



The modern, fast and easy to use risk analysis tool

Cloud Edition Customising the Bowtie diagrams

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Customising diagrams

BowTie Pro™ allows extensive customisation of the diagrams. This is done via the “Diagram Options” button on the BowTie diagram screen.

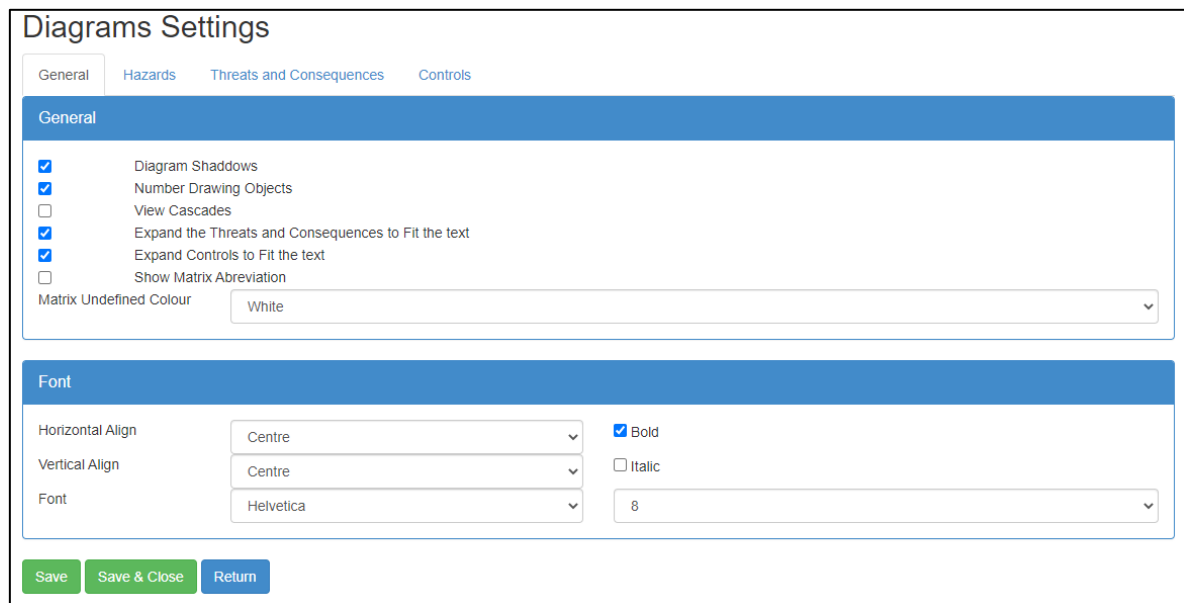
Diagram Options Screen

Open the “Diagram Options” screen by selecting the button on the menu bar or by selecting “Diagrams -> Customise Diagram” on the toolbar.

The Diagram Options screen has the following tabs:

- General
- Hazards
- Threats and Consequences
- Controls

General Tab



The screenshot shows the "Diagrams Settings" dialog box with the "General" tab selected. The "General" section includes the following options:

- Diagram Shadows
- Number Drawing Objects
- View Cascades
- Expand the Threats and Consequences to Fit the text
- Expand Controls to Fit the text
- Show Matrix Abbreviation
- Matrix Undefined Colour: White

The "Font" section includes the following settings:

- Horizontal Align: Centre
- Vertical Align: Centre
- Font: Helvetica
- Size: 8
- Bold
- Italic

Buttons at the bottom: Save, Save & Close, Return.

Diagram shadows

Diagram shadows are a visual enhancement that allows a sense of perspective to be applied to the diagrams, see right.

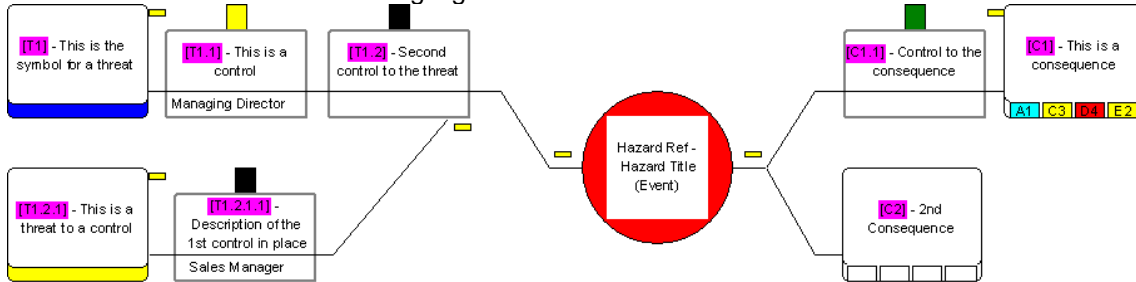


Number Diagram Objects

The option relating to number objects becomes of use when the diagram is printed or issued in a document and provides a unique reference to be made to all objects.

