

Release Notes

CIVIL DESIGN AND ENGINEERING

November 2021

Quantm 2021.FP1

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New version, Integration and Workflows

Quantm corridor

Quantm corridor is a new option for corridor identification. All existing and new Quadri Business Premium users are able to install and use Quantm corridor version. The corridor optimization produces a range of corridors with specified width. The minimum corridor width is limited to 5% of the length between the endpoints.

Corridor Identification

Optimization Type

☐ Free to Roam ☒ Geometric

☐ Quick Seed ☐ Curvilinear

☒ Corridor

100 Corridor Width (m)

Name

Job name: Corridor

Number of Alignments Returned: 5 (5)

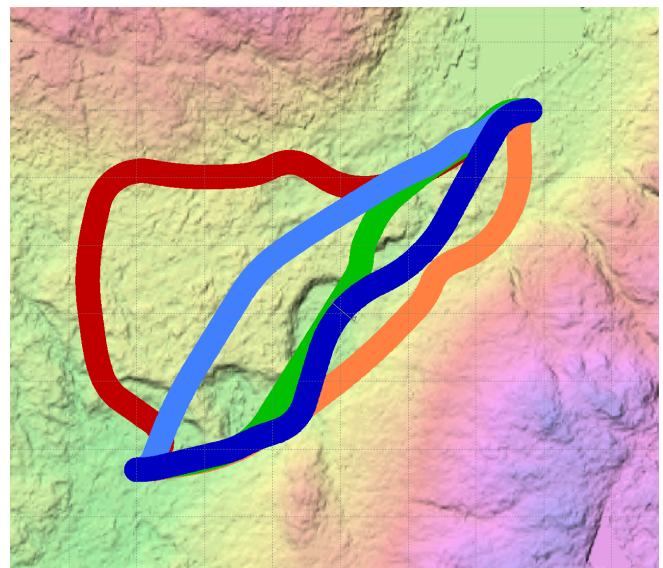
Description

Corridor Optimization- Produces a sample of corridors of a specified width

Notes:

Submit by: Local Processor

Submit Cancel



Progress bar x6 of what you put in "number of alignments" Eg. if you apply for 1 corridor the progress bar will go up to (1x6) = 6 and then return 1 corridor.

Quantm Viewer

Quantm viewer is available.



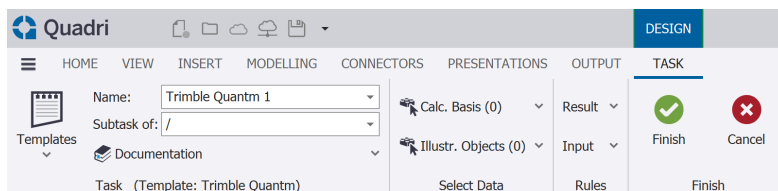
Quantm
Viewer

Improved Quadri integration

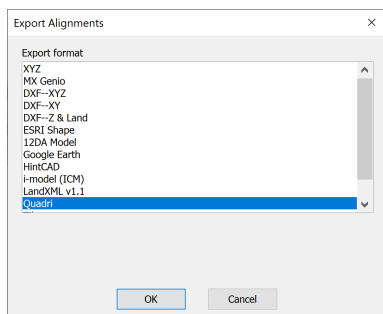
Users are now able to send alignments back and forth between Quadri and Quantm.

From Quantm to Quadri:

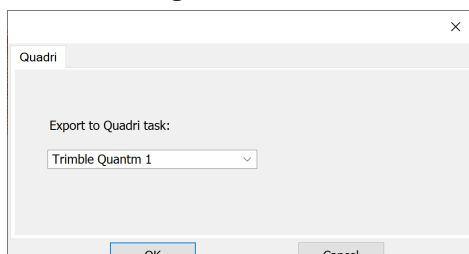
- Make an empty Trimble Quantm Task in Quadri , using the Connector.



- Export Selected Alignment in Quantm.



- Select the alignment to the Quadri Task you made.



