Quantm 8.3 Release Notes

Build 8.3.0.9

Enhancements

The Quantm 8.3 release includes these new features and enhancements:

- Use the new CO_2 Calculator to forecast carbon dioxide emissions that will be generated during the construction of alignments in your project. Enter expected CO_2 output values for moving materials, preparing land, and constructing structures along each alignment. In addition, you can forecast the CO_2 emissions that will be produced by traffic using the new alignment. The calculator is currently available for roads only. (details)
- You can now set a minimum radius lower than 35 meters for horizontal alignments! (details)

Bug Fixes

And fixes for these resolved issues:

- The default maximum height of retaining walls had to be 9999 meters. Now any height is allowed. (details)

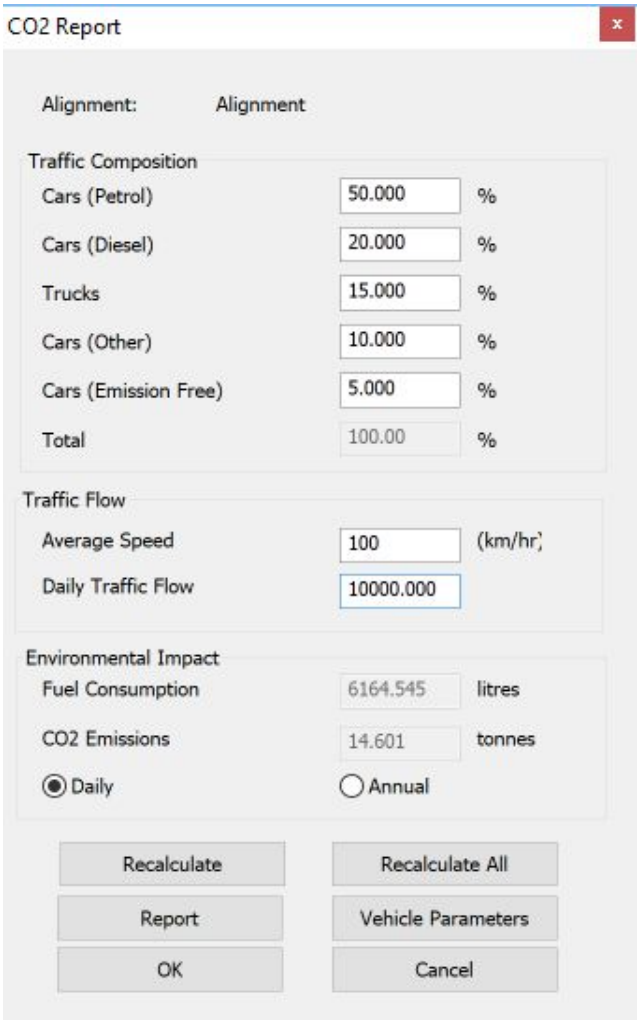
To keep learning more about Quantm, visit the product page here!

If the link above doesn't cooperate, copy-and-paste https://www.trimble.com/alignment into your web browser.

Details

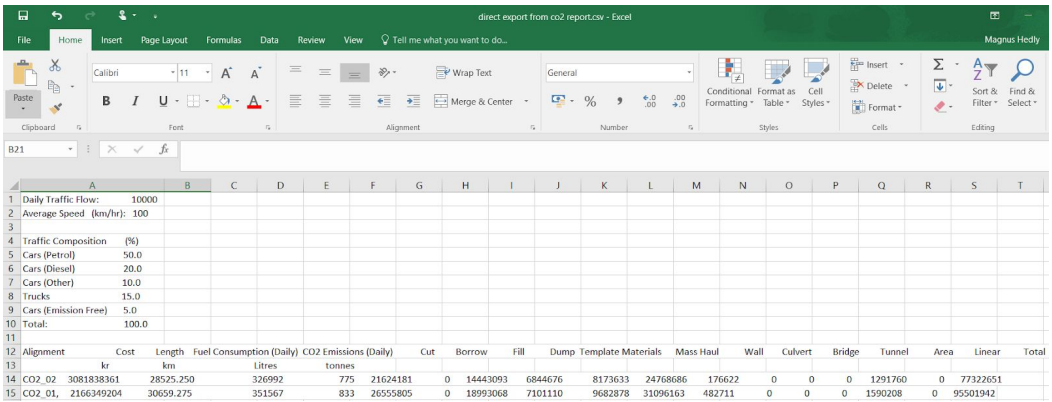
- QTM-14: CO_2 Calculator
  To calculate CO2 emissions for the construction and usage of a specific alignment in your project, follow these steps:
  1. On the menu, select Data > Cost Parameters.
  2. On these tabs, enter CO_2 values per meter^2/mile^2 (as applicable):
     - Global tab - emissions for moving haul, dump, borrow, and fill, materials.
     - Template Materials tab - emissions for construction per material.
     - Bridge and Tunnels tabs - emissions for constructing these specific structures.
     - Areas tab - emissions for preparing site areas

