Trimble Business Center

Point Conformance Workflow

Contents

Introduction and background information

The ***'Point Conformance Report'*** provides reporting functionality for as-built points against designs for piles, columns, boreholes, bolts, etc. The following workflow shows users how to perform conformance reporting on data typically seen on civil projects.

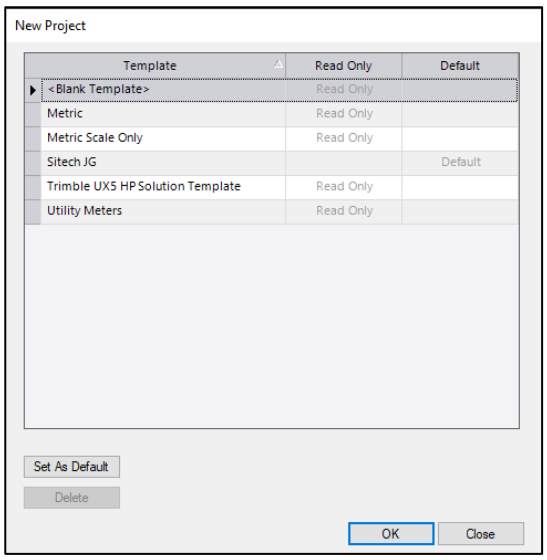
1. Importing Data

Launch a new project

In Trimble Business Center, do either of the following:

1. On the Start Page, click the **New Project** button.
2. In the TBC ribbon, select **File > New**.

The **New Project** window will display.

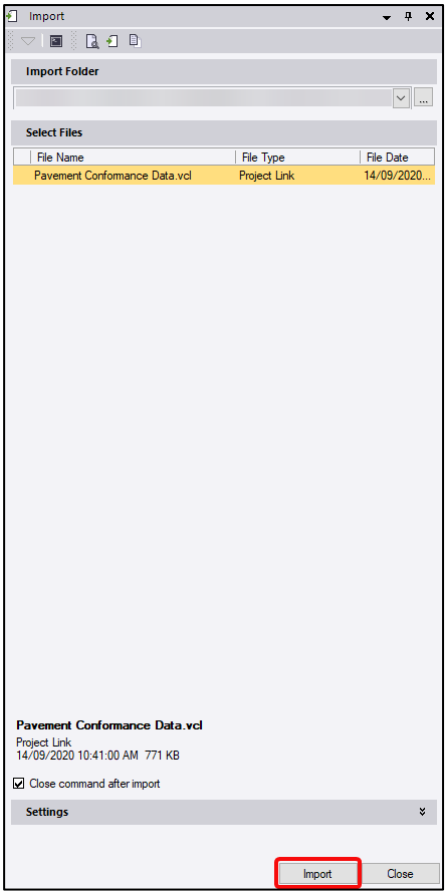


Select *Metric* template or your own default template and click **OK.** The **Plan View** will then display.

Import data

To import data:

1. Start by opening the import window. Navigate to **Home > Data Exchange > Import.**
2. In the import window **click** the  **icon**. The Import Folder window should display.
3. Navigate to the folder containing the drainage data you wish to import. **Click OK**.
4. In the import window **select** the file containing the data you wish to import. Change the settings if required. **Click Import**.



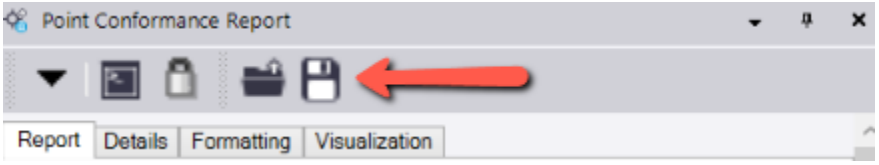
2. Open the command

Navigate to the **Point Conformance**  icon on the ribbon to open the command or press F12 and type in the command name.

3. Save and Load Templates

The point conformance report tool allows tolerance templates to be saved and loaded into the reporting tool. This means the user can fill out information in each settings tab, then save it as a template for future use. Once you have all relevant data filled in and the report is ready to be created the template can be exported by:

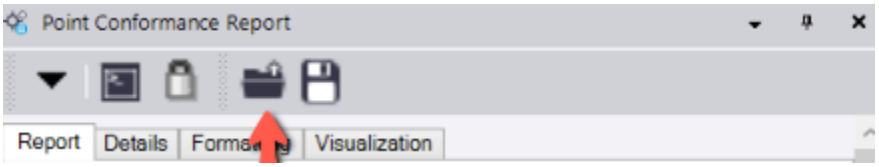
- Clicking the  icon at the top of the tool bar.