- Now you can find the Alignment in the Quadri Task.
- Users can find the optimal 2D corridor with the new version and send the selected corridor area to Quadri.

From Quadri to Quantm

- Create a connector task in Quadri
- Choose the selected alignment(s) to be sent to Quantm in the calculation basis
- In Quantm, under import alignment choose alignment format Quadri

Import Alignment

Alignment format: Quadri

Alignment file: [Browse]

Quadri task: [Dropdown]

Source measurement: ☒ Metric ☐ Imperial

Import alignment as: [Text Field]

☐ Snap to start/finish points

OK Cancel

4K screen compatibility

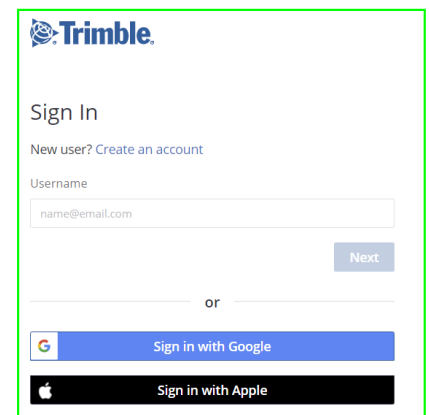
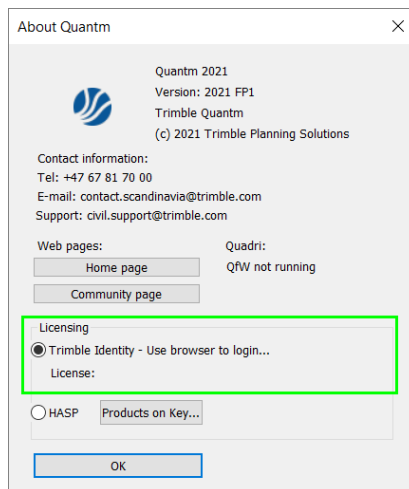
Quantm can now be used on a 4K screen with proper user interface scaling.



New license system

Trimble ID log in

Quantm change licenses system from Gemalto Sentinel to named user Trimble Identity login with named users to be aligned with all Trimble products. Last day to change to the new TID system is 31st of November 2022. Quantm will automatically login to Trimble ID through your default browser.



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Updated User Interface

Quantm User Interface Modernization

Quantm changes user interface from drop down menus to ribbon. You can easily use the mouse wheel to scroll between the 4 different tabs "Scenario", "Edit", "Alignment" and "Warnings".

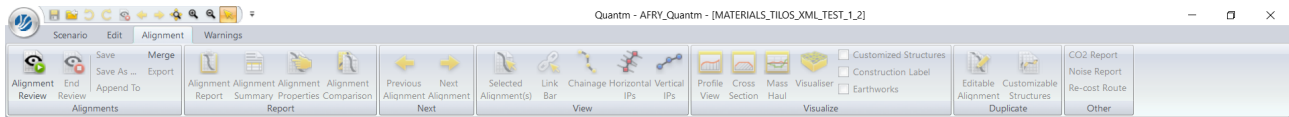
1. Scenario



2. Edit



3. Alignment

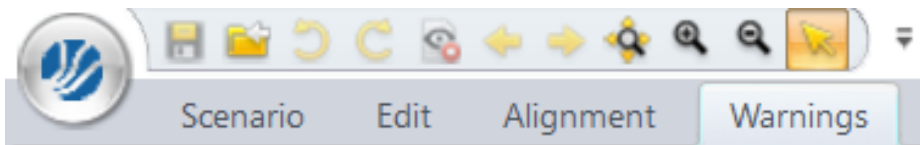


4. Warnings



Quick Access Toolbar:

In the top menu in Quantm there is a Quick Access Toolbar. You can customize this toolbar to show the tools of your choice.





New Enhancements & Features

Unique Geometry when Bridges and Tunnels are made (IP's)

In *Geometric Parameters* you can now make specific geometry for tunnels and bridges.