     Note: You would typically get average local CO2 emissions data from your regional transportation authority.
  3. Right-click the alignment you want to report on and select CO_2 Report.
  4. In the Traffic Composition section, enter percentages for the types of vehicle traffic (cars and trucks) that are expected to use the alignment.

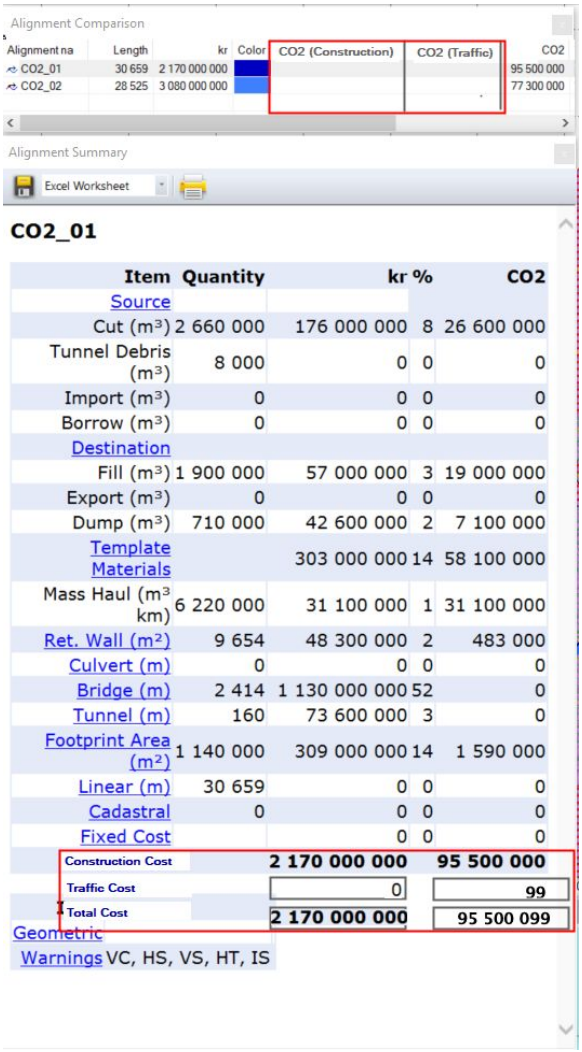


Note: The numbers shown are samples and do not reflect actual values.

5. In the Traffic Flow section, enter projections for the average speed and traffic volume. The total CO_2 emissions are reported in the Environmental Impact section; you can report as daily or annual. Weekdays and weekend days are treated the same.
6. If desired, you can also show these values in a Microsoft Excel spreadsheet by clicking the Report button.



7. Select Alignment Summary and review the CO_2 emissions values and percentages (%) for each of the categories you filled, as well as the total. The Summary also reports on the future CO_2 emissions from traffic (from the values entered in the CO_2 Report dialog).