The numbering on the left hand side, Threats, will be T1 – Tn and then each of its Controls are called TX.1 to TX.n. The Threats to the Controls are also numbered. On the right hand side the objects all begin with a C for Consequence.

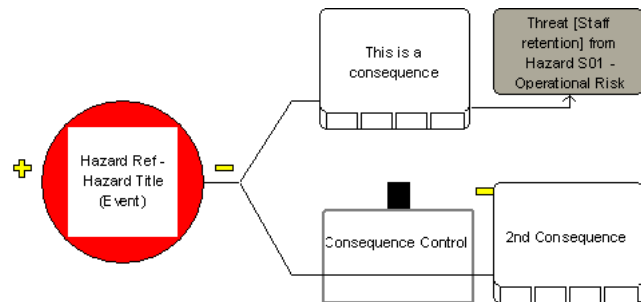
This is shown below with the numbers highlighted



View Cascades

Cascading Hazards allow a Consequence from one bowtie to be linked as the Threat or Hazard to another bowtie

When displayed, the cascades have a grey background. Right-clicking on the cascade will allow the user to navigate to the linked diagram.



Expand the Threats and Consequence or Controls to fit the text

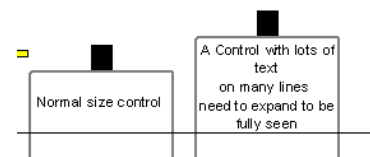
Sometimes the text of the Threats, Consequences or Control will not fit into the box. If this is the case then there are options in BowTie Pro™ to allow the boxes to grow to try to fit all the text on the diagrams.

This can be done from the menu bar by pressing the \updownarrow button and will allow the Threats, Consequences and Controls to grow to fit the text.

In the Diagrams Options Screen there are two checkbox that will:

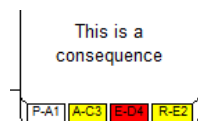
- Allow the Threats and Consequences to grow.
- Allow the Controls to expand to the desired height as shown

The boxes will stop growing once it is three times its normal size. There is an option to reduce the font to allow the text to fit further. If the text still does not fit the size of the font should be reduced or the text should be reviewed.



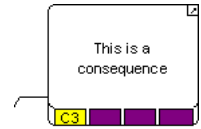
Show Matrix Abbreviation

The Show matrix Abbreviation will display the single character assigned in the matrix setup as a prefix to the Matrix results



Matrix Undefined colour

The matrix undefined colour is used when you wish to identify unassigned items in the diagram so that they stand out. This is performed using the “Matrix Undefined Colour” drop down.



By default the undefined colour is white.

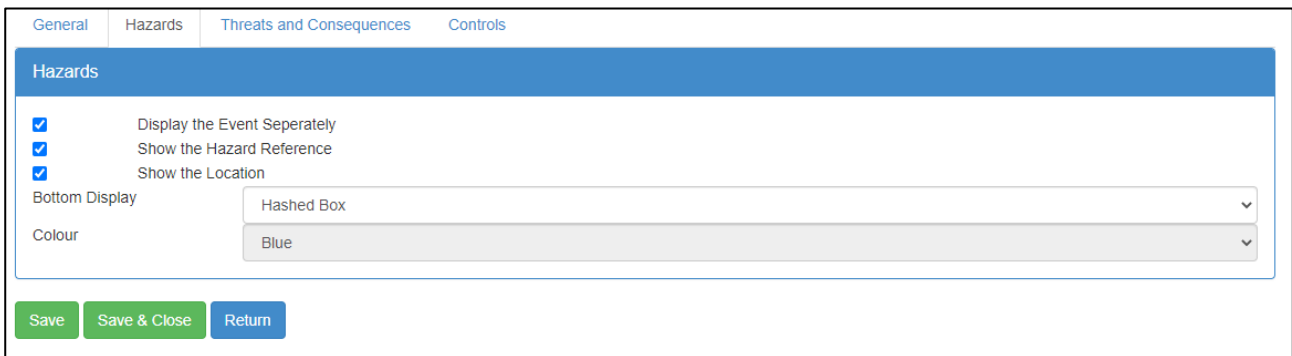
Diagram Font

The font used in the diagrams can be customised.