Geometric Parameters

Geometry type

- 80 km/h
- 90 km/h
- Bridge Geometry
- Tunnel Geometry

Horizontal Vertical Grade Template

Curve Limits

Radius (m) Minimum: 900 Desired: 1000 ☒

Back to Back Curves

- ☒ Same Direction
- ☒ Opposite Direction

Superelevation

Maximum (%) 7

Transition

Transition Type Clothoid

Length Convention Linear

Trans. Length at Min Radius 270

Straights

Horizontal (m) Minimum: 0 Desired: 0 Maximum: 0 ☐ ☐

OK Cancel

In *Cost Parameters*, you can assign the unique geometry to specific tunnels and bridges.

Name	Abutment slope (%)	Deck	Min length (m)	Geometry	Max height (m)	Max length (m)	Area Cost (kr/m²)	CO2 (CO2/m²)
Default Bridge	100.00	Single	0.00	Bridge Geometry	10.00	50.00	2500,00	650,00
Bridge over Water	100.00	Single	0.00	Bridge Geometry	30.00	100.00	3000,00	650,00
Bridge over Land	100.00	Single	30.00	Unspecified				

Retaining wall improvements

No walls

In Preference settings, Check the box “no height defined walls”, if you do not want Quantm to create retaining walls.

Preference Settings

General Alignment Zone Feature Warnings CSV Export

Display width factor: 5 V:H Ratio: 10:1

Cross Section Interval Setting: 20,0 (m)

Volume Report section interval: 200 (m) Accuracy for duplication: 1,0 %

Alignment Cost Settings

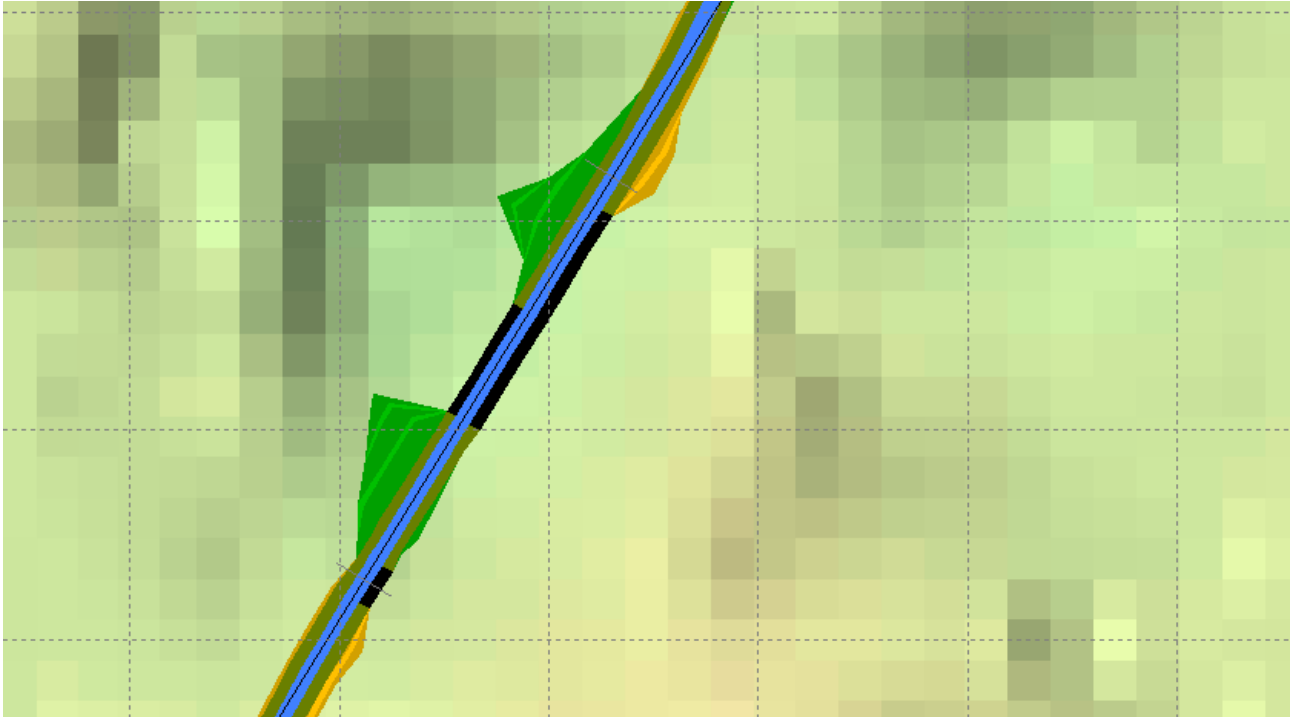
- ☒ Alignment cost
- ☒ Alignment %
- ☒ Fixed cost
- ☐ Cost as % savings only
- ☒ Automatically re-cost on edit
- ☐ No Height Defined Structures
- ☒ No Height Defined Walls
- ☒ Display CO2

