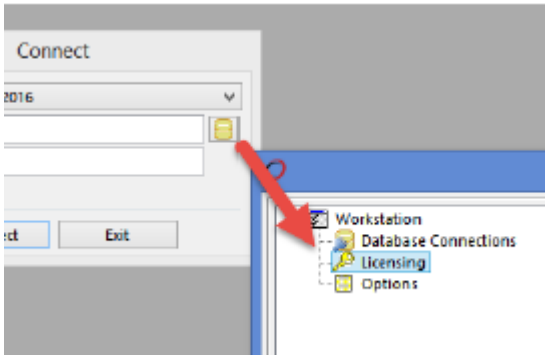
- Drag & drop support is also available via the **Projects Browser** (and by extension, the stand-alone **Impact Viewer**). Observing the same rules as above, files & messages may be added to the **Project Documents** and **Customer Documents** windows.

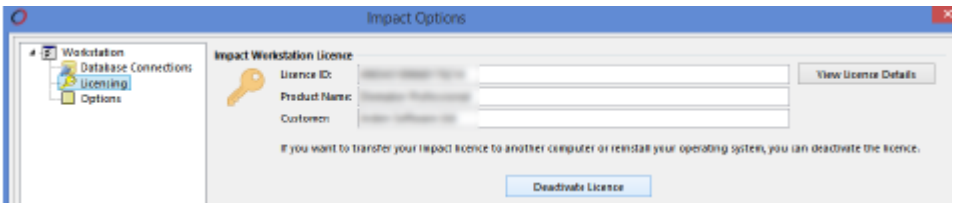
- When adding a **zipped** file to the document management system, Impact will offer the choice of adding the **zipped** file itself or **unzipping & attaching the contents** of the zip archive:

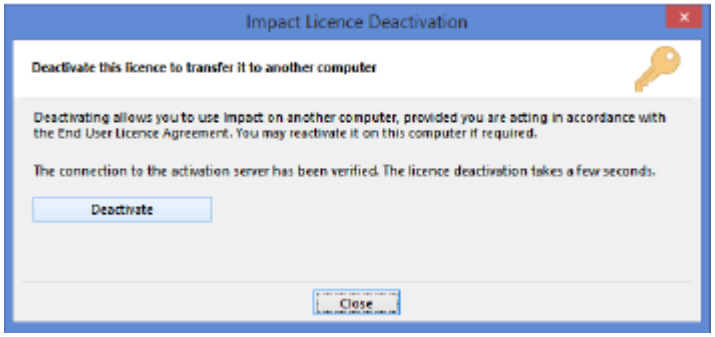


Licensing/Nalpeiron V10*

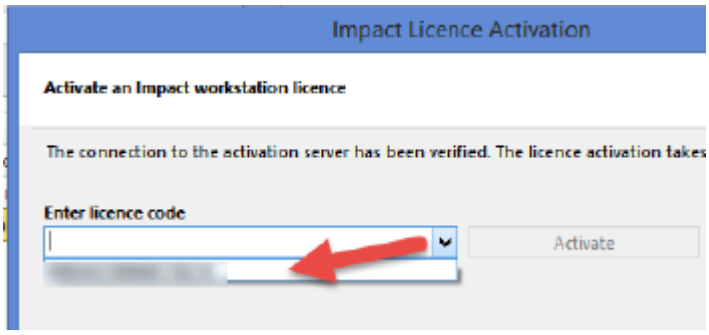
- Updates to software-based **Nalpeiron** licensing make for simplified setup and maintenance.
- Significantly, this removes the need for a *locally installed* **Nalpeiron** Licensing Service and brings a new heartbeat/phone-home method, allowing silent and automatic update of licences, without the *need to manually deactivate and reactivate*.
- Licences may be subsequently **deactivated** via the **Login** screen as there's no longer an installed local **Nalpeiron** service:



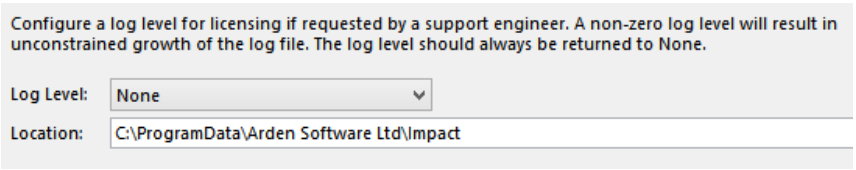


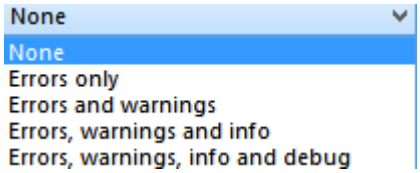


- One additional benefit of the updated licensing method is that licence codes are stored locally, and may be accessed from a pull-down list (if you're in the habit of activating & deactivating licences to switch them between workstations):



- Enhanced licence logging options are also available:





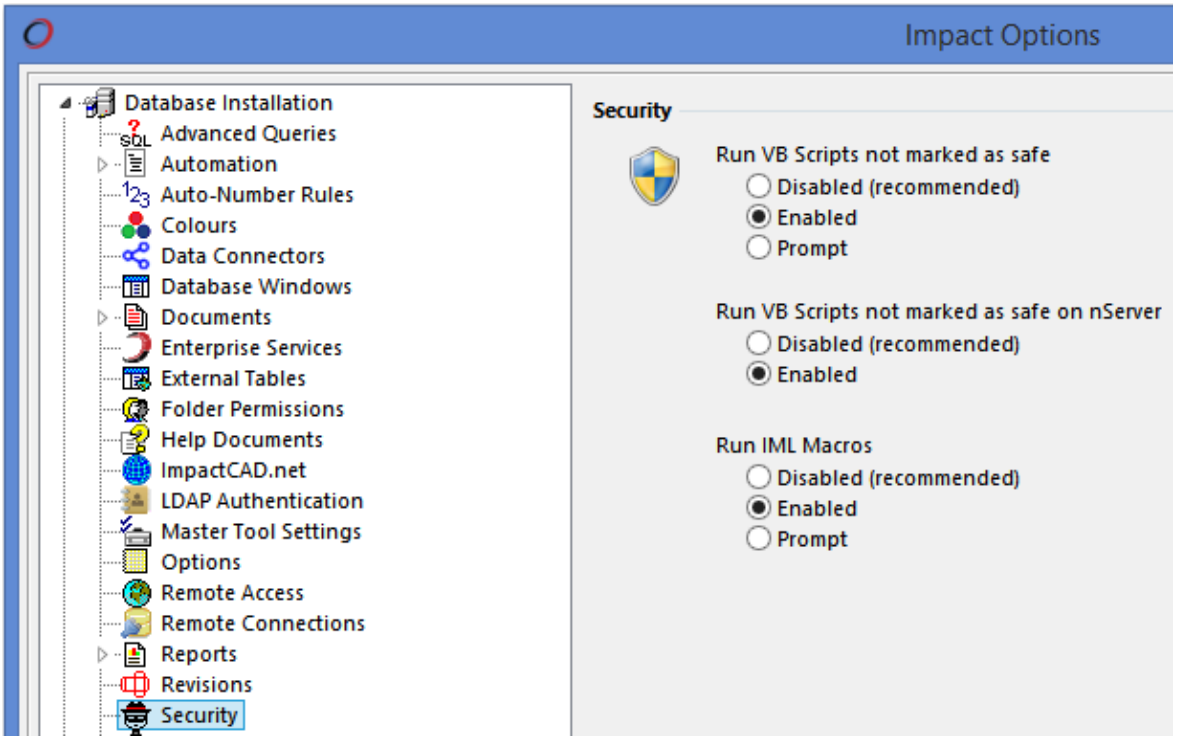
- As expected, an offline activation mode is also available.

Licensing/Dongleless Licence Server*

- Due to the increasing number of requests to host Impact licensing services in virtualised environments, the Impact (and nServer) license server services now support dongleless operation. This removes any reliance upon physical hardware/DK2 dongles.
- Note that unlike the hardware/dk2 licence server, the dongleless licence server may not be transferred to another host workstation/server without Arden Software involvement. A machine-specific enabling file is needed – and if the licence server host is changed, a new enabling file needs to be generated by Arden Software.

Script Security Modifications*

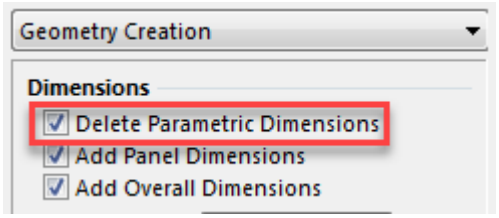
- The security options for **VB Scripts** & **IML Macros** have been moved from **Workstation>Security** to **Options>Environment>Database Installation>Security**:



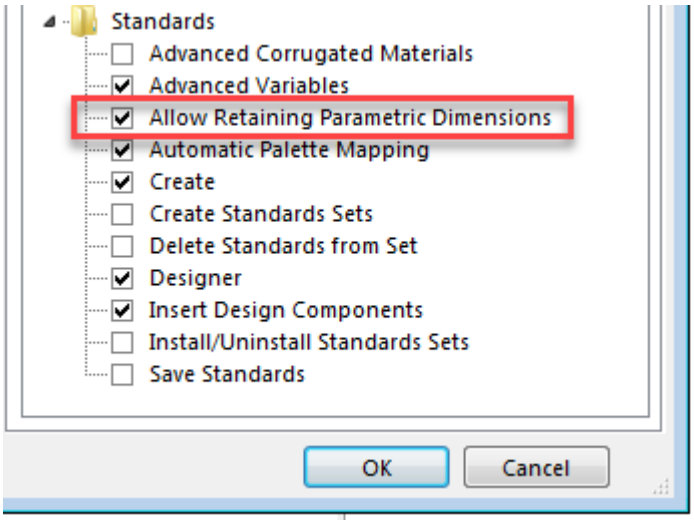
- This change allows the options to be specified **per database**, as opposed to **per workstation**, thus simplifying the deployment process for anyone wishing to use script (and IML) security.
- In addition, a new option has been added to provide script security for **nServer.**

Parametrics & Standards*

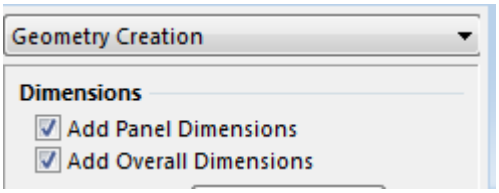
- It's now possible to supress the "**Delete Parametric Dimensions**?" prompt, when running Standards:



- Users may forget to delete the parametric dimensions (or switch them on accidentally) - and this may lead to parametric dimensions becoming visible within the drawing itself or within subsequent Reports.
- A new privilege ("**Allow Retaining Parametric Dimensions"**) has been added within the **Standards** node of the **User Privileges** Master Tool Setting:

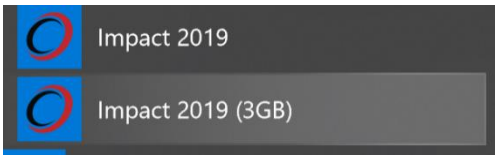


- If enabled (note that this is the *default* option, post-upgrade), the "**Delete Parametric Dimensions?"** option will be **visible** within the **Geometry Creation** page of the **Standard Wizard**.
- If **disabled**, the "**Delete Parametric Dimensions?**" prompt will not be displayed to the user and parametric dimensions **will not** be added to the drawing:



Memory Handling Improvements - Large-Address Aware (LAA)

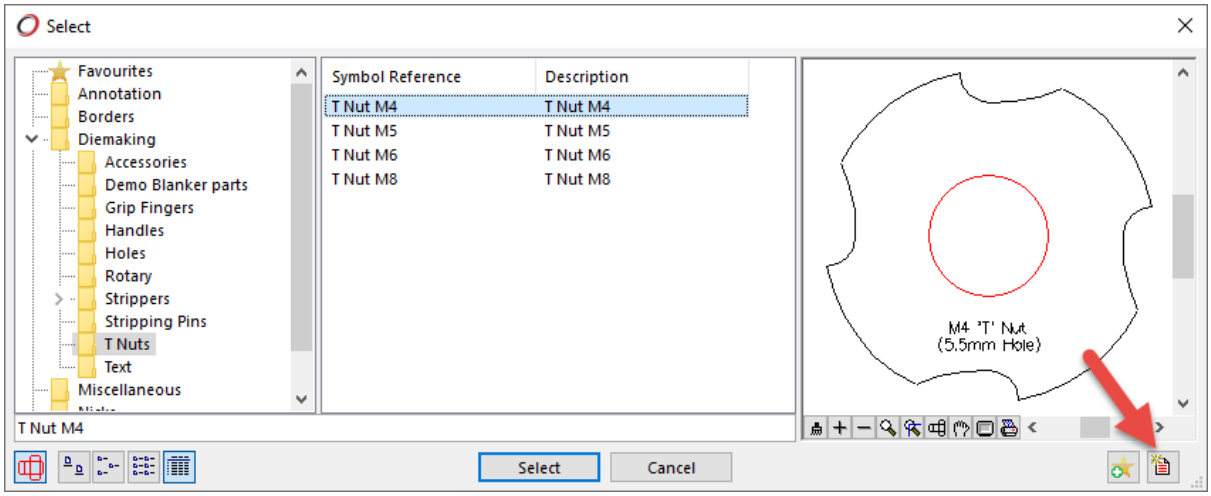
- 32-bit applications (such as Impact) can only access 2GB of RAM - even on a 64-bit OS, with lots of available RAM.
- Under a 64-bit OS, it's now possible to allocate an increased amount of RAM, and to take advantage of this, Impact (and the Impact Viewer) **2019** will install a **3GB** shortcut:



- The 3GB shortcuts will then allow Impact (and the Impact Viewer) to run with access to increased RAM.
- This should be beneficial when importing large 3D models with a high polygon count.