- Any font installed on the PC can be selected
- Size of the font needs to be considered as the smaller the font the more that can be displayed in the boxes
- The alignment of the text within the boxes in the diagram ie Left, Centre or Right and Top, Middle or Bottom
- The Font of the text that is displayed in the boxes on the diagram

The Min Font Shrink box sets the size that the text will shrink to on diagrams. To turn on auto shrink check the box “Shrink text to fit” on the general tab.

Hazards Tab



The screenshot shows the 'Hazards' configuration tab with the following settings:

- Display the Event Separately
- Show the Hazard Reference
- Show the Location
- Bottom Display: Hashed Box
- Colour: Blue

Buttons at the bottom: Save, Save & Close, Return

Display the Event Separately

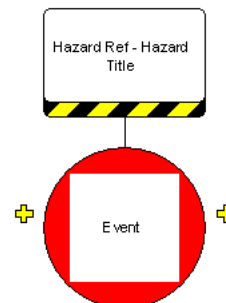
The Hazard/Event is located in the centre of the bowtie and can be shown as a red ball with all its data contained within it, or split out with the Hazard above the Event. This is done using the “**Display the Event separately**” option.

The advantage of having the Hazard split out is that more text can be seen easily on the diagram



Un-Ticked

Event and Hazard displayed together



Ticked

The Event displayed below the Hazard

Show the Hazard Reference / Show the Location on the Hazard

Both the Hazard Reference and the Location can be turned on and off to reduce the text displayed in the hazard box.

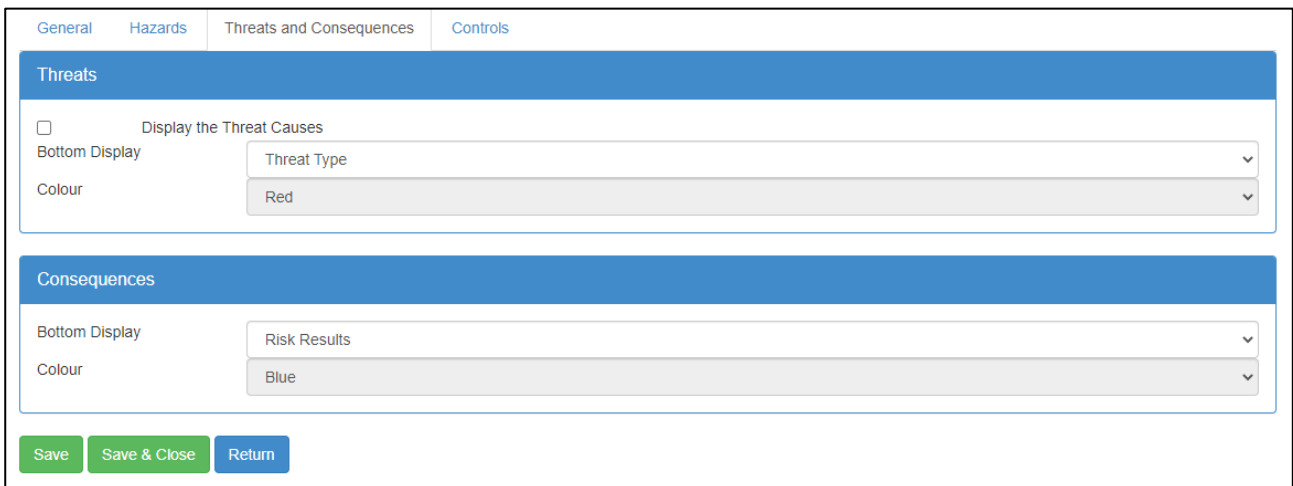


Hazard bottom display

If the Hazard and Event are shown separately the bar beneath the Hazard boxes can be customised.