Rounding of Radii

- ☐ Radius H (m)
☒ 10 ☐ 100 ☐ 1000
- ☐ Radius V (m)
☐ 10 ☒ 100 ☐ 1000

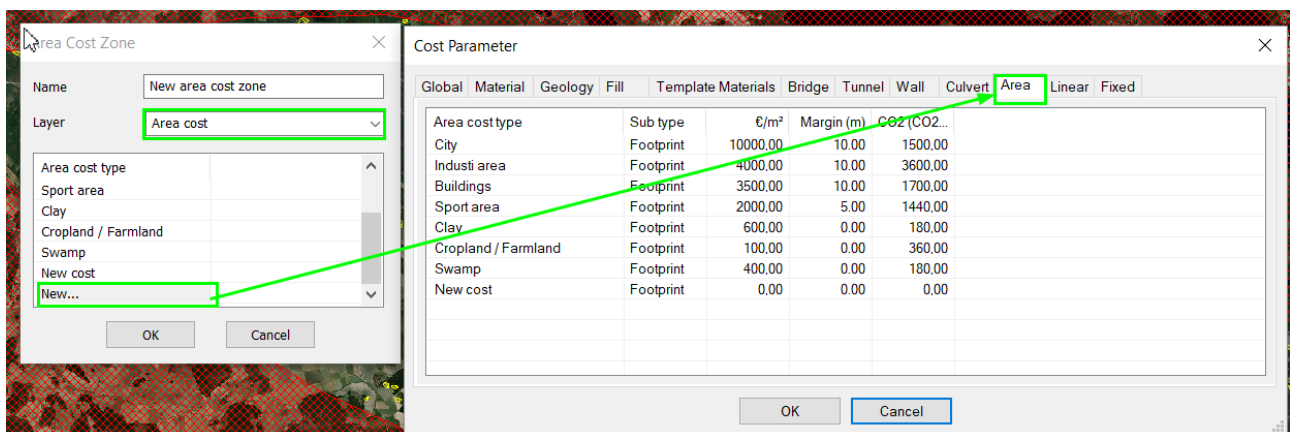
Visualize walls

View retaining walls in plan view with black color.



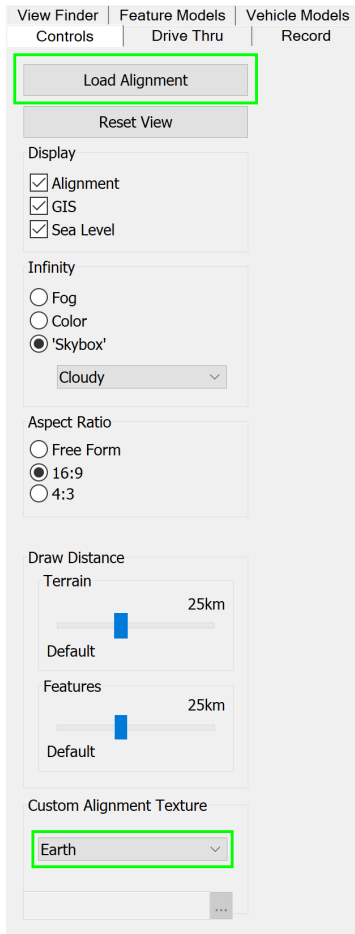
Create new constraint with the correct areas/features applied

When creating a new zone/feature, you can now create it, click new and you will go directly to the correct tab in *Cost Parameters*.

