Quantm 8.3 Release Notes

Build 8.3.0.9



The Quantm 8.3 release includes these new features and enhancements:

- Use the new CO₂ Calculator to forecast carbon dioxide emissions that will be generated during the construction of alignments in your project. Enter expected CO₂ output values for moving materials, preparing land, and constructing structures along each alignment. In addition, you can forecast the CO₂ 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! (<u>details</u>)



And fixes for these resolved issues:

• The default maximum height of retaining walls had to be 9999 meters. Now any height is allowed. (<u>details</u>)

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

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





• <u>QTM-14</u>: CO₂ 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 meter²/mile² (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 CO₂ 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.

)2 Report		
Alignment: Alig	gnment	
Traffic Composition		
Cars (Petrol)	50.000	%
Cars (Diesel)	20.000	%
Trucks	15.000	%
Cars (Other)	10.000	%
Cars (Emission Free)	5.000	%
Total	100.00	%
raffic Flow		
Average Speed	100	(km/hr)
Daily Traffic Flow	10000.000	
nvironmental Impact		
Fuel Consumption	6164.545	litres
CO2 Emissions	14.601	tonnes
Daily	Annual	
Recalculate	Recalcu	ilate All
Report	Vehicle Pa	arameters
ОК	Car	ncel

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 CO₂ 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.

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1 Daily Traffic Flow: 10000				
2 Average Speed (km/hr): 100				
3				
4 Traffic Composition (%)				
5 Cars (Petrol) 50.0				
6 Cars (Diesel) 20.0				
/ Cars (Other) 10.0				
8 Trucks 15.0				
9 Cars (Emission Free) 5.0				
11				
12 Alignment Cost Length Fuel Consumption	(Daily) CO2 Emissions (Daily) Cut Borrow Fill Dump Template Materi	ials Mass Haul Wall Culvert Bridge Tunnel Area Li	near Total	
13 kr km Litre	s tonnes	and massinger wan convert bridge former wed th	incur Total	
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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).

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• <u>QTM-15</u>: 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.

Geometry type ≰ Standard geometry					
Horizontal Vertical Gra	de Terr	plate			
Radius (m)	Minimu 35	n:	Desired: 0		
Back to Back Curves	'n				
Superelevation Maximum (%)	7				
Transition					
Transition Type		Clothoid		~	
Length Convention		Linear		~	
Trans. Length at Min	Radius	45			
Straights Horizontal (m)	Minimu 50	n:			
	Desired 0		Maximun 0	n:	

• <u>QTM-21</u>: 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.

lobal	Material	Geology Te	emplate Mate	rials Bridge	Tunnel	Wall	Culvert	Area	Linear	Fixe
Name Bofau	lt Wall	\$/m² 300.00	Slope (%) 100000.00	Height (m) 9999.00						