- Yellow and black hashed bar (as shown above),
- Risk results (if risks are turned on for the Hazard in the Setup box of the risk matrix)
- A colour of choice

Threats and Consequences Tab

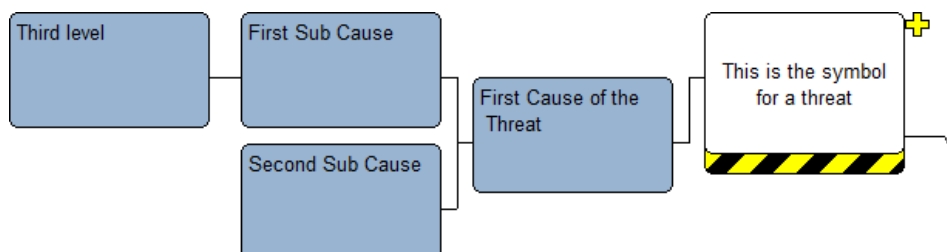


The screenshot shows the 'Threats and Consequences' configuration tab. It has four sub-tabs: 'General', 'Hazards', 'Threats and Consequences', and 'Controls'. The 'Threats' section includes a checkbox for 'Display the Threat Causes', a 'Bottom Display' dropdown set to 'Threat Type', and a 'Colour' dropdown set to 'Red'. The 'Consequences' section includes a 'Bottom Display' dropdown set to 'Risk Results' and a 'Colour' dropdown set to 'Blue'. At the bottom, there are three buttons: 'Save', 'Save & Close', and 'Return'.

Threats

Display the Threat Causes

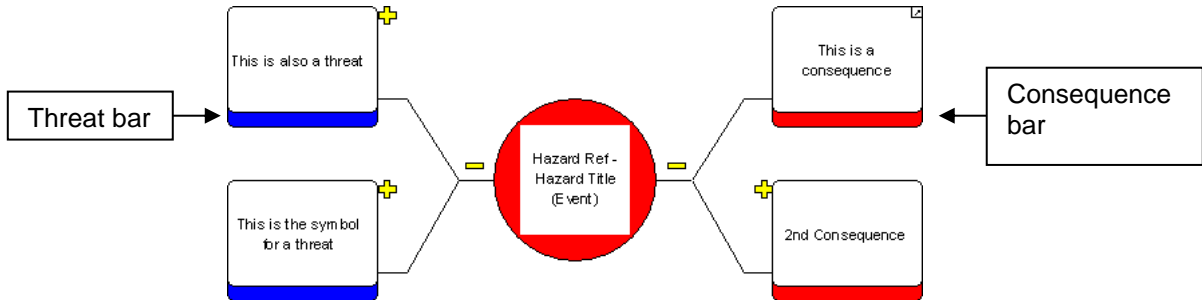
The Threat causes can be displayed to the left of the Threat to provide an indication of why the Threat was released. When shown on the diagrams the Threat Causes can be edited through the diagram's popup menus. The Threat Cause can be 3 levels deep.



Threat bottom display

The bar beneath the Threats boxes can be customised.

- Yellow and black hashed bar,
- The risk results (if risks are turned on for the Threat in the Setup box of the risk matrix)
- A colour of choice (as shown here in blue).
- The Threat Frequency
- Threat Type Description

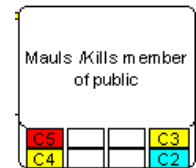


Consequences

The bar beneath the Consequences boxes can have either:

- The risk matrix Results
- A colour of choice (as shown above in red).
- The LOPA Results

If the Risk Matrix on the Consequence is setup to have a before and after result the after results will be displayed below the before results