- Choose the folder you wish to save the template to and click **save**.

To load a saved template:

- Click the  icon at the top of the tool bar.



- Navigate to the file containing the template, select the file and click **Open.**

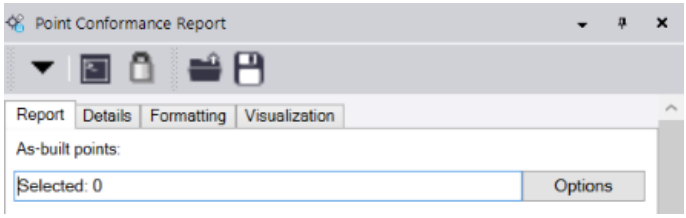
The file should load into the tool and automatically fill the predefined fields in each tab.

4. Reference File Data

When using the reports, the following picker is available on some selection boxes. When you see the “Ref…” button it means that you can select a line from a reference file. This allows you to keep the design and as-built files as separate TBC projects, reducing duplication.

5. Report Settings Tab

The report setting tab provides selection fields for the data being reported as well as options and tolerance settings.



As-built points

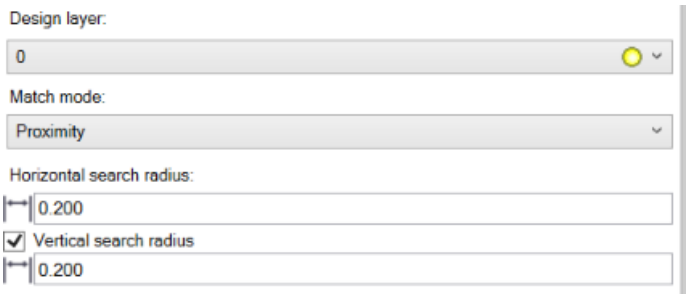
This field requires the selection of points to be reported on. *(The options button provides selection tools to select data more easily from within the project).*

1. **Click** in the **As-built points** field and in the plan view select all points required for conformance.

Design

Select the layer where the design points are to report against.

Then select the method used to match them against the as-built points.

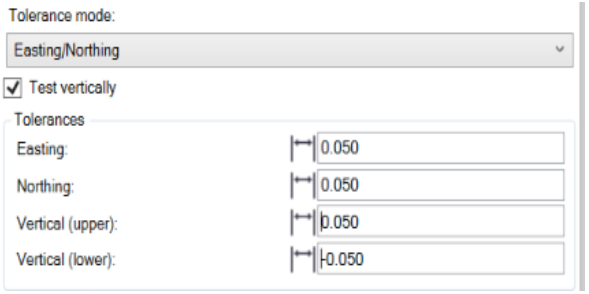


Proximity uses the location of the as-built points and finds the closest design point to compare it with, within the search radius. Click the *Vertical search radius* to match points based on their 3D distances.

Id_Exact matches the points with the same point ID.

Id_Closest matches the points that are named similarly. eg. P226 and P226_Asbuilt would match.

Tolerance Mode



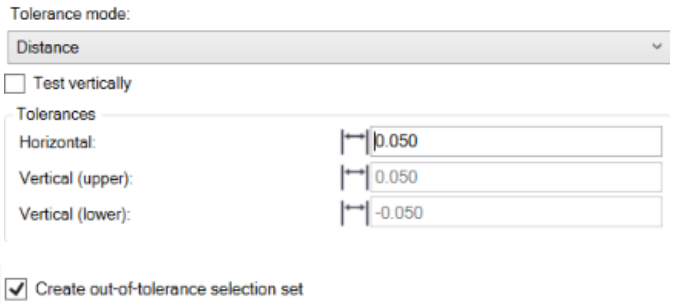
There are three different report modes to choose from. The allowable tolerance can be adjusted under each mode.