Document Relationships for Symbols and Templates*

- You can now also associate documents with symbols and templates. Typically, you might use this to directly store related reference material or part specifications.
- This feature then offers convenient access to those documents when adding or using symbols and templates.



- As a reminder, this change builds on Impact's existing support of a wide range of document relationships which offers the ability to associate documents with objects, including:
    - Project Documents
    - Customer Documents
    - User Documents
    - (Document to) Other Documents
    - Layer Documents
    - Contact Documents
    - Site Documents
    - Address Documents

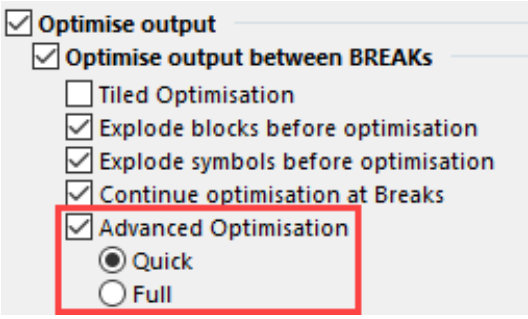
Manufacturing

Stripper Tool Performance Improvements

- Performance improvements have been made when placing restrictions and male stripping parts (notably within an internal waste area that has replicated instances).
- Speed improvements have also been made when working within a zoomed view on a stripped waste area.

Plotter Optimisation*

- Significant improvements have been made regarding the optimisation of machine output.
- **Advanced Optimisation** options have been added to the **Post Processor** setup:



- **Quick** – provides a quicker optimisation by finding a compromise between the actual running-time of the optimisation algorithm and the quality of the optimisation. Typically, this option would be used for outputting a Dieboard or a drawing with many entities (e.g. 7,000 entities or greater).

- **Full** – provides better optimisation by reducing the amount of rapid travel in the final plot. This option also **disables** the **Optimise output for internal cuts** option. A drawing containing a lower number of entities, distributed evenly over a drawing layer may be considered suitable for **Full** optimisation.

- During internal testing, we found that the **Quick Optimisation** option gave the following reductions in **Rapid Travel** distances for an entire layer compared to the current output:

    - Layout of Samples 22.71%
    - Dieboard 14.49%
    - Female Stripper 9.44%
    - Routing Stripper 14.19%

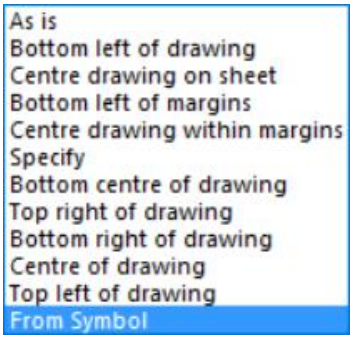
- Similarly, we found that the **Full Optimisation** option yielded the following reductions (again, for an entire layer, compared to the current output):

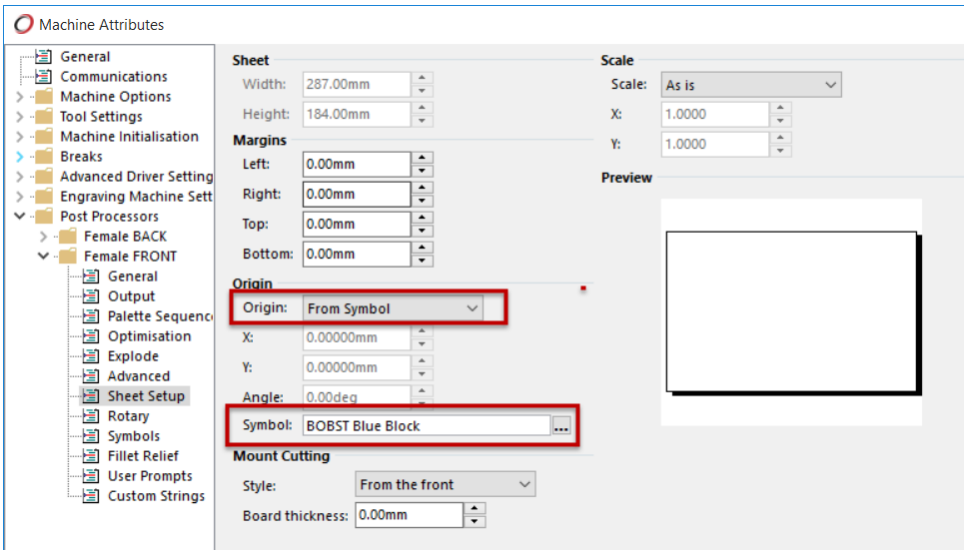
    - Layout of Samples 28.96%
    - Dieboard 17.26%
    - Female Stripper 10.49%
    - Routing Stripper 15.05%

- Note that results will vary, based upon drawing complexity & hardware specification.

Symbol Position Reference When Plotting*

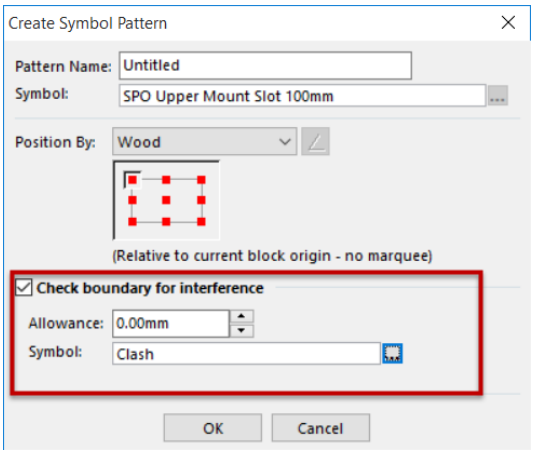
- Several machines reference the centreline notch (for location) and as the 0,0/origin point. Impact **2019** can set the origin of output *relative* to the insertion point of a defined symbol. This is useful, as sometimes the centreline notch is offset from the actual centre of the drawing.





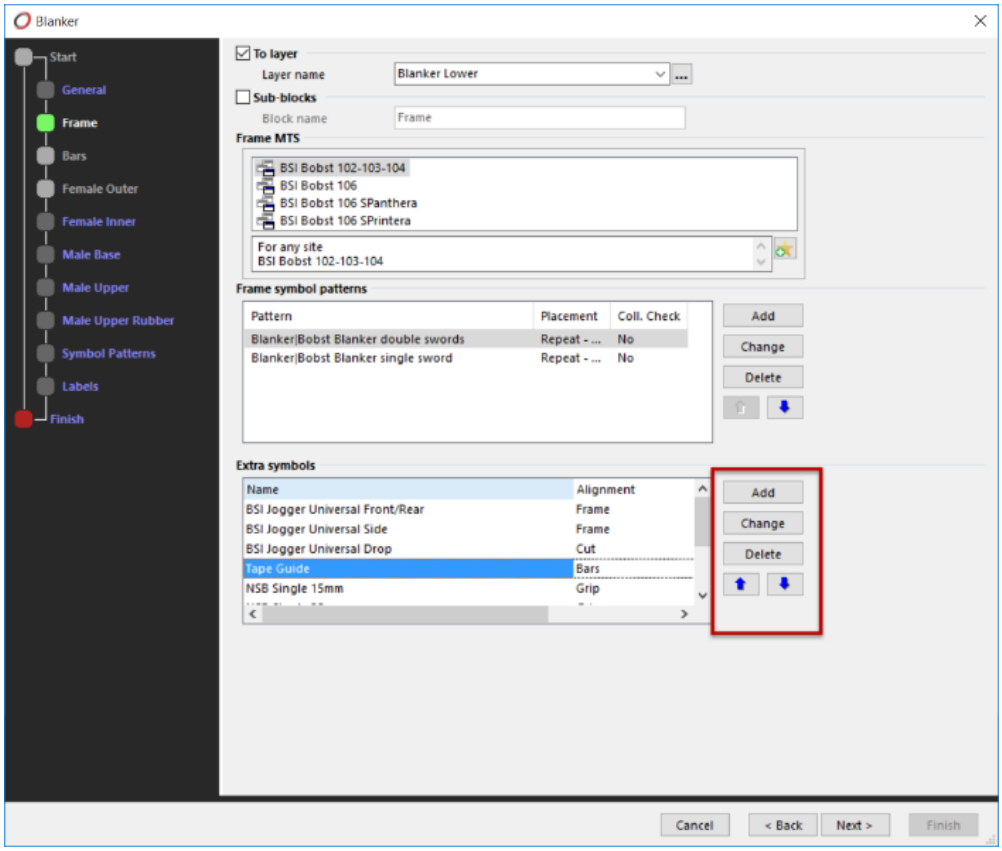
Automatic Creation of Symbol Patterns and Alternative Symbols

- The **Block Create Symbol Pattern** tool allows the creation of a symbol pattern from an Impact drawing. The **Create Symbol Pattern** dialog now has the option to set a 'check boundary for interference' symbol against **each individual symbol**.
- The collision **symbol** is a requirement - for the mounting holes for the **Rotary Dieboard** tool, for an example.



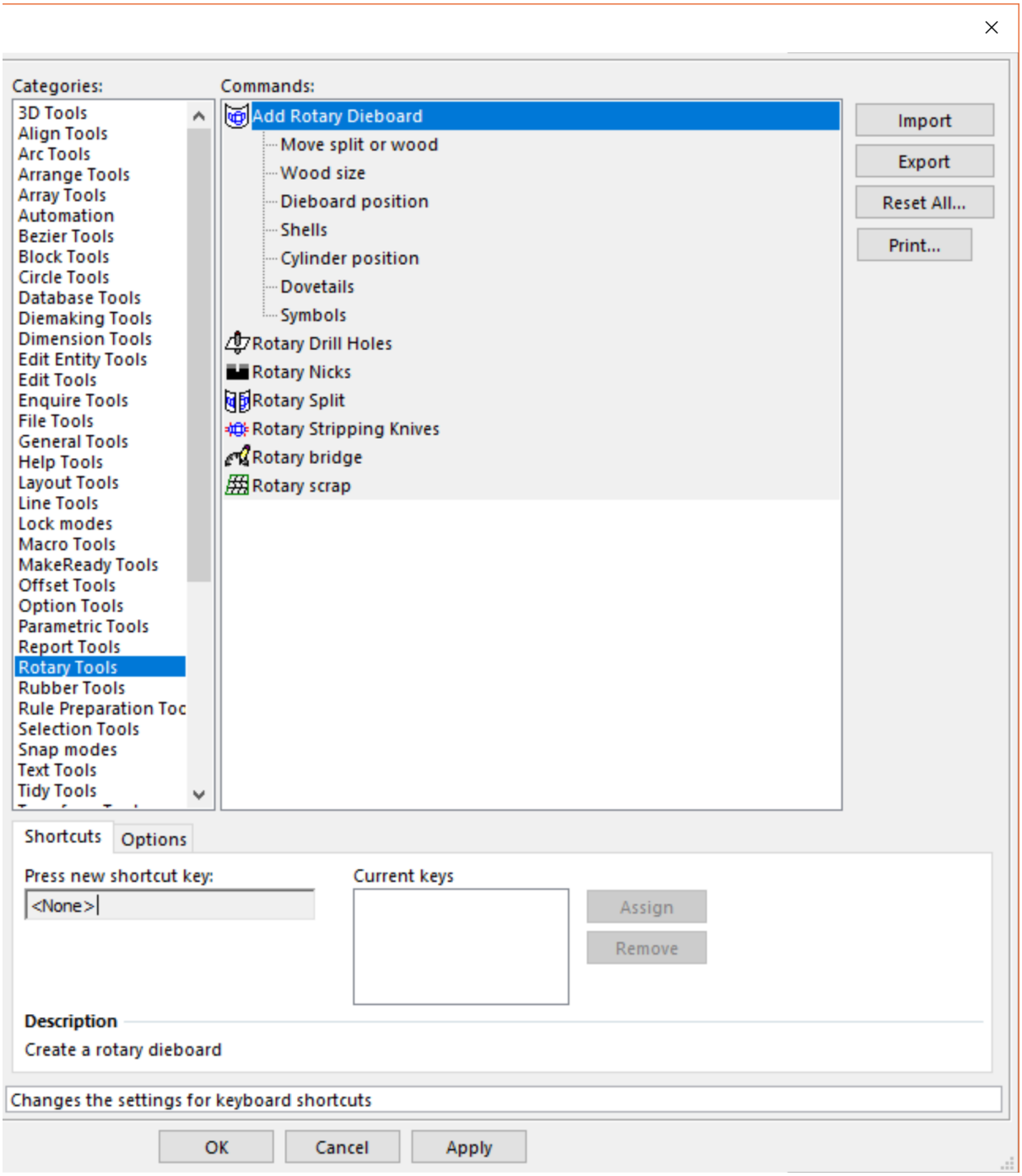
Blanker Frame Symbols Ordering*

- The **Blanker** tool has the option to allow the manual placement of symbols, relative to the lower frame. The order in which these symbols are presented to user can now be predefined, resulting in easier grouping:



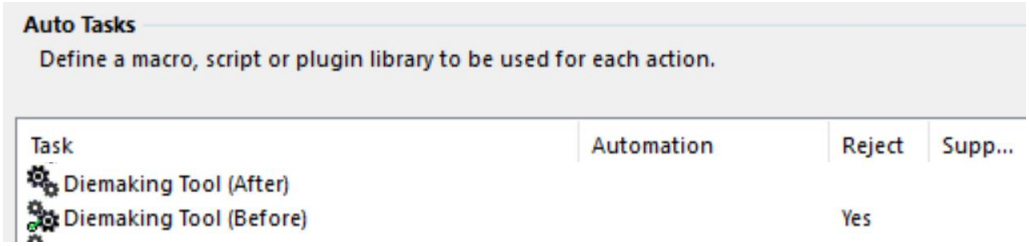
Rotary Dieboard Workflow Improvements

- To improve the workflow of the **Add Rotary Dieboard** tool, keyboard shortcuts/hotkeys can be defined for the various sub-tools:

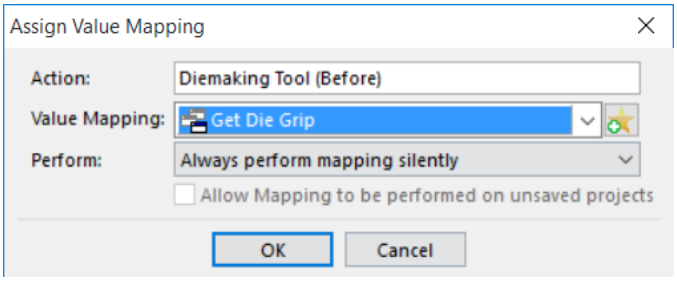


Diemaking Auto Tasks and Value Mappings*

- There are two new **auto tasks** - **Diemaking Tool (Before)** and **Diemaking Tool (After)**:



- These tasks will apply to all Diemaking tools which **currently** have individual auto task capabilities.
- There are also two new **Value Mapping** triggers that can be used to copy values into variables before (or after) many **Diemaking** tools are run:

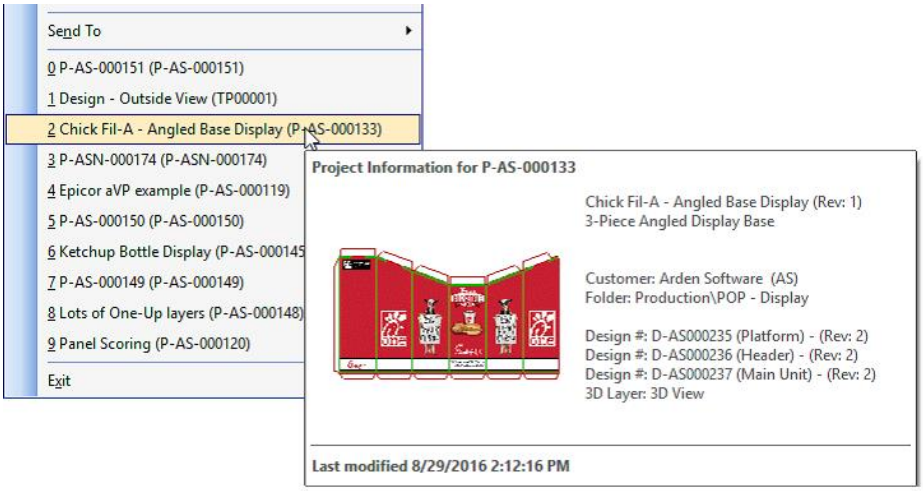


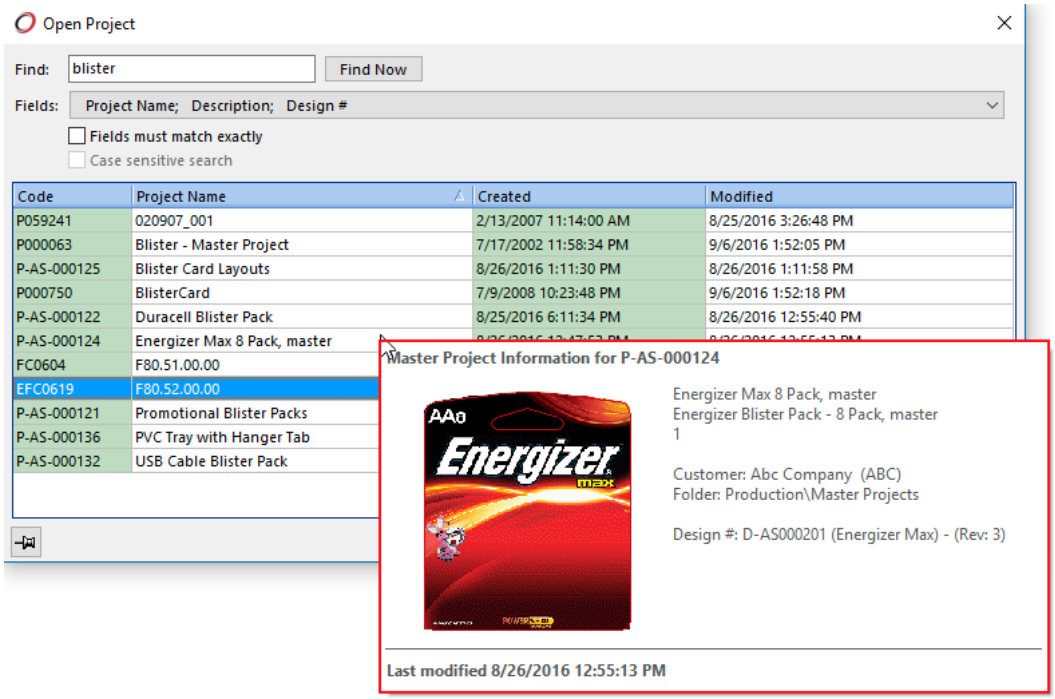
- This provides a single trigger that all **Diemaking** tools will use, rather than the specific triggers. For example, the **Diemaking Tool (Before)** value mapping trigger can be used to map a database source to a variables destination – and the variables could then be picked up by the **Add Dieboard** tools…

User Interface

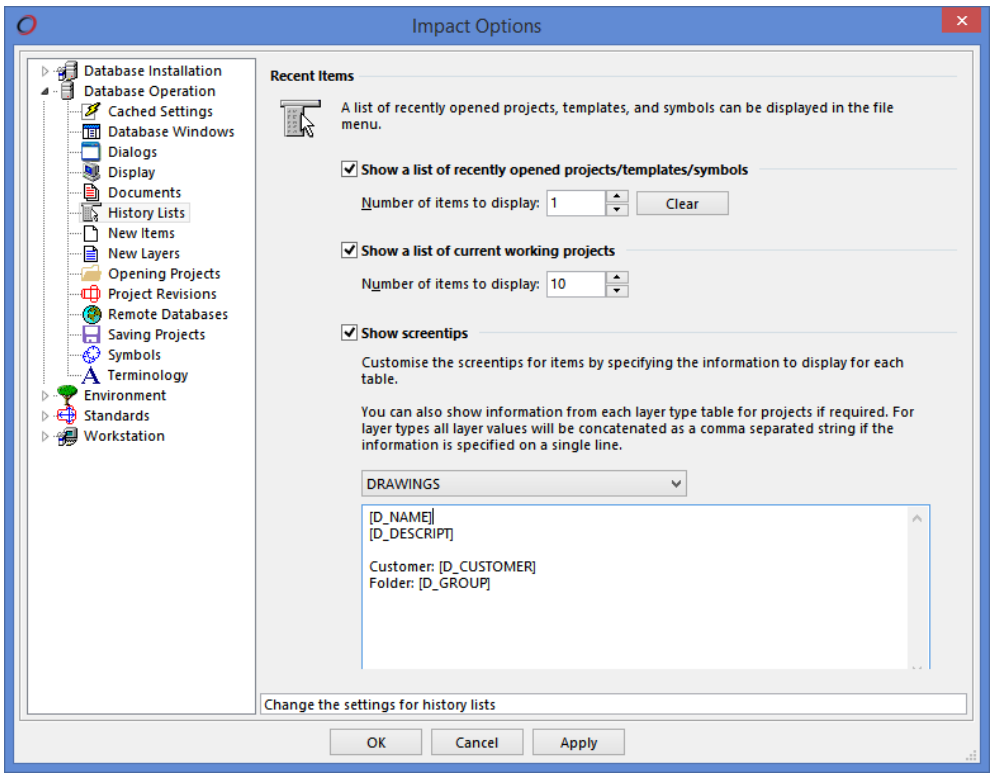
Screentips for Enhanced Project Previews *

- Screentips/pop-up hints have now been added to provide custom project details and thumbnail previews in the **History** and **Working Projects** lists.
- They are also visible within the **File > Open Project** dialog.
- The lists will display a thumbnail image (provided one has been created) and an appropriate header & footer for each item **type** (**Project**, **Symbol** or **Template**), when hovering over a list item:

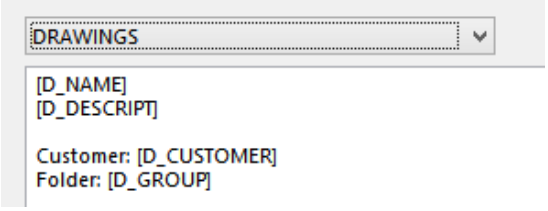


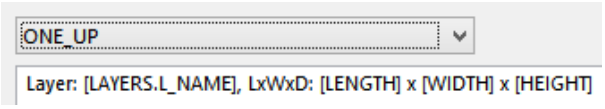


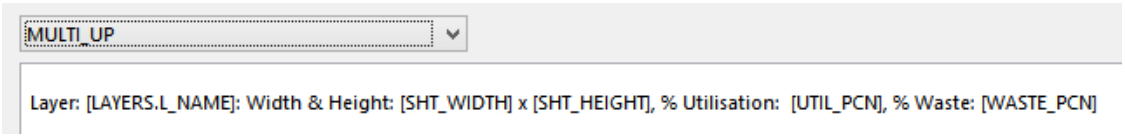
- Whilst default configurations will be provided for each item **type**, there's scope for customisation via the **Show Screentips** options (**Options>Environment>Database Operation>History lists**):



- Information may also be displayed from layer **type** tables – so the following tip configuration:





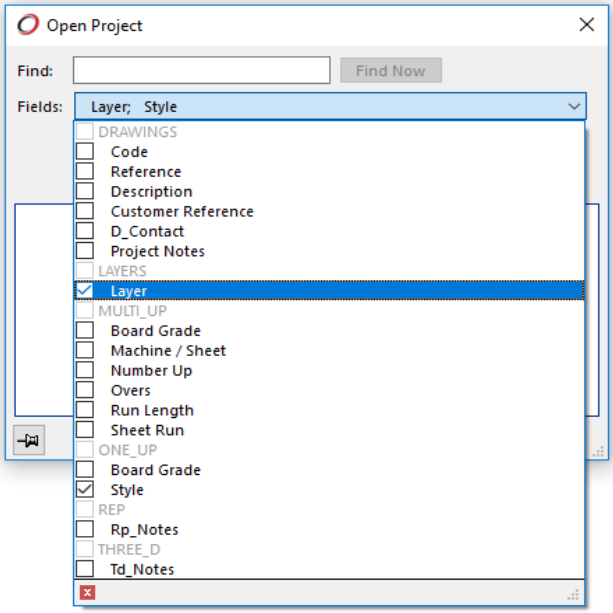


- Would display the following screen-tip:

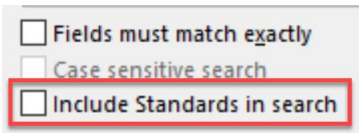
- As expected, these options may be set a user or a **user-group** level.

Enhanced 'Open Project' dialog, including custom field lookup

- Previously, by default, the 'Open Project' dialog allowed searching on **Project Code**, **Reference**, **Description** (or any other integer or character-type fields which were not hidden or private).
- The dialog has now been expanded to allow searching of fields within the DRAWINGS, LAYERS and Layer EXTRA (typically One_Up/Multi_Up) tables, and includes and integer or memo-type fields (such as **Project Notes**):
- Impact also uses field **Prompts** instead of field names for friendlier and more descriptive items in the dropdown list.