Controls Tab

General Hazards Threats and Consequences **Controls**

Controls

Show Tasks on the Control

Display Human Factors on the Control

Show Escalation Factors

Display Control Codes on the Control

Display Control Effects on the Control

Bottom Row 1

Bottom Row 2

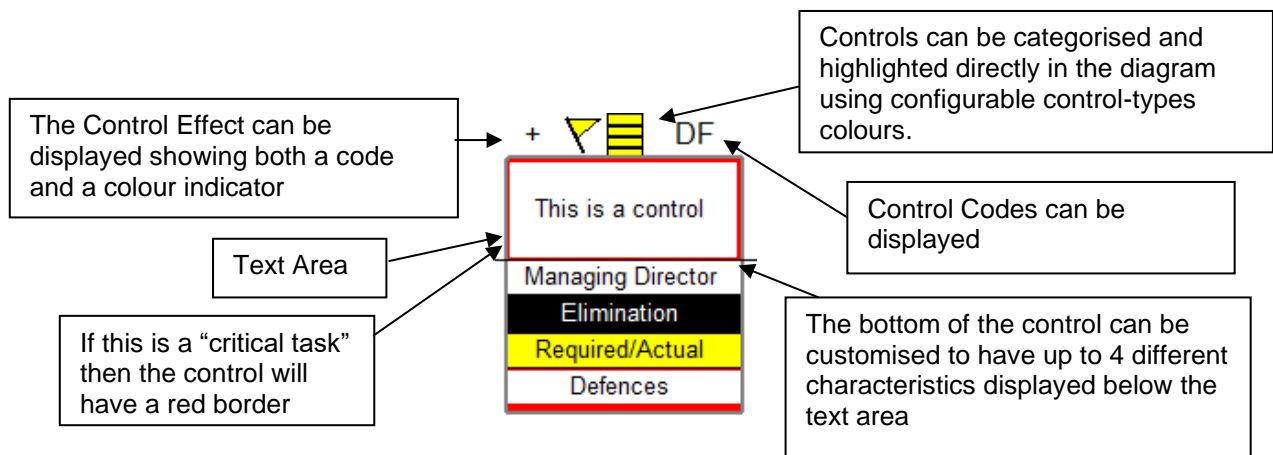
Bottom Row 3

Bottom Row 4

Show Blank Rows

Save Save & Close Return

The Controls tell the story of how the Threats and Consequences are managed.



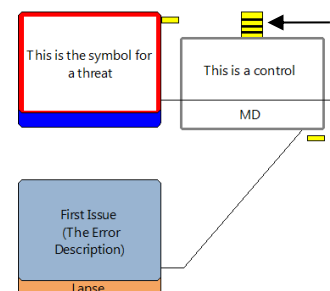
- The Control Types are always displayed as a coloured box at the top of the Control
- To show the Control code at the top right of the Control click **"Display Control Codes on the Control"**
- To show the Control Effects at the top left of the Control click **"Display Control Effects on the Control"**
- To show the Human Factors on the controls click **"Display Human Factors on the Control"**

View the Tasks on the Controls

The task can be shown in the text area of the Control box by checking this box. The task will be appended to the Control and shown in brackets.

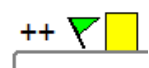
Display the Human Factor Controls on the Control Type

There is a check box on the Controls to indicate if the Control is under the influence of Human Factors. The Human Factors flag is displayed as a hashed bar on the control type. The Human Factor details are shown in a similar way to the "Threats to the Controls or Escalation Factors" and can be edited or deleted directly from the diagram screen



Show the Control Effects

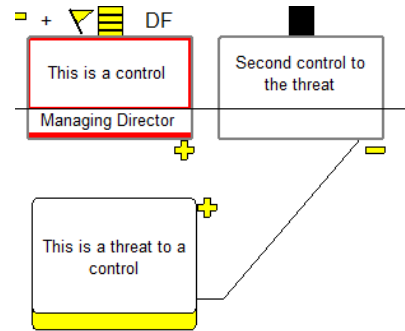
When "Show the Control Effects" is used to give an indication of perceived strength at the top left hand corner.



Show the Threats to the Control

The Threats to the control will display the details of the Threats to the control at the bottom of the control and these items can be selectively expanded and contracted by clicking the + - buttons.

The Threats to the Control have a yellow bar at the bottom with their text above.



The bottom of the Control

The bottom of the Control has the ability to show up to four different characteristics including:

- ✓ Post
- ✓ Post Description
- ✓ Start Dates
- ✓ Target Dates / Complete
- ✓ Costs
- ✓ Documents
- ✓ Risk Matrix results for the Control
- ✓ Criticality and Level
- ✓ Function
- ✓ Type Description
- ✓ Code Description
- ✓ Effect Description
- ✓ Efficiency
- ✓ System
- ✓ Status
- ✓ Accountable
- ✓ Accountable Description

Summary

BowTie Pro™ diagrams can be extensively customised and we plan to continue making our solution as flexible as possible.