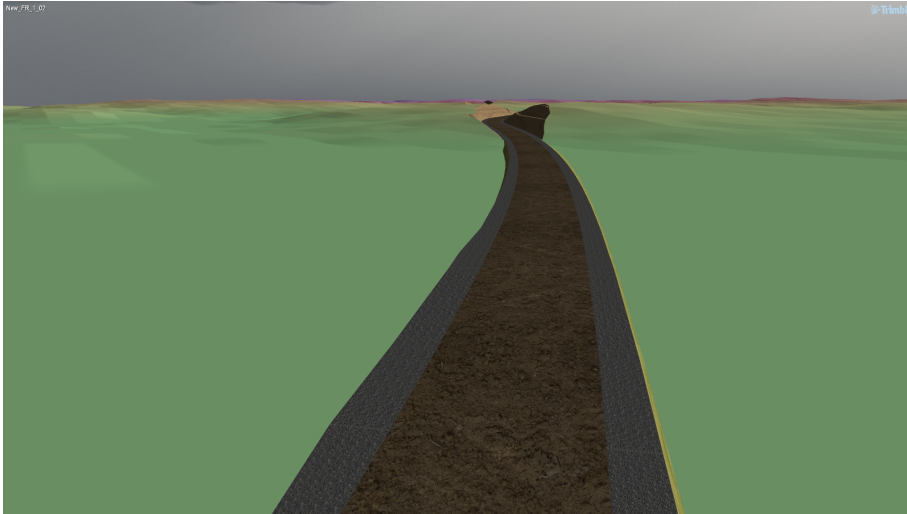


Possible to change the texture of the road and railway

Inside the visualiser you can change the texture and the number of lanes of the road and railway. In the installation package there are a few textures to choose between. You can find these in the drop down menu under *Custom Alignment Texture*. After choosing a texture, press *Load Alignment*, and the alignment will change to the texture you chose. You can also import more textures from SketchUp, and use the button with the three dots under *Custom Alignment Texture* to view it.