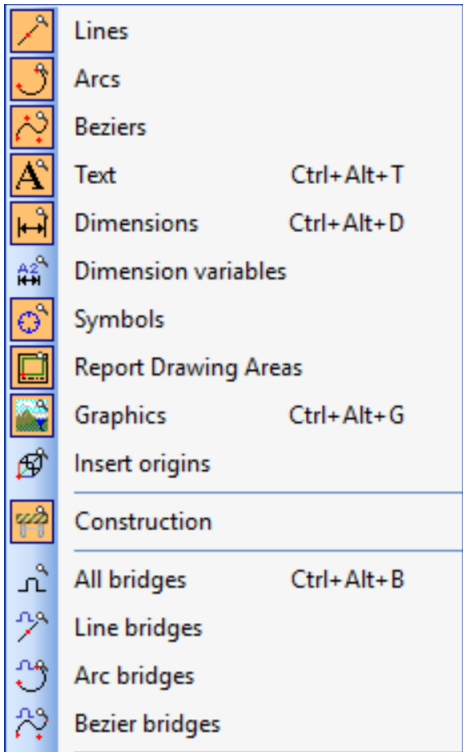
- Note that a simple filter has been added to allow **Standards** to be omitted from search results:

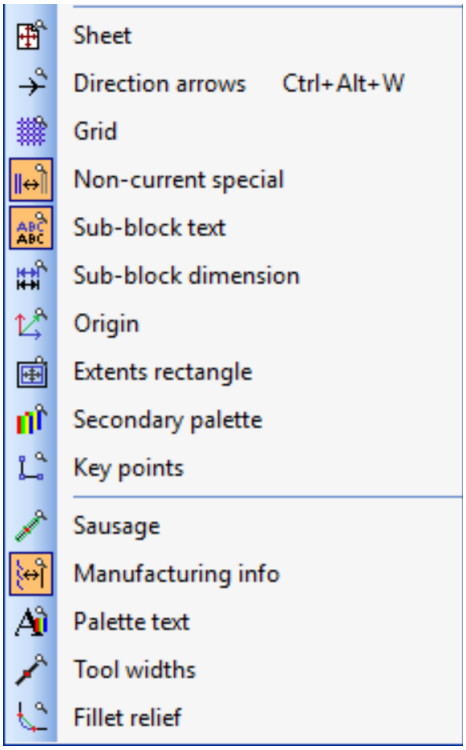


- The additional fields will lead to quicker drawing/layer finding.

Icons for Visibility Toggles

- The **Visibility Toggles** have been updated by the addition of tool icons:



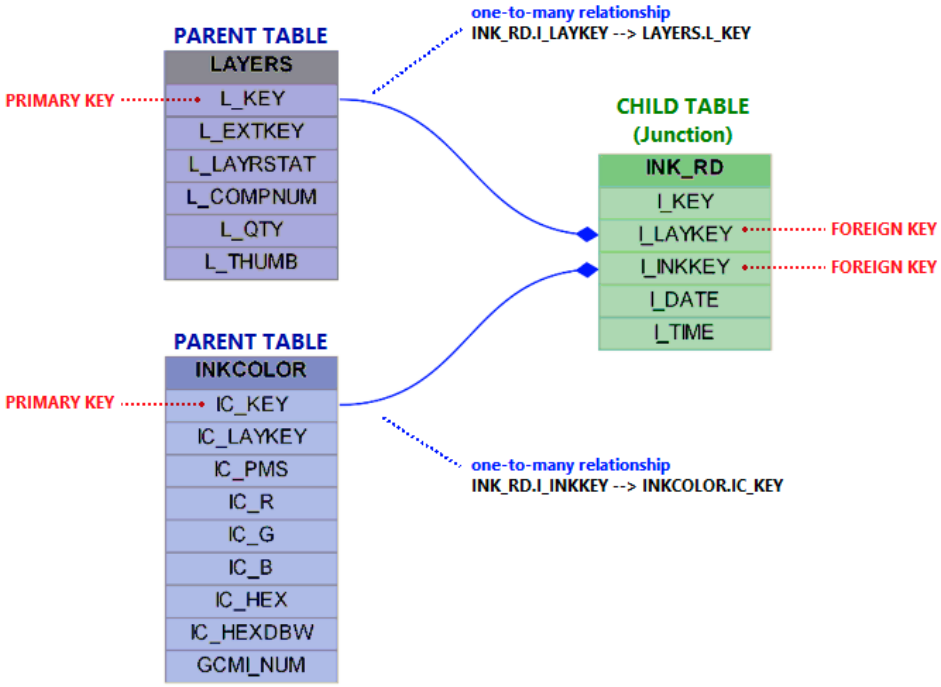


Database

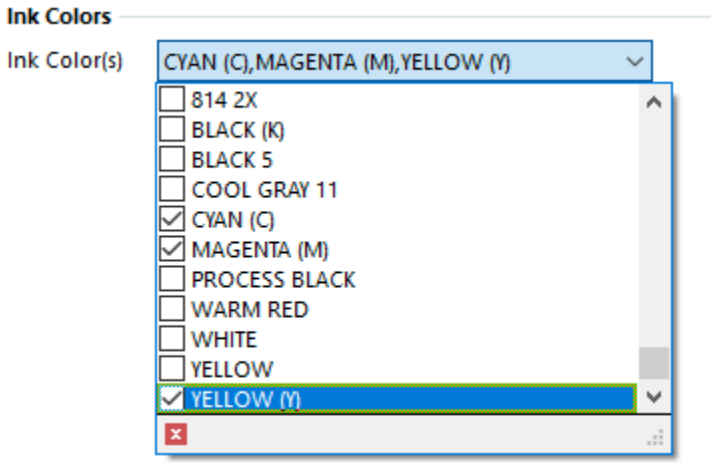
Impact **2019** introduces the largest collection of new database features and enhancements in a single version since the inception of the product. These features span different categories and allow for better organising, searching and the presentation of data within the Impact database.

Many-to-many*

- This powerful new feature is a huge topic, requiring its own documentation (available separately). Essentially this adds support for extended, custom database table relationships, e.g. multiple customer and contact addresses for ship to, billing, or as in the below diagram of a table relationship, a way to assign multiple ink colours for a design.

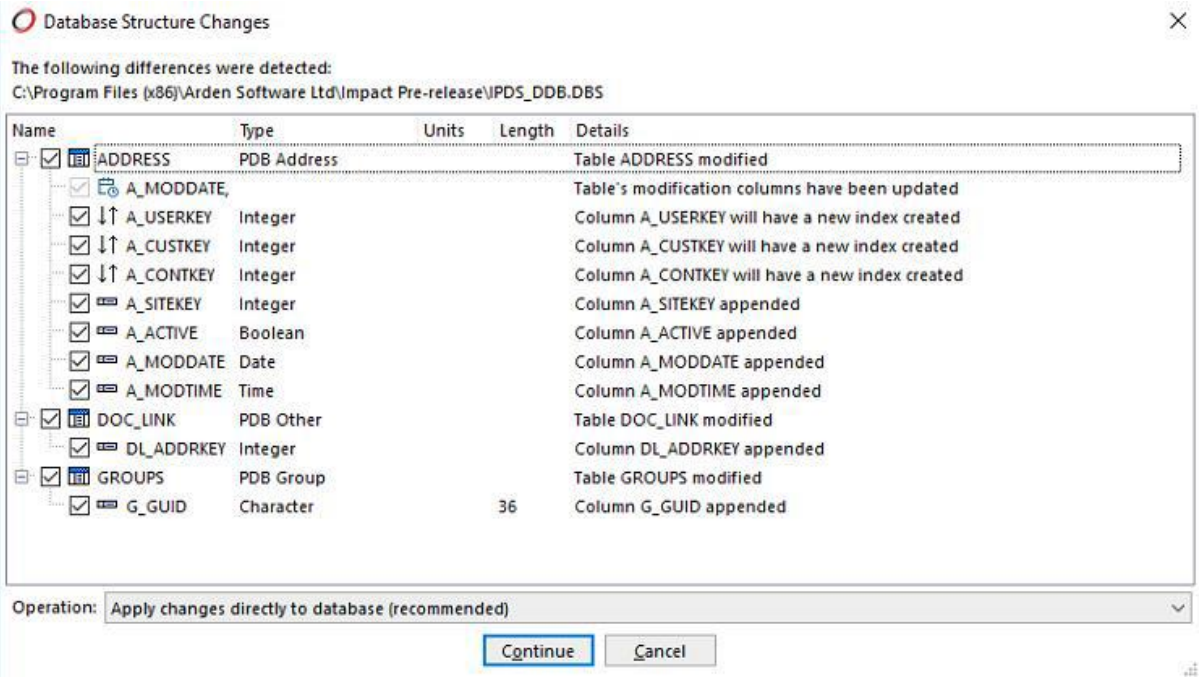


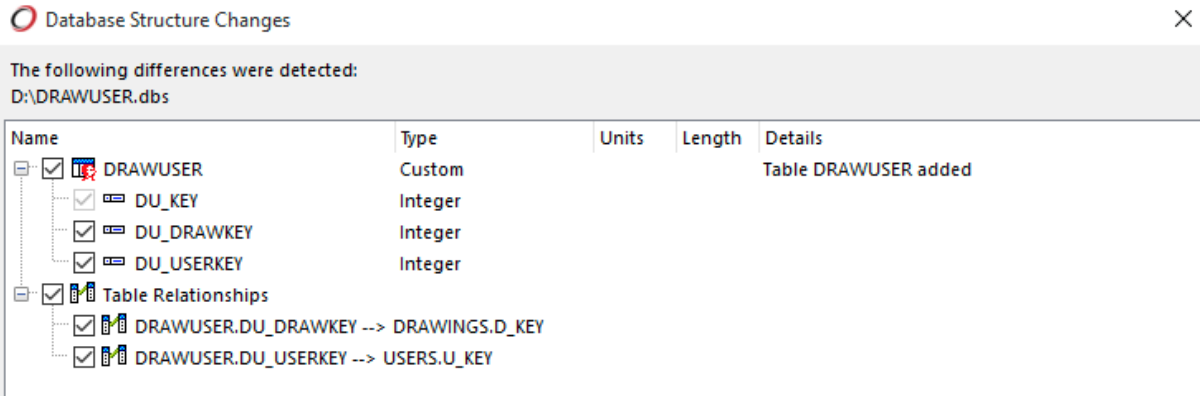
Here's an example of how that may then be presented to a user for selection in an Impact Database Window, making use of one of the new Check ListBox field control type, as covered later in this document.



Database Structure (DBS)

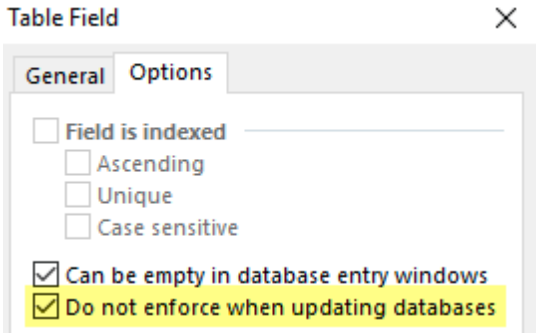
- There are several new database structure changes (tables/fields/indexes, etc.) that have been added to Impact **2019**.
- The structure changes dialog has had a makeover, including the features:
  - It now uses a hierarchy tree to display all structure changes
  - Added icons for different change types
  - Added more details including showing column types and lengths
  - Added detected table relationships changes.
  - Added context menu for checking various tables/columns/relationships quickly.





Non-enforced Null Changes*

- There is a new mechanism within Impact to detect if a user has changed a column's required (nullable) flag so it is not automatically reset at next upgrade.
- For example, if you configure the ONE_UP.LENGTH to be required (non-nullable) then when updating Impact, this has traditionally always forced back to not required (nullable).
- For each column that should NOT have its nullable flag reset you simply need to configure the 'Do not enforce when updating database' checkbox.



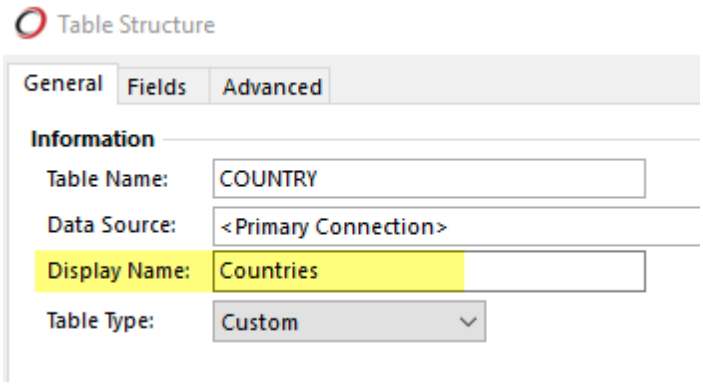
- This option only applies when configured in an exported DBS file that is subsequently imported into an existing database. This means that any upgrade of Impact will not reset these nullable flags.
- These changes have already been applied to all appropriate columns in the ipds_ddb.dbs file we distribute. No configuration changes are required at any central or site databases.

Archived or Active Items for Dynamic Lookups*

- Impact **2019** introduces a mechanism to archive items within a dynamic lookup. Often, the items that are contained within a dynamic lookup become superseded with new items. For example, say you have a table of manufacturers joints and originally had a 'glued' option. You now wish to change terminology and extend it to use 'Glued inside' and 'Glued outside' instead. If you open an old project that used the original option, you still want to be able to see this. However, if you were to create a new project, you don't want to be able to see/choose the old option. This was not possible in Impact versions prior to Impact **2019** .
- You can now choose to either configure either an Active or Archived column depending on your specific requirements and terminology that you wish to use.