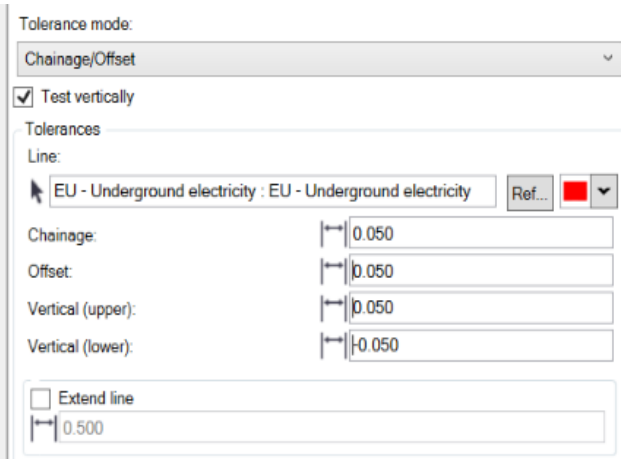
Easting/Northing reports the difference between points relative to the easting and northing.

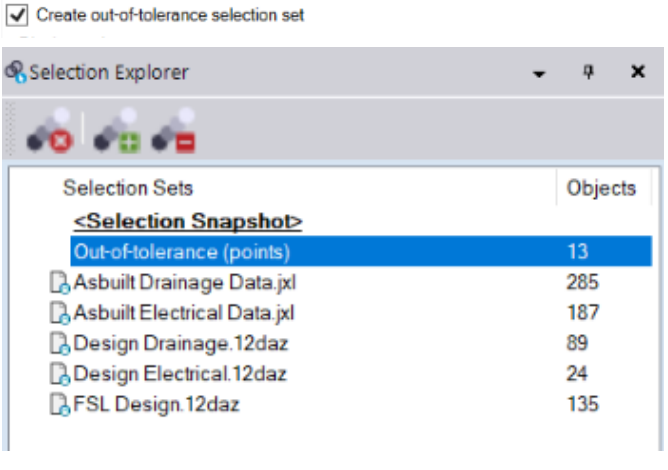
Distance reports the relative 2D distance between points.

Chainage/Offset reports the difference relative to the distance along and offset to a selected line. You may choose to extend the line chosen. The reference line geometry is projected by the distance entered so that points beyond the extent of the line can be reported.

Check **Test Vertically** to report the vertical deltas. When this is unchecked only the horizontal differences are reported.







Check the **Create out of-tolerance selection set** to create a selection set of the data that was outside of the tolerances you set. These points will appear in the selection explorer, highlighting them in the project.

Display Options

The display options are used to toggle on or off columns that will be displayed in the report. Toggle on or off the required display options by clicking the check boxes.

Include summary

This includes adds the header summary and information from the details tab.

Include as-built description

This includes the information stored in the description 1 & 2 of the as-built point selected.

Include design description

This includes the information stored in the description 1 & 2 of the design point selected.

Include as-built coordinate

This adds the as-built coordinates of the point to the report.

Include as-built ellipsoid height

This adds the ellipsoidal height of a point to the report. This will only work with the as-built coordinate enabled.

Include design coordinate

This adds the design coordinates of the point to the report.

Include as-built chainage/offset

This adds the as-built chainage & offset to the report. This will only work when using *ChainageOffset* mode.

Include design chainage/offset

This adds the design chainage & offset to the report. This will only work when using *ChainageOffset* mode.

Include as-built code

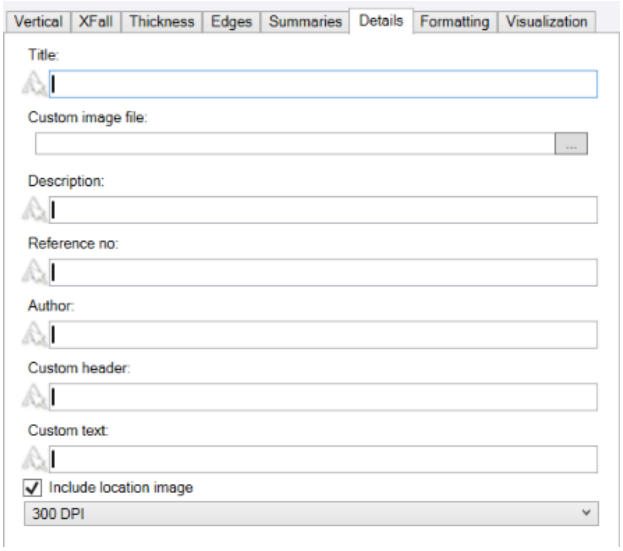
This adds the as-built point code to the report.