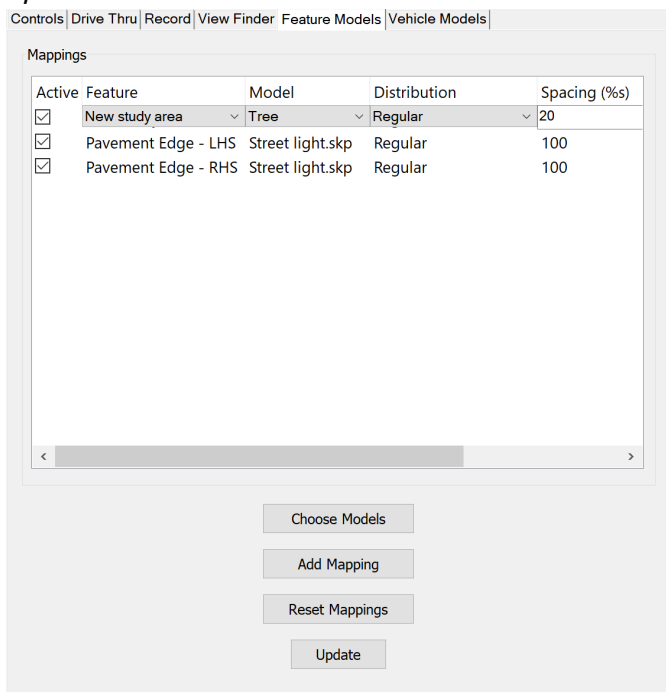


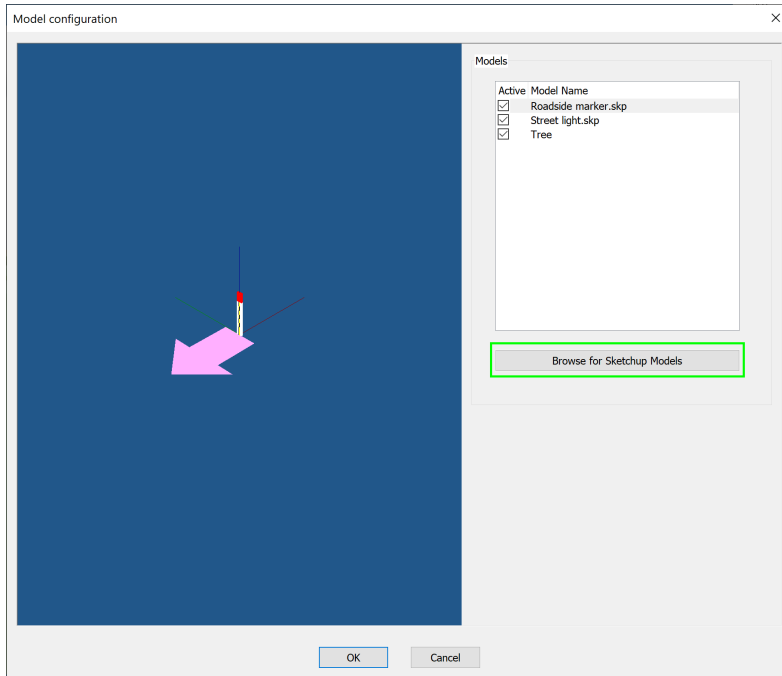
In this picture, we have used the earth texture.



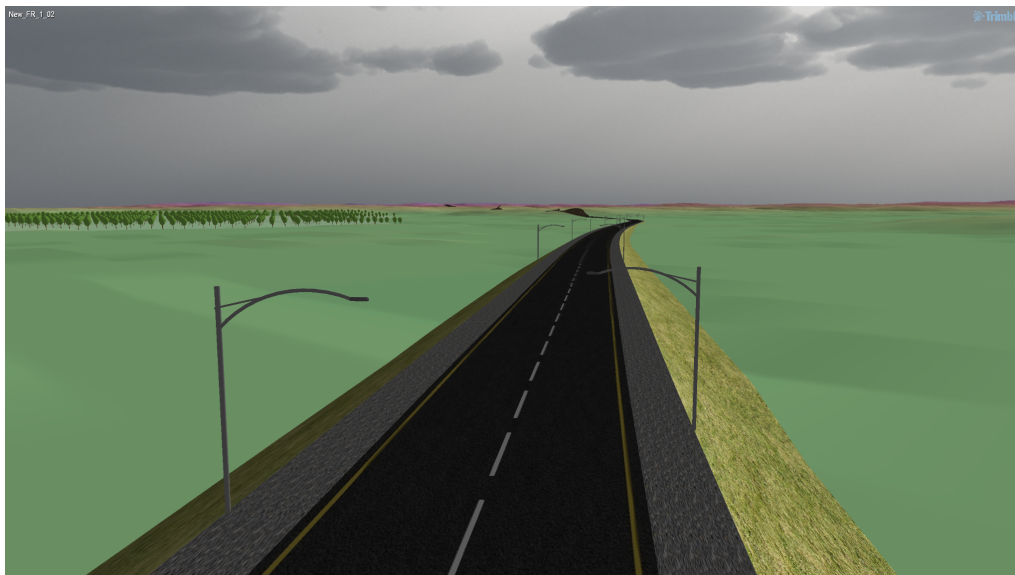
Improved 3D Visualization Capability with newest version of Sketchup