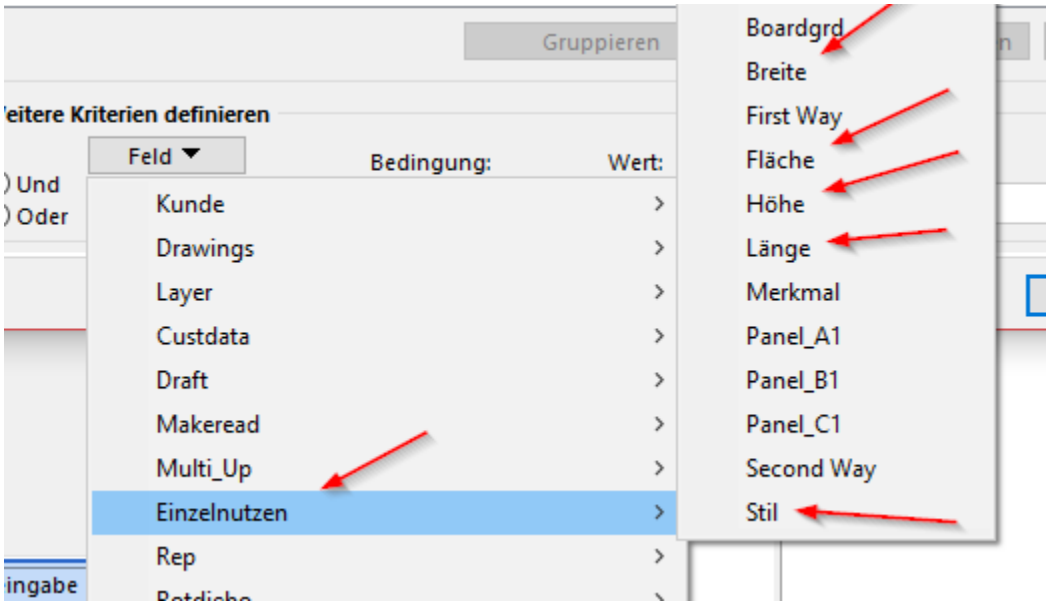
Table Display Names/Prompts

- A new '**Display Name**' property has been added for each table in the Table Structure form
- This is now used to display friendly table names in the following situations:
    - When Impact prompts to delete tables
    - When listing fields to include in the Open Project searcher's field selection
    - When displaying fields to select by table for building Advanced Database Queries
- During upgrade existing database tables are automatically updated and the 'Display Name' is copied from the '**Menu Text**'



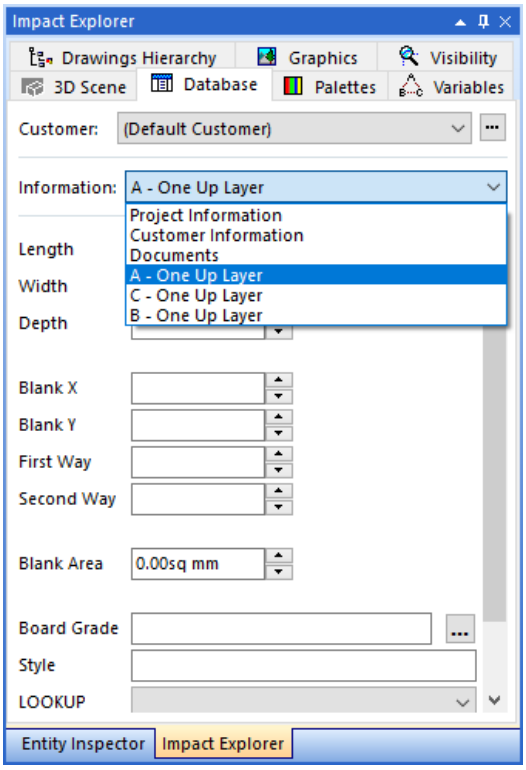
Translatable Table and Column Prompts*

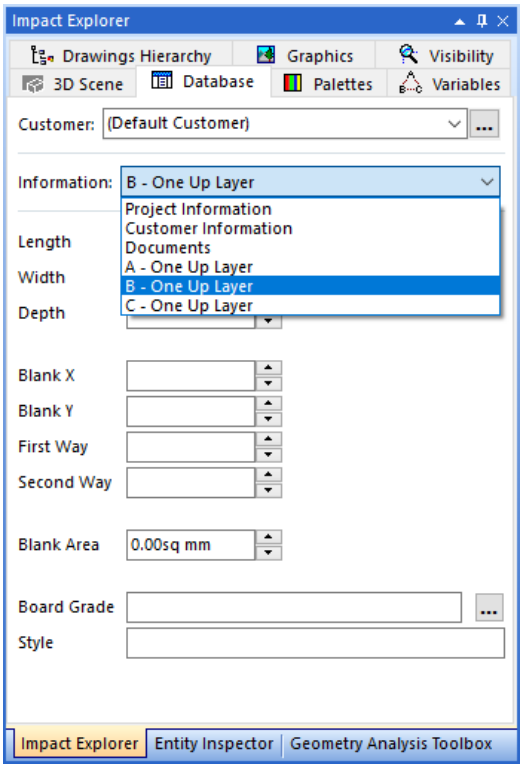
- For the convenience of users connected to the same database as users of a different language, you can now localise the table and column names displayed throughout Impact.
- In the below example, we see a selection of key table and column prompts translated to German. The same transations will appear in the File > Open > Project dialog



Layer List Sorting

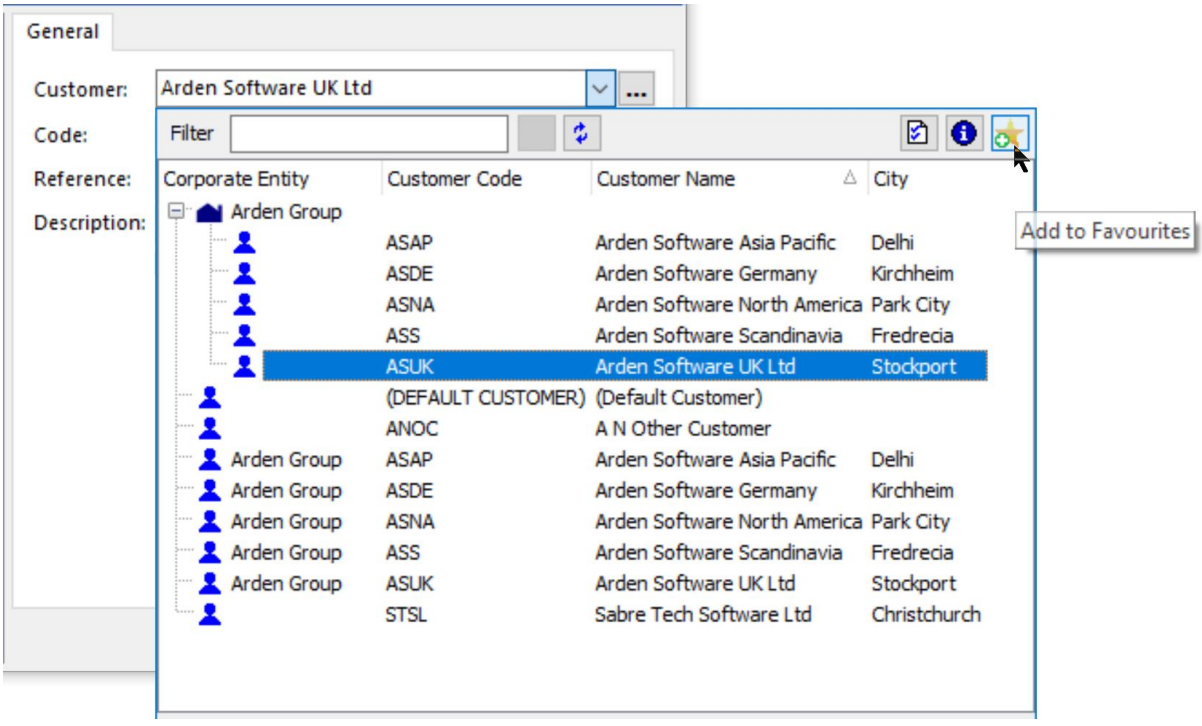
- The Database Window for Projects, which is commonly enabled in the **Database** tab of the **Impact Explorer** and also accessible via **Database** > **Project** menu, contains entries for accessing "Project Information", "Customer Information", plus a list of all the project's layers for easy selection. It's not unknown for this to contain a large number of layers, which until now have not been presented in a particularly useful order. This list is now sorted alphabetically, allowing users to quickly locate and switch between them for view or edit.
- A comparison of Impact 2016 (left) and 2019 (right) is presented below:





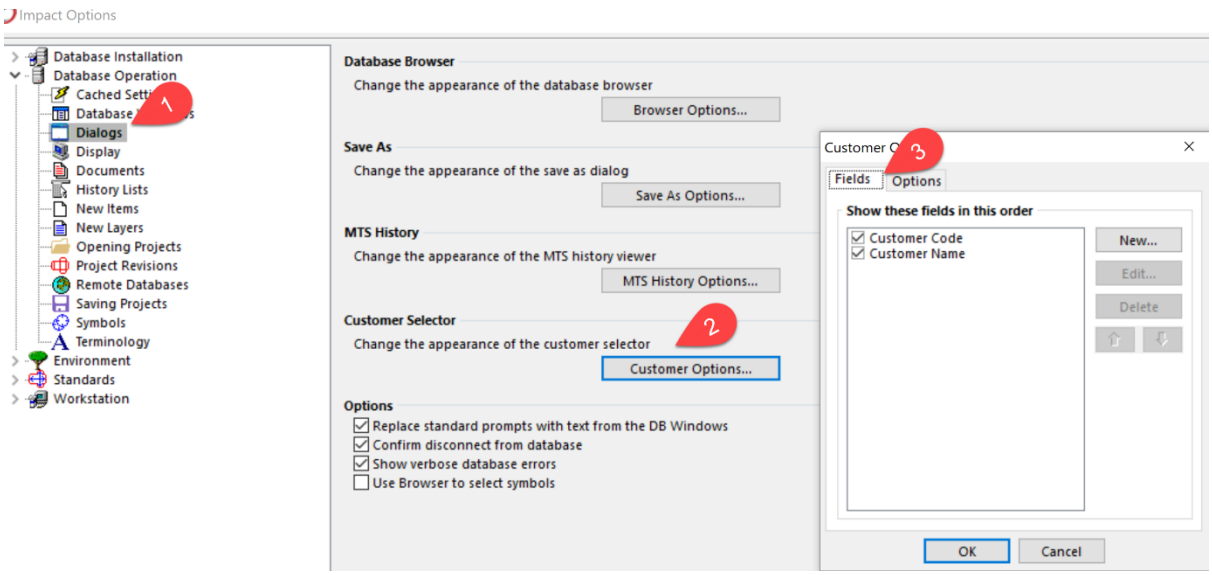
Improved Customer Selector and Customer Group handling*

- Supporting searching and selecting customers by customer group, address and other common customer attributes, as well as the flagging of **Favourite Customers:**

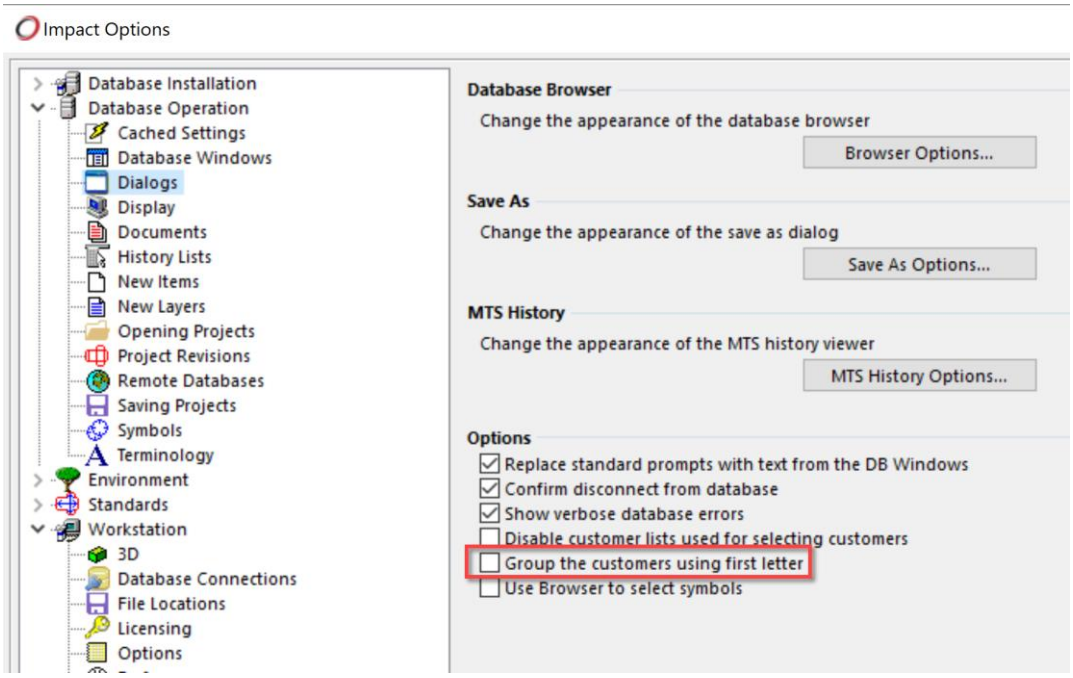


- The customer list display may now be managed in the same way as the Details pane within the Projects

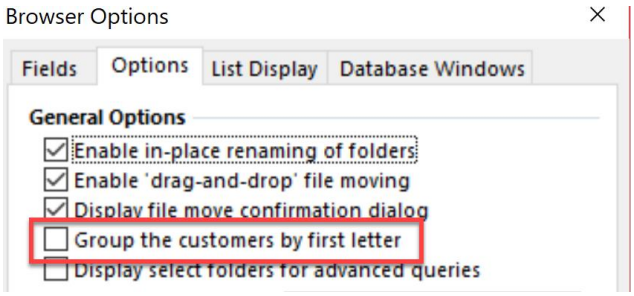
Browser (and the Revisions pane within the Browser Information pane), via **Customer Options** (subject to user privileges):



- Note that the existing '**Group customers by first letter**' option has been **moved** from the **Database Operation->Dialogs** page:



…. into the **Browser Options** form (as it only applies when using the **Impact Browser**):

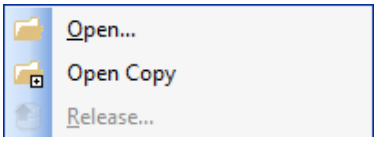


Bill of Materials (BOM)*

- With the promise of component part lists, and a reporting tool with multi-page output (PDF), this feature is made possible by the core 'Many to Many' database improvements introduced in to this product release, for which there are many similar applications. The BOM feature will however be delivered as a comprehensive plug-in due for release later in **2019**.
- Please feel free to register your interest in this forthcoming feature to be notified when it becomes available.