Include design code

This adds the design point code to the report.

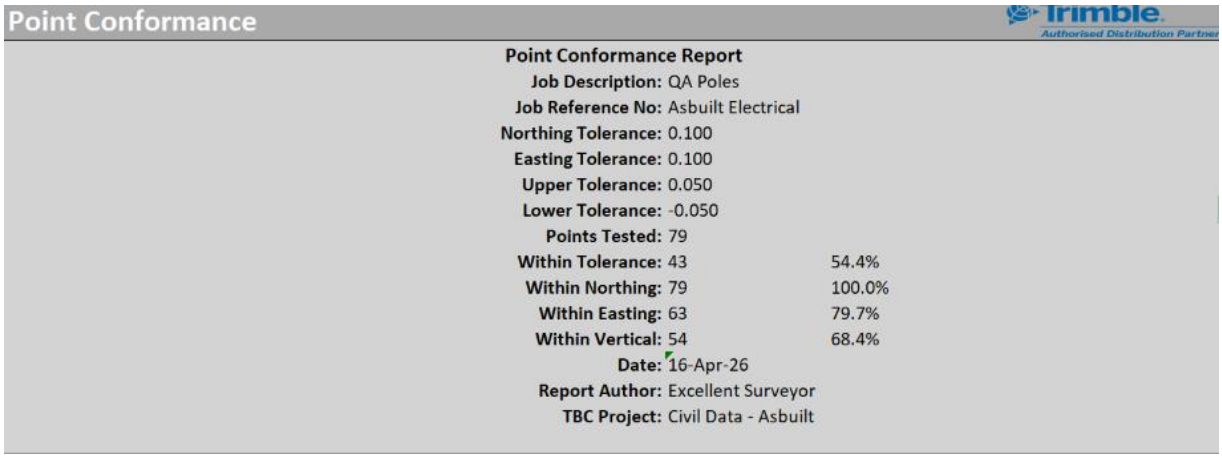
6. Details Settings Tab

The details settings tab provides fields to add report information. Information such as the report title, description, reference number (job number) and surveyor name are all defined by the user in this tab. There is also a custom header and custom text area for the user to define their own.



Select a “png” or “bmp” image file to be added as a custom image file to the top right corner of the report. E.g., company Logo or project image. This only appears if you have a ***Title*** filled out.

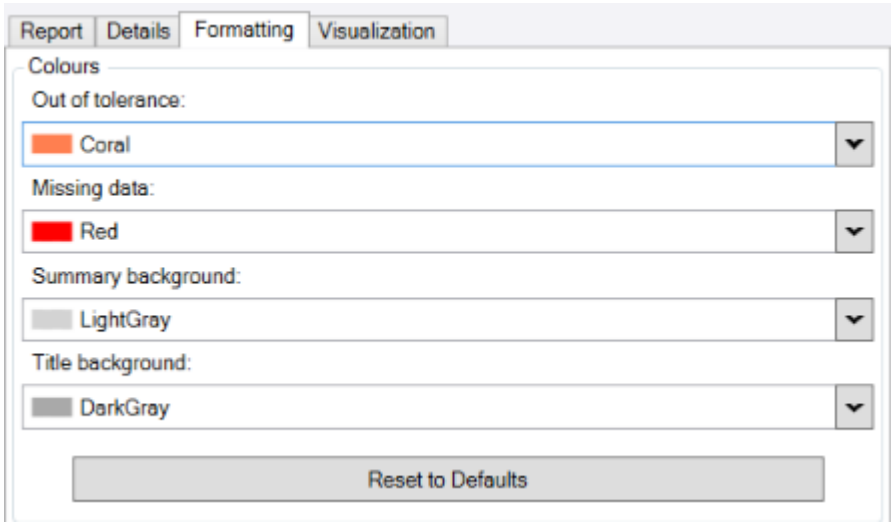
Check the **Include location image** box to add a snapshot of your current view to the report. The image clarity can be controlled by the DPI dropdown.