Alignment Comparison

Alignment na	Length	kr	Color	CO2 (Construction)	CO2 (Traffic)	CO2
CO2_01	30 659	2 170 000 000				95 500 000
CO2_02	28 525	3 080 000 000				77 300 000

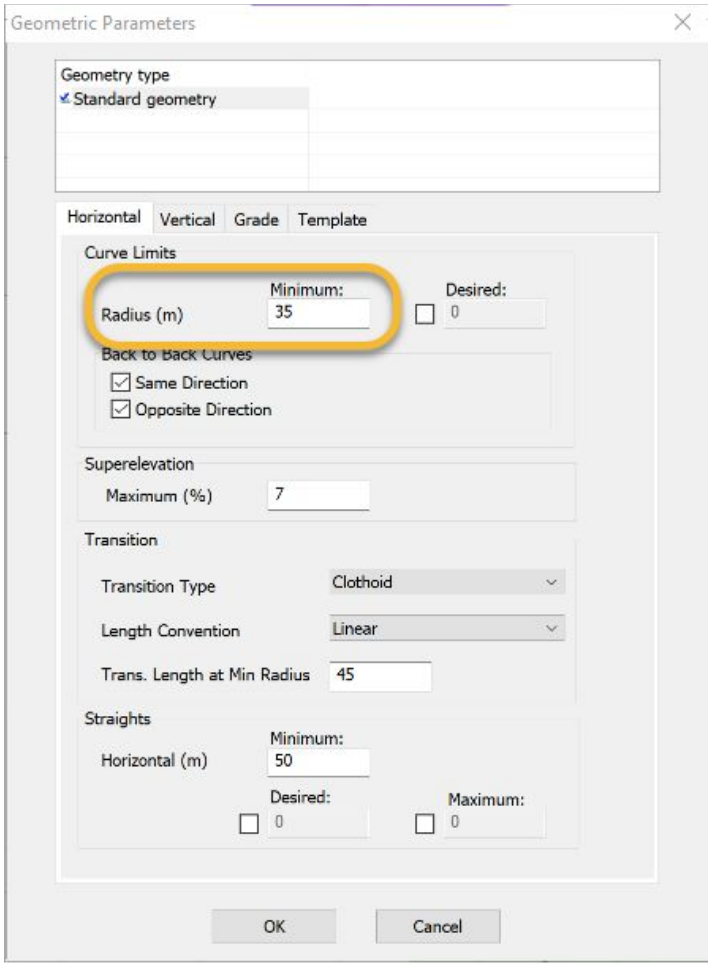
Alignment Summary

Excel Worksheet

CO2_01

Item	Quantity	kr	%	CO2
Source				
Cut (m³)	2 660 000	176 000 000	8	26 600 000
Tunnel Debris (m³)	8 000	0	0	0
Import (m³)	0	0	0	0
Borrow (m³)	0	0	0	0
Destination				
Fill (m³)	1 900 000	57 000 000	3	19 000 000
Export (m³)	0	0	0	0
Dump (m³)	710 000	42 600 000	2	7 100 000
Template Materials		303 000 000	14	58 100 000
Mass Haul (m³ km)	6 220 000	31 100 000	1	31 100 000
Ret. Wall (m²)	9 654	48 300 000	2	483 000
Culvert (m)	0	0	0	0
Bridge (m)	2 414	1 130 000 000	52	0
Tunnel (m)	160	73 600 000	3	0
Footprint Area (m²)	1 140 000	309 000 000	14	1 590 000
Linear (m)	30 659	0	0	0
Cadastral	0	0	0	0
Fixed Cost		0	0	0
Construction Cost		**2 170 000 000**		**95 500 000**
Traffic Cost		0		99
Total Cost		**2 170 000 000**		95 500 099
Geometric				
Warnings	VC, HS, VS, HT, IS			

- QTM-15: Horizontal alignment radius - To set the minimum radius allowed for a horizontal alignment, select Data > Geometric Parameters on the menu. In the Curves group on the Horizontal tab, edit the value in the Radius (m) field.



- QTM-21: Retaining wall height - To change the maximum height of retaining walls, select Data > Cost Parameters on the menu. Then click the Wall tab and edit the Height for any wall.