New Project 'Open Copy' Action

- New dedicated 'Open Copy' option has been added to the context menu in the Project Browser – allowing you to open a 'Copy' of a project immediately, as opposed to using the 'Open a copy of the selected project….' option from the Open Project dialog.

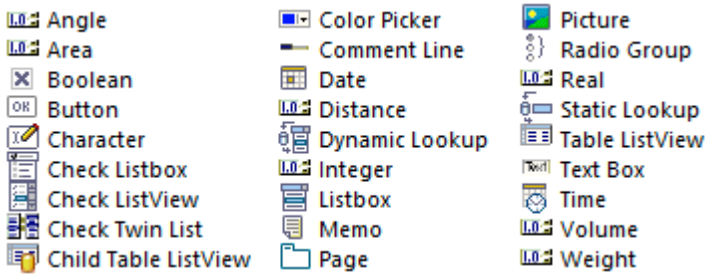


Enhanced Database Windows*

With the addition of user-defined table relationships, there are several new concepts and features to introduce regarding Database Windows. The highlights of which are included here:

Control Type Icons

DBW Control Types now have iconography to better distinguish controls from one another. These icons appear when adding a control type in the Field Attributes dialog, as well as the Fields tab of the DBW MTS.



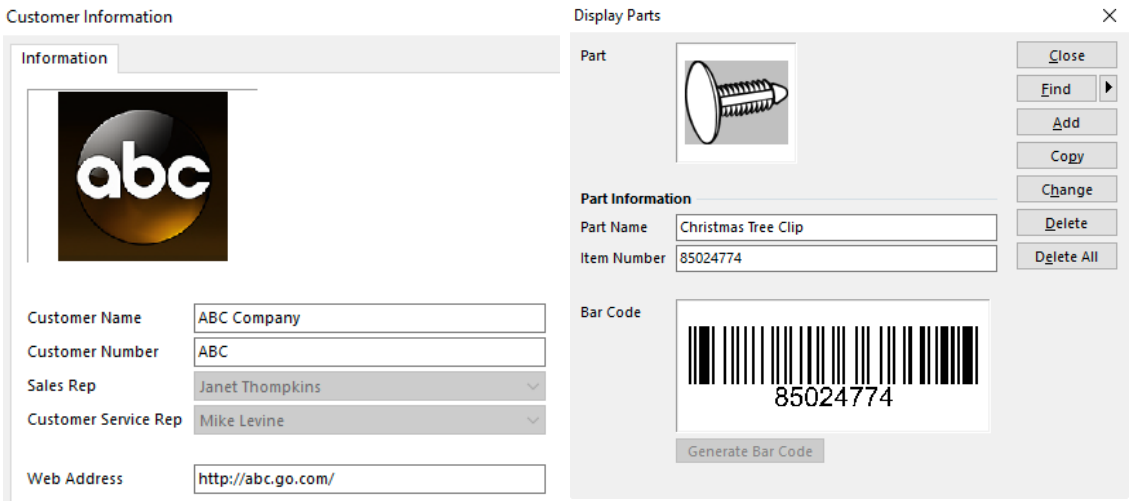
New Control Types*

Six new DBW Control Types have been added:

Picture	A new control for editing images.
Check Listbox	A drop-down combo presenting a list of checkable items.
Check ListView	A list view control presenting a list of checkable items.
Check Twin List	A twin list view control presenting two lists of items that can be moved between the lists.
Table ListView	Used to display multiple table records in a grid view directly in a DBW. Typically, this is the only control in the DBW.
Child Table ListView	Used to add/edit/delete multiple child table records directly in a DBW.

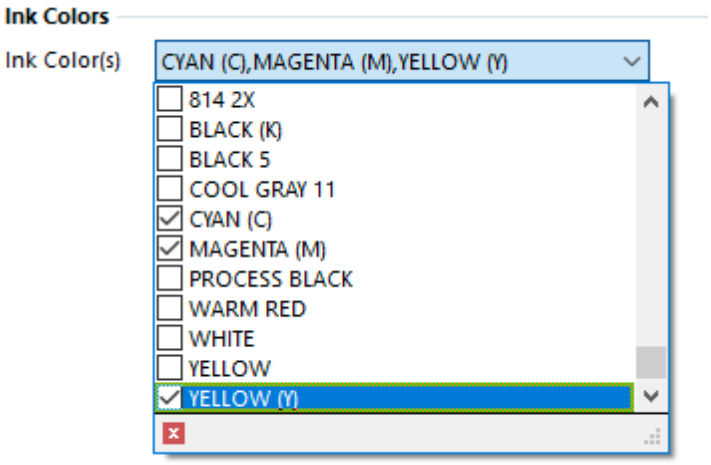
Picture Control*

- A new Picture Control has been added to DBW's for adding images to the database. The picture control can read/write images to Picture (BLOB) columns in a database table.



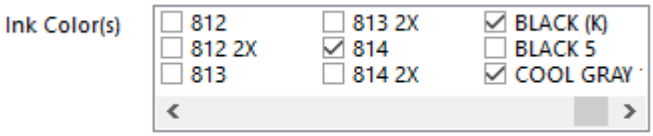
Check Listbox*

- The Check Listbox is a drop-down list box with a checkbox included with each entry item. This allows for selection of multiple values within one control, while the dropdown list box occupies very little screen real estate.



Check ListView*

- The Check ListView is a static list view with a checkbox included with each entry item. Like the Check Listbox, this allows for selection of multiple values within one compact control.



Check TwinList*

- The Check TwinList is a two-column control with arrows to move items between columns. Items in the left column indicate all available choices, while items in the right column are the assigned/chosen values. This allows for selection of multiple values within one control.

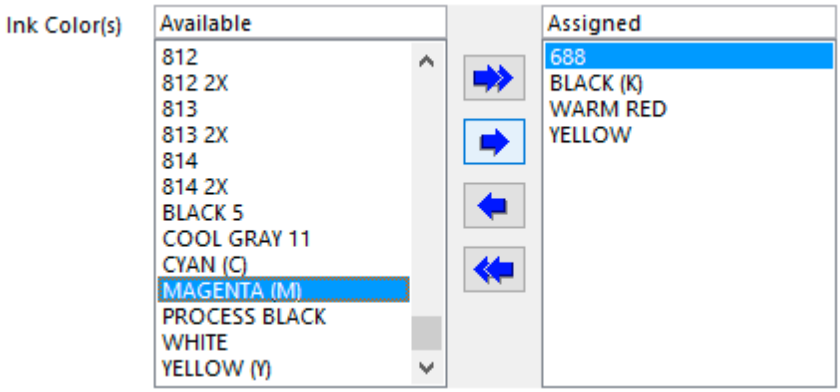
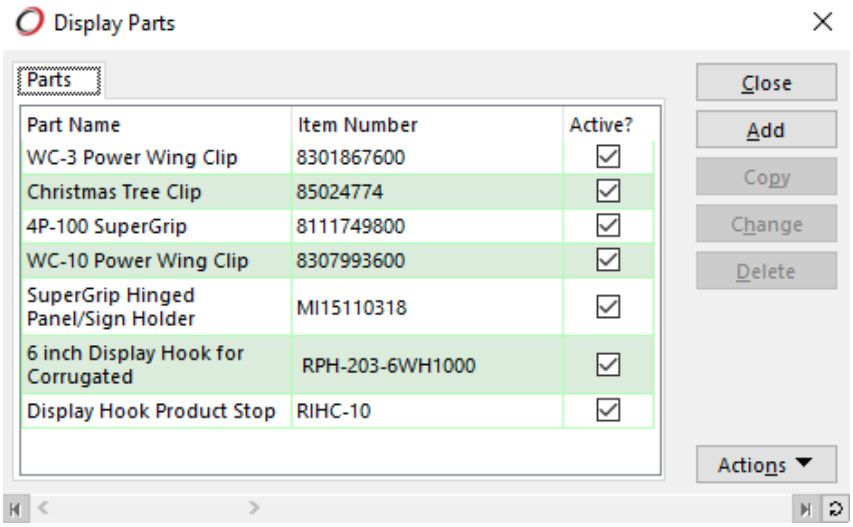


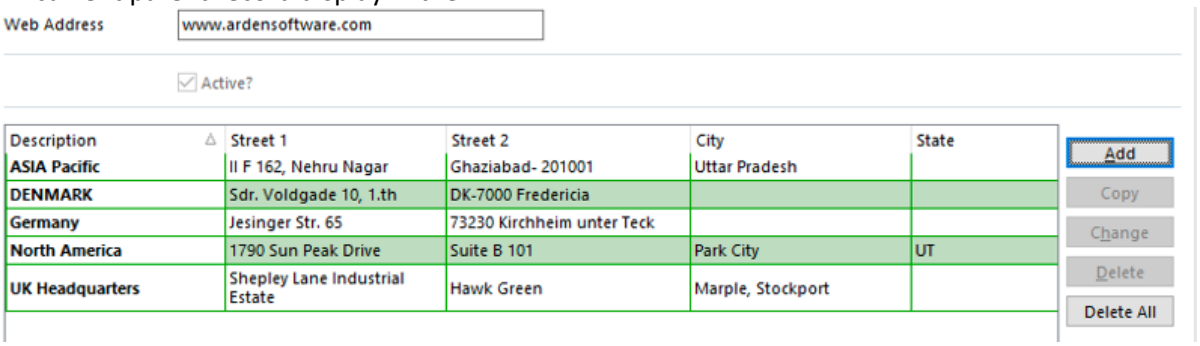
Table ListView*

- The Table ListView control is used to create a specific type of DBW for displaying multiple records from the same table within a DBW. Commonly referred to as a 'ListView DBW'. The ListView DBW is only appropriate when directly editing tables within the database.



Child Table ListView*

- The Child Table ListView control displays an embedded listview control for child records related to the current parent record display in the DBW.

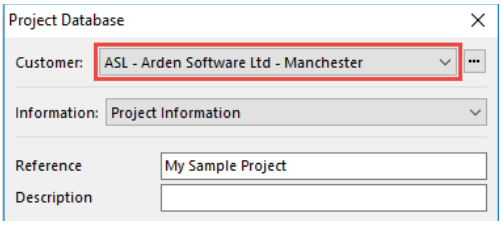


Database Window Test Mode

- When configuring database windows (DBW) you can use the Test button to see a preview of how the DBW will look. This helps with field arrangement.
- In Impact **2019**, the Test button has been improved to make it easier and more efficient to configure and test dynamic data within DBW's without the need to save the MTS and use it within Impact.
- The DBW test mode now also loads dynamic lookup values and will react to child/parent filtering if possible. If your DBW includes dynamic lookups that are filtered on D_CUSTOMER then it will use the customer from the current drawing or the default customer.
- The DBW test mode allows full interaction with Child Table List Views, including allowing you to add/edit/delete rows from the ListView controls. **No data is updated when using Test mode**.