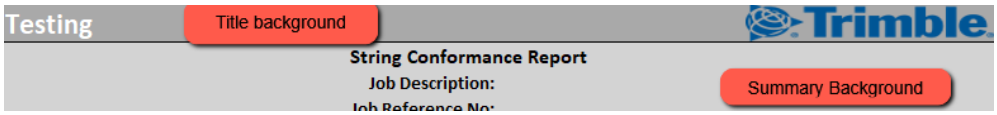
7. Formatting Settings Tab

The formatting tab is used to adjust the colour variations to the generated report.

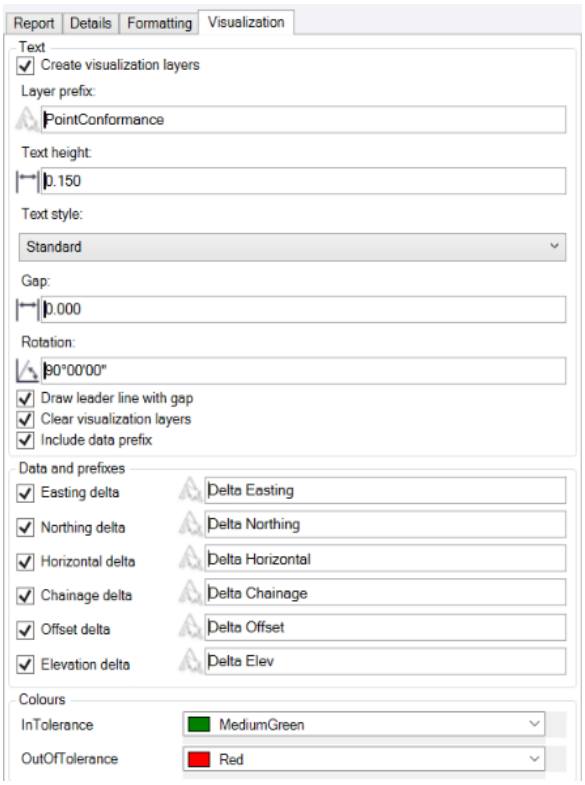
Use **Reset to Defaults** to revert to the default colours, shown below.



Note: Title background is active when there is a Title used in the details tab, shown in #6.



8. Visualization Settings Tab



The visualization tab provides options to create CAD text data displaying information about the conformance point and tolerances.

- **Click** the **Create visualization layers** box to enable the creation of CAD text detailing the conformance point.

Layer prefix

The layer prefix field sets a text prefix to the layers created to store the visualization text data. The default prefix is 'PointConformance'. If the default value is not suitable, **replace** the text in the Layer prefix field.

Text height

The text height field is used to set the size of the CAD text created. **Input** the desired **text height**.

Text Style

The text style drop down is used to choose an existing or create a new text style for the conformance text. **Select** an **existing text style** or create a **new text style**.

Gap

The Gap setting is the distance in metres that the insertion point of the text will be right of the node it is created for.

Clear visualization layers

Clears all visualization point object layers each time the Visualize button is clicked. By default, this box is ticked.

Include data prefix

The include data prefix allows the data prefix such as conformance, design, As-built etc. to be toggled on or off. By default, this box is ticked.

Data

This allows the user to toggle on or off the text associated with the report. The headings can be adjusted by the user.

- Easting Delta
- Northing Delta
- Horizontal Delta
- Chainage Delta
- Offset Delta
- Elevation delta

Colours

Adjust the colours used in the plan view.

Click the **Visualize** button to create customised text in the model view (plan and 3D) on specific layers. View the results.

9. Create report

Review tabs as required to verify all options are set correctly.

- **Click** the **Create Report** button to generate Excel report.

Example report

Below is an example report.