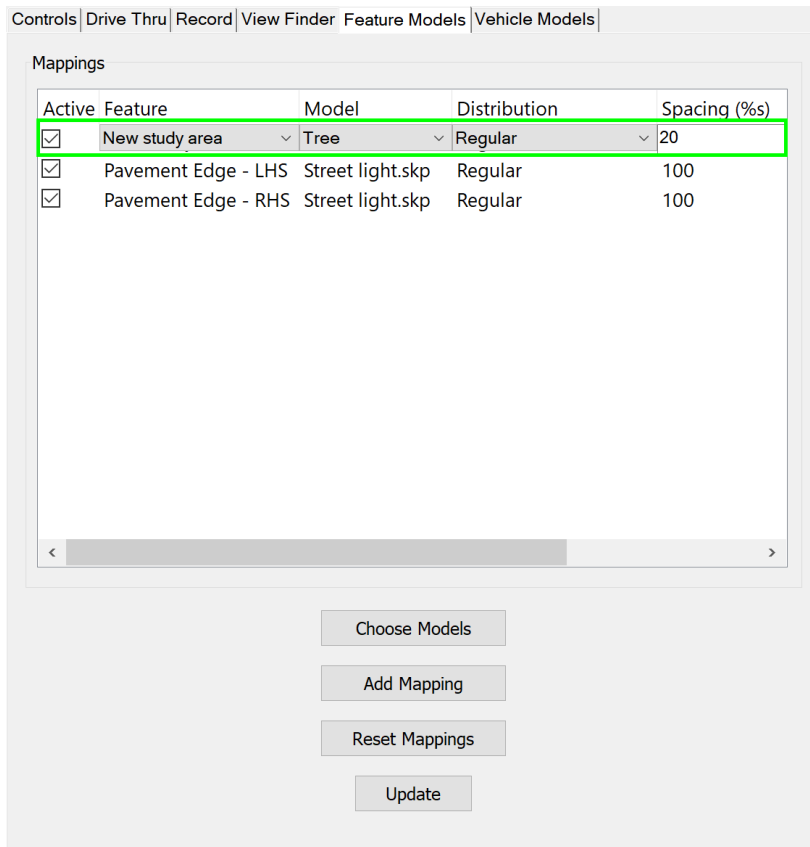
To add new SketchUp models in the visualizer, press the *Choose Models* button. The model configuration window will open. Press *Browse for SketchUp Models* to add a new model that you have saved in the model folder. Remember to set the new model to Active, and then press *Update*.





In the example below we have used the roadTexture.bmp. We have placed out Street lights, and made a forest to the right in the picture. To create a forest in the visualizer, you place the trees in a zone (here in a *New study area*).





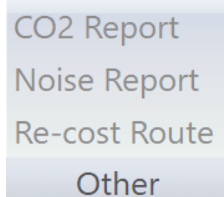
Portuguese translation

Quantm can be used with Portuguese and Portuguese Brazilian language.

CO2

Grey out Noise/CO2 Traffic Report for Railway

No CO2 or noise report from railway traffic. Today the CO2 and noise is based on car traffic, and is not representative for railway-traffic. Therefore it is not available for now.



Include CO2 in Reports

CO2 is included in Excel reports

- Alignment Reports

Alignment Report

MATERIALS_TILOS_XML_TEST_1_FR_3_03

From 0 m to 6462.677 m

Interval 50 m

☐ Cross section report

☒ Customised report

☒ XY

☐ Z & Land height

☐ Bearing & Grade

☐ Radii

☐ Quantities

☐ Costs

☒ Co2

☐ Convert to imperial units

OK Cancel

- Alignment Summary Report
- Alignment Comparison Report
- Scenario Input Report

Calculate traffic CO2 for x number of years

Choose how many years you want to calculate the CO2 from traffic. It is possible to choose 1, 5, 10, 20, 30, 40, 50, 60, 70, 80, 90 and 100 years

CO2 Report

Alignment:

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	%

Traffic Flow

Average Speed: 100 (km/hr)

Daily Traffic Flow: 10000.000

Environmental Impact

Fuel Consumption: 1871346705 litres

CO2 Emissions: 4433009.72 tonnes

☐ Daily ☒ Years

1

Recalculate

Report

OK

Recalculate