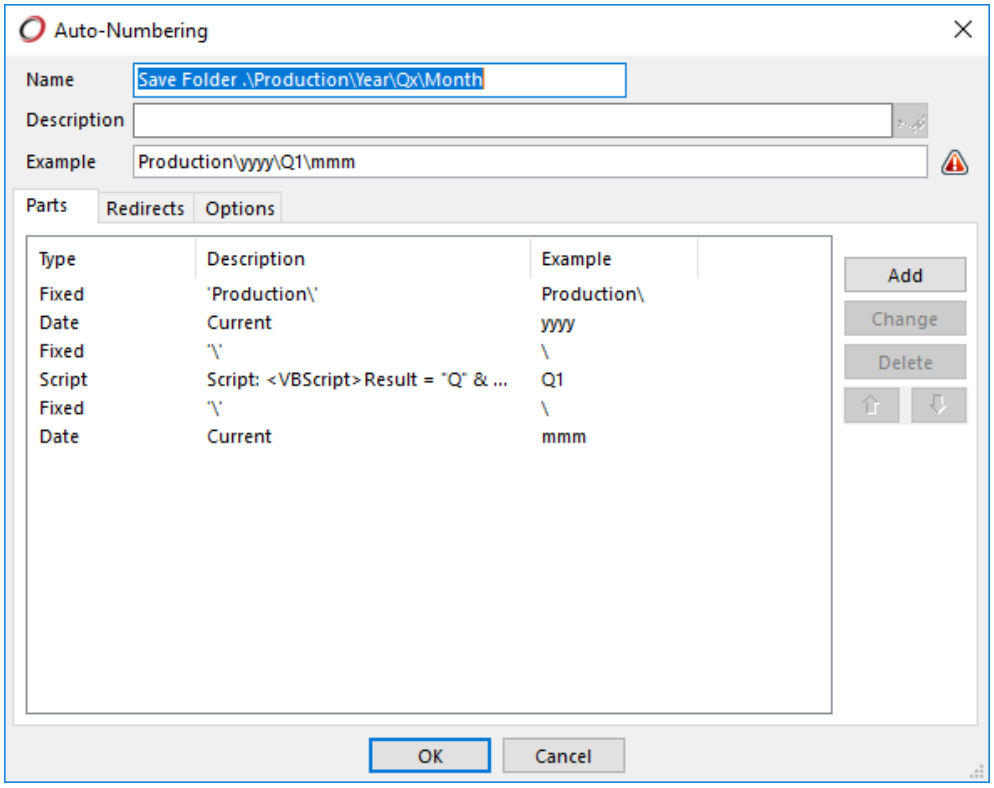
Advanced Formatting for Customer and Address Display Names**

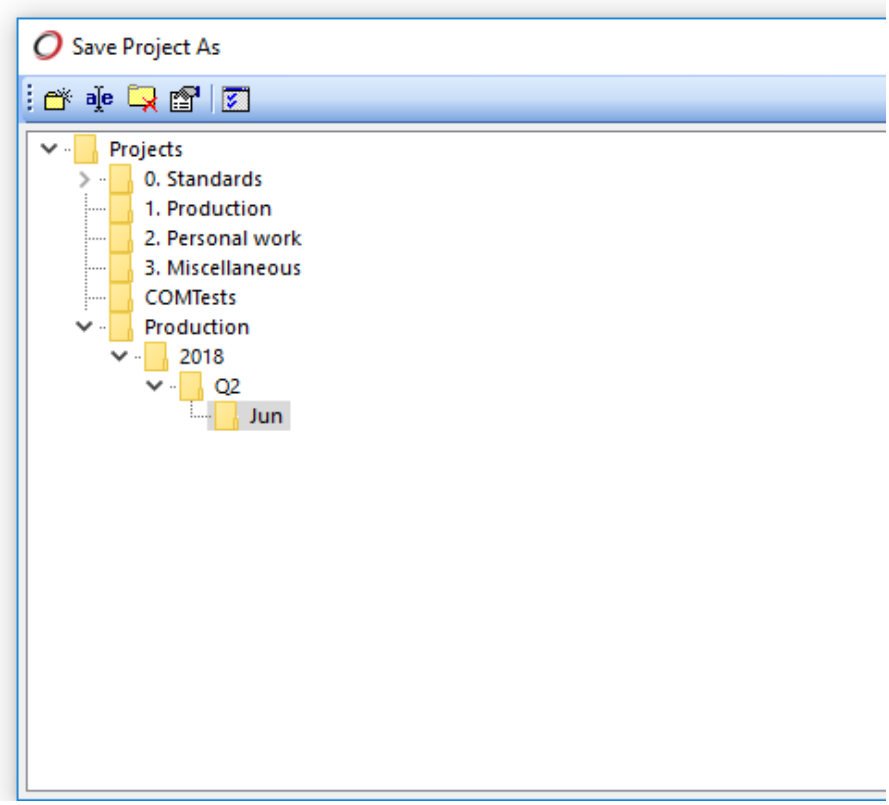
- You can now append/prepend additional identifying data within customer and address selectors, to clearly distinguish records based on a combination of key fields. For example, you may wish to configure your display settings to include a customer's city or state in their display name.



Auto-Numbering Folder Creation

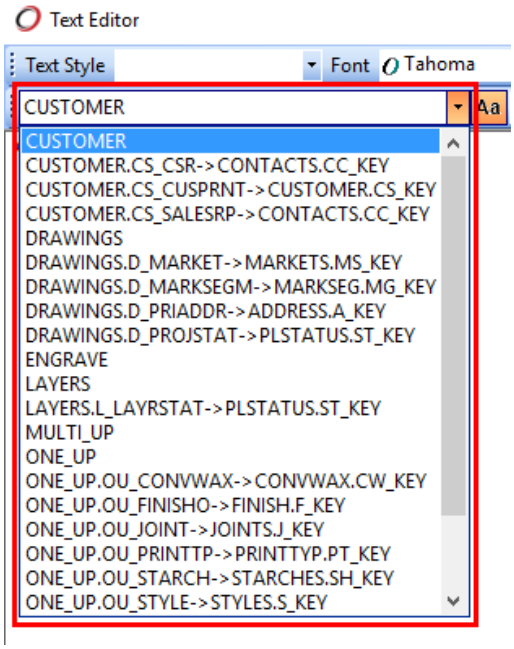
- Project save folders can be created automatically (if they don't already exist) as part of an auto-numbering master tool setting
- This is very useful if you currently organise your projects by month or quarter for example, and are therefore routinely creating new folders manually





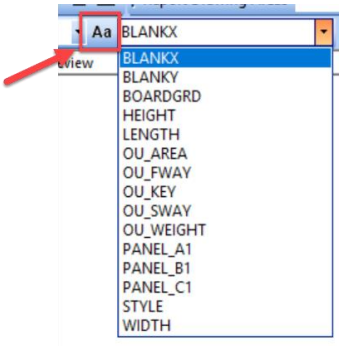
Simplified Custom Table Field Links

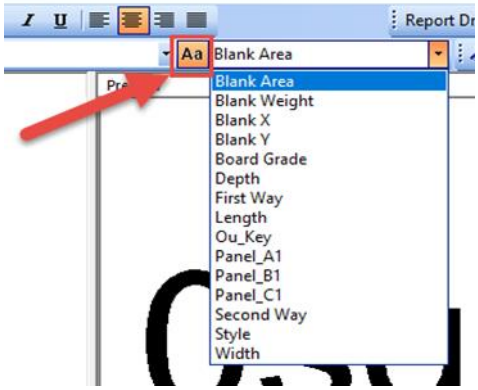
- Previously, it was difficult to remember the syntax needed to access data from parent tables (typically when wishing to display lookup values in report templates). With any dynamic lookups that are created or updated to use the new table relationships feature, you now have a convenient way to locate and display values from linked fields.



Friendly Field Prompts

- A new text editor option offers a toggle button labelled '**Aa**' to switch between a field's name and its more easily recognisable field prompt:





- This option replaces the actual database column name with the user-defined prompt (or text-label) – which usually has a more meaningful description, to aid understanding.

Dynamic Image Generation (Reports)*

- Images stored in picture type database fields or images from disk can now be added dynamically to report templates. For example, you may wish to include your customer's logo or the designer's avatar on a report.

- These images are controlled by adding a text entity with a special format, some examples of which include:

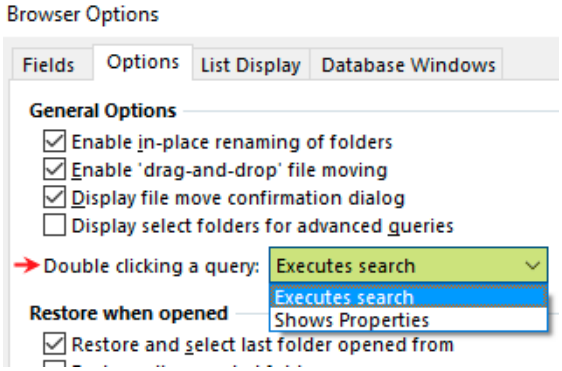
    - **[ImageFile("[Script("<VBScript>Result = "D:\image1.jpg"")]")]** - Loads an image directly from disk
    - **[CUSTOMER.CS_PICT]** - Loads an image from a picture type field in the CUSTOMER table
    - **[ImageFile("[CUSTOMER.CS_FILE]")]** - Loads an image based on a file path held in the CUSTOMER table

Create a new layer without completing required fields*

- No longer prompting users to populate required database windows fields until save time

Double-click Browser Queries to Execute*

- There is now an option to define the behaviour when you double-click on Query from within the Impact Browser.
- This often-requested option can be found under **Options > Environment > Database Operation > Dialogs** and click the **Browser Options** button.
- Double-clicking a Query can be set to one of the following:
    - **Shows Properties** (behaviour in Impact 2016 and earlier)
    - **Executes Search** (new in **2019**)



3D

Speed

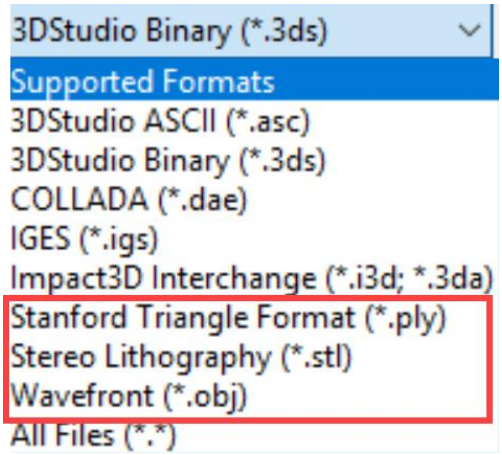
- Faster model creation and better handling of multiple copies of the same model, for example, as produced by 3D arrays, resulting in a smaller memory footprint and more responsive working environment.

Automation

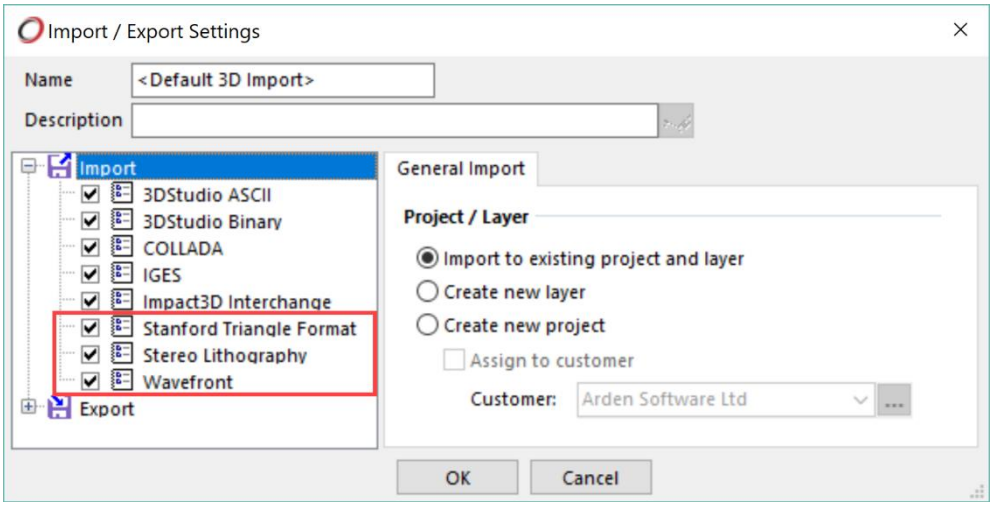
- There's now the possibility to create and update 3D models via Impact COM (or nServer), to support automation or external 3D model generation requests, e.g. for web-to-pack solutions
- This includes the independent update of materials, geometry, board and artwork.

Extended 3D File Format Import Support**

- The import of 3D file formats **Wavefront (.OBJ)**, **Stanford Triangle Format (.PLY)** and **Stereo Lithography (.STL)** are now supported, including textures, without the need for the 3DX library add-on:



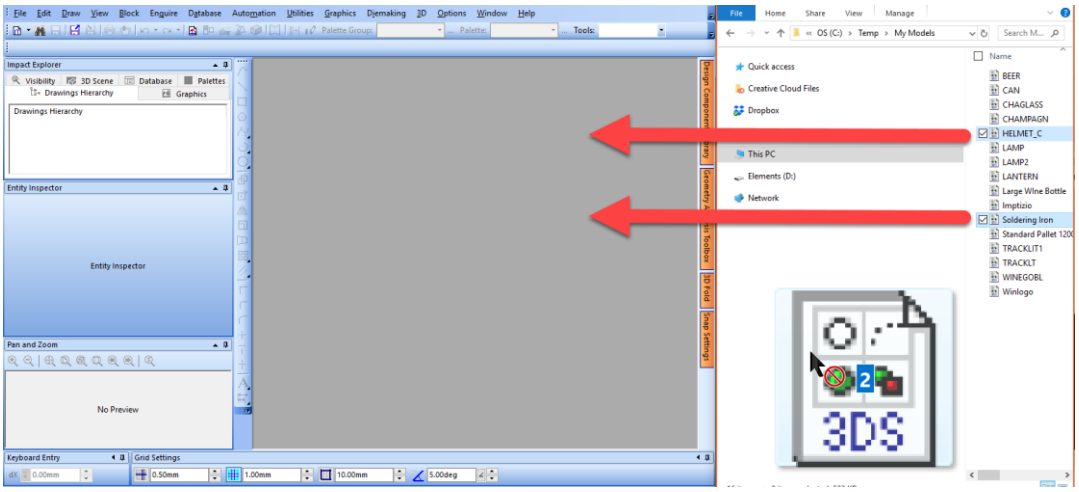
- **Remember to update your 3D Import Master Tool Settings to enable the new formats:**



- **No additional settings are needed for these formats** – there's nothing else to configure other than enabling the formats within your 3D Import MTS.

Drag and Drop 3D Import

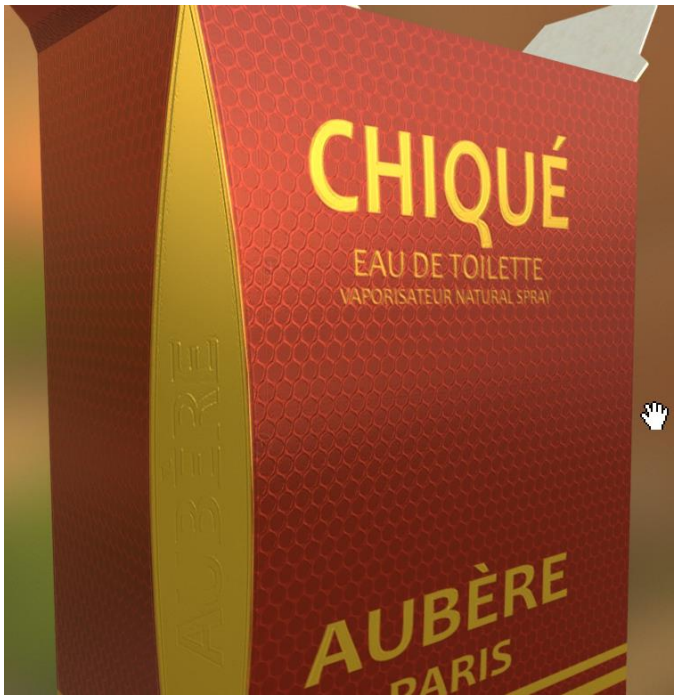
- 3D objects may now be imported via **drag and drop,** for quicker/easier import.
- Simply drag the objects onto the Impact application:



- The **3D Import Master Tool Settings** will be displayed for **each** dragged object.
- This allows you import the objects(s) into the current 3D layer, into a new layer in the current project or into new project(s).

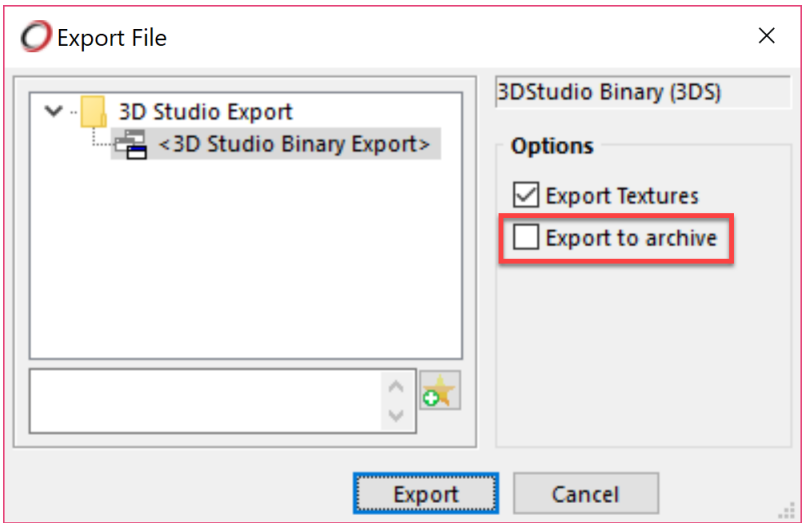
Improved Collada Export Support for Sketchfab

- Bump-mapping (embossing/debossing) and metal texture support for **Collada** exports (to the **Sketchfab** service) has been added:



Zipped/Archived 3D Export*

- For file size reduction, and easier distribution of 3D exports that produce multiple files, we've added an **archive** option to the 3D Export Master Tool Settings where applicable.
- The option will compress the output of a 3D model and any accompanying textures into a single zip file, allowing quicker & easier sharing (email, uploads etc) of 3D content.
- The new option is applicable to 3D Studio Binary (*.3ds), AutoCAD Drawing (*.dwg), COLLADA (*.zae), VRML 1.0 (*.vrml) and VRML 2.0 (*.wrl) formats



- This functionality is also supported by the **COM** interface.

3DX Library Update

- This update adds or extends support for the following 3D file formats (including the usual bug-fixes):

  Acis 2018 (R28)
  Catia V5 V5_6R2018
  Creo 4.0
  Inventor 2018
  NX 12
  Parasolid v30.1
  SolidWorks 2018
  SolidEdge ST10
  Rhino 6

3DxWare (SpaceMouse) Library Update

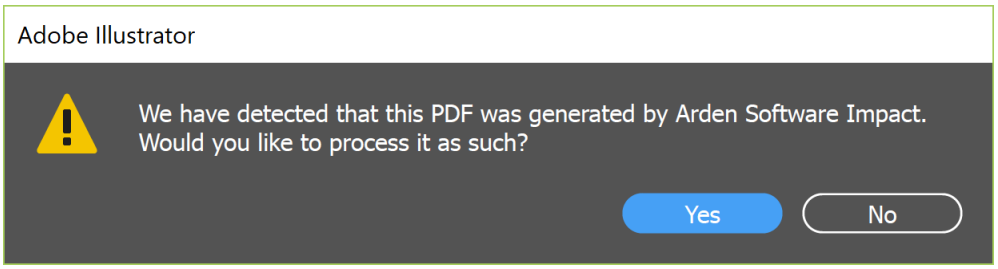
- The SpaceMouse library has received a routine update.

Graphics

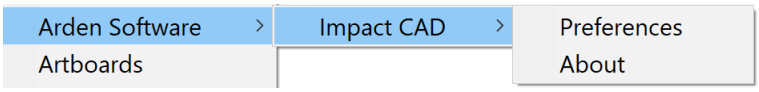
Illustrator Workflow

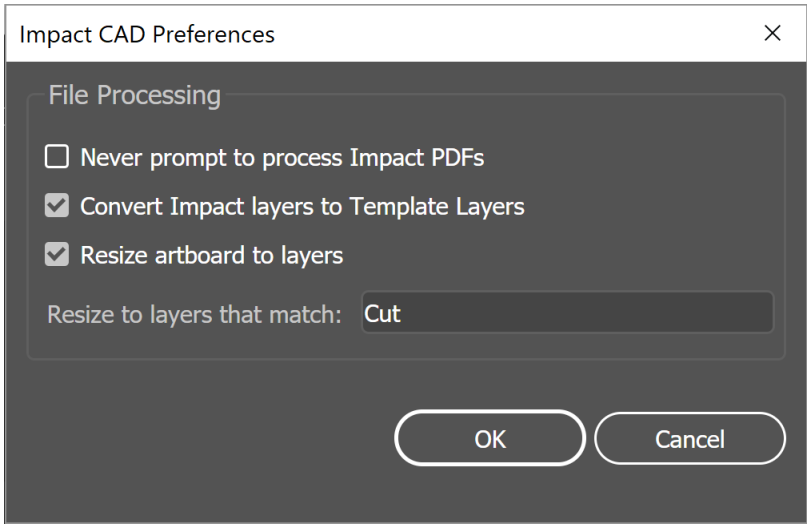
Standalone Plug-in for Improved Adobe Illustrator File Exchange

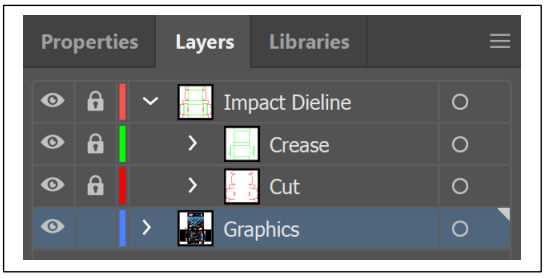
- A plug-in for **Adobe Illustrator** for **Mac** and **PC** has been developed.
- The plugin is currently compatible with Adobe Illustrator Version **17** (CC 2015.5), **18** (CC 2017) & **19**.
- The plug-in provides improved layer support (automatic creation of PDF layers corresponding to Impact palette names); automatic artboard resizing (to the design extents) and locking of dielines for **Impact-created PDF files**, exported from Impact **2010** & later.
- The plug-in searches within a PDF file for the **pdf:Producer>Impact<** tag. If this is found, the PDF file is assumed to be an Impact-generated PDF:



- The PDF is then is processed in accordance with the plug-in preferences - which are configured within **Adobe Illustrator** itself (via the **Window>Arden Software** menu):







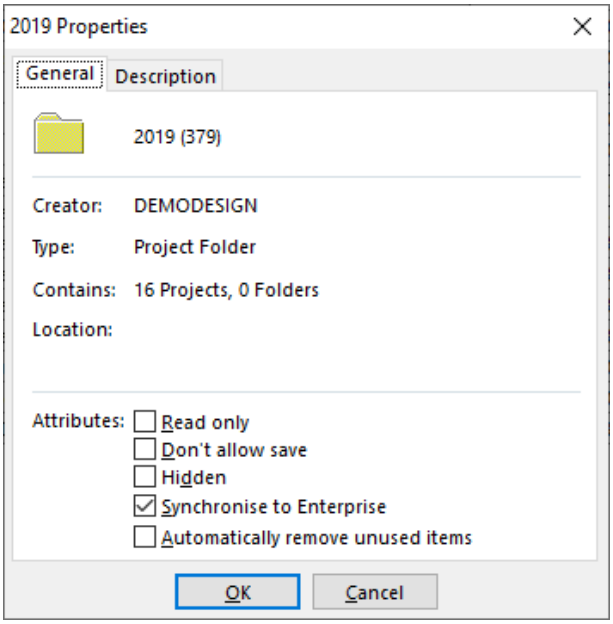
- A dedicated help page has been created for the 'Impact Plug-in for Adobe® Illustrator®' which can be found here: https://help.ardensoftware.com/impactpluginforillustrator_1_en/
- Note, further Adobe Illustrator plug-ins are now being developed to deliver, amongst other features, live 2D/3D preview of graphics as edited and saved within Illustrator.

Enterprise

General

Auto-generated Enterprise Folders Enabled for Sync

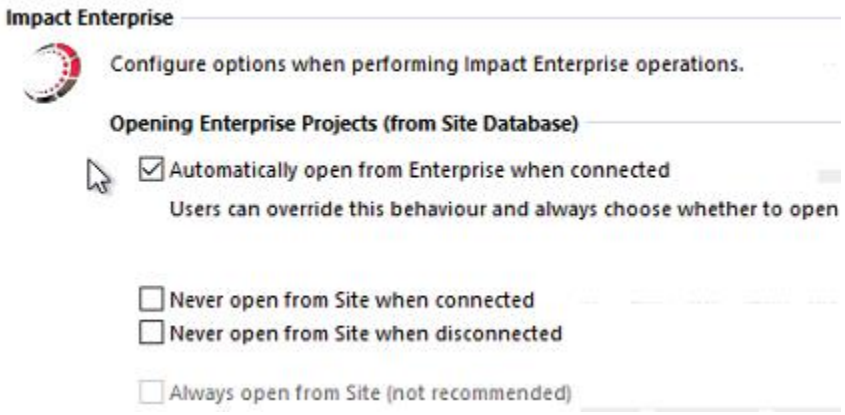
- Folders created automatically as the result of projects being synchronised between Enterprise databases now have their 'Synchronise to Enterprise' flags set automatically, meaning any additional contents added to that folder will also be synchronised



- Typically, database administrators will manage the folder structure within the central database and publish it, including configuring which of those folders should be synchronised back to central. However, automatically created folders or those added by individual users may not have had this flag set, this this feature becomes useful.

Improved Options for Opening Projects at Site Databases

- Force local only OR central only project check-outs. Simplifies the check-out process, preventing accidental collision of changes or working on outdated versions of a project.



Coming Soon

Look out for the following Enterprise features, which will be delivered in a soon-to-be-released Impact **2019** Service Pack:

Master Project Support

- Folders renaming is now fully supported for synchronised folders

Master Project Support

- Master Projects is an advanced Impact feature that allows commonly used design components (layers) to be inserted and later automatically updated where featured in other projects in a database. This feature will also be supported across a wider Enterprise system, combining these two powerful concepts for ultimate flexibility.

Linked Revisions Support

- Unlike making a copy of a project, linked revisions help you track the ancestry of a project and projects derived from it. This feature will also be supported across a wider Enterprise system.

Arden Software
E: info@ardensoftware.com
W: www.ardensoftware.com