Point Conformance

Trimble Authorised Distribution Partner

Point Conformance Report

Job Description:	QA Poles	
Job Reference No:	Asbuilt Electrical	
Northing Tolerance:	0.100	
Easting Tolerance:	0.100	
Upper Tolerance:	0.050	
Lower Tolerance:	-0.050	
Points Tested:	79	
Within Tolerance:	43	54.4%
Within Northing:	79	100.0%
Within Easting:	63	79.7%
Within Vertical:	54	68.4%
Date:	16-Apr-26	
Report Author:	Excellent Surveyor	
TBC Project:	Civil Data - Asbuilt	

Location

Point Ids		Design			Deltas			
As-built	Design	Easting	Northing	Elevation	2D	Easting	Northing	Vertical
210331GM	P174	53896.364	162432.217	2.350	0.064	-0.021	0.060	-0.031
210331GM	P175	53894.221	162432.392	2.350	0.065	0.040	0.051	-0.050
210331GM	P176	53892.078	162432.567	2.350	0.024	0.023	-0.007	-0.055
210331GM	P177	53889.935	162432.742	2.350	0.080	-0.075	-0.027	-0.059
210331GM	P178	53887.792	162432.917	2.350	0.025	0.011	0.022	-0.062
210331GM	P179	53885.649	162433.092	2.350	0.167	-0.153	-0.068	-0.209
210331GM	P180	53883.506	162433.267	2.350	0.156	-0.142	-0.064	-0.040
210331GM	P181	53896.559	162434.515	2.350	0.051	-0.021	-0.046	-0.044
210331GM	P182	53894.417	162434.705	2.350	0.034	-0.032	-0.011	-0.049
210331GM	P183	53892.276	162434.894	2.350	0.085	0.083	-0.020	-0.045
210331GM	P184	53890.134	162435.084	2.350	0.044	-0.038	0.023	-0.056
210331GM	P185	53887.993	162435.273	2.350	0.070	-0.070	-0.001	-0.055
210331GM	P186	53885.851	162435.463	2.350	0.117	-0.116	-0.014	-0.053
210331GM	P187	53883.709	162435.652	2.350	0.092	-0.073	-0.056	-0.048
210331GM	P188	53896.770	162436.813	2.350	0.012	-0.003	0.012	-0.041
210331GM	P189	53894.630	162437.016	2.350	0.074	0.074	0.006	-0.040
210331GM	P190	53892.489	162437.220	2.350	0.051	0.043	-0.028	-0.057
210331GM	P191	53890.349	162437.424	2.350	0.046	-0.044	0.014	-0.001
210331GM	P192	53888.209	162437.628	2.350	0.071	-0.055	0.045	-0.025
210331GM	P193	53886.068	162437.832	2.350	0.044	-0.022	0.038	-0.048
210331GM	P194	53883.928	162438.036	2.350	0.108	-0.108	-0.005	-0.037
210331GM	P195	53896.996	162439.108	2.350	0.062	0.047	-0.041	-0.062
210331GM	P196	53894.858	162439.326	2.350	0.014	0.008	-0.012	-0.056
210331GM	P197	53892.719	162439.545	2.350	0.022	-0.004	-0.022	-0.072
210331GM	P198	53890.580	162439.763	2.350	0.034	-0.020	-0.028	-0.045
210331GM	P199	53888.441	162439.981	2.350	0.140	-0.136	-0.033	-0.001
210331GM	P200	53886.302	162440.199	2.350	0.035	-0.034	0.006	-0.056
210331GM	P201	53884.163	162440.417	2.350	0.113	-0.113	0.009	-0.069
210331GM	P202	53897.238	162441.402	2.350	0.020	-0.009	-0.018	-0.074
210331GM	P203	53895.101	162441.635	2.350	0.032	0.025	-0.020	-0.035
210331GM	P204	53892.963	162441.867	2.350	0.029	-0.016	0.024	0.001
210331GM	P205	53890.826	162442.100	2.350	0.032	-0.029	0.014	-0.049
210331GM	P206	53888.689	162442.332	2.350	0.081	-0.070	-0.041	-0.041
210331GM	P207	53886.551	162442.565	2.350	0.038	-0.035	0.015	-0.033
210331GM	P208	53884.414	162442.797	2.350	0.133	-0.133	-0.004	-0.029
210331GM	P209	53897.541	162444.085	2.350	0.047	0.022	-0.041	-0.061
210331GM	P210	53895.405	162444.334	2.350	0.053	0.053	-0.004	-0.052
210331GM	P211	53893.270	162444.583	2.350	0.009	-0.009	0.002	-0.020
210331GM	P212	53891.134	162444.833	2.350	0.040	0.006	-0.040	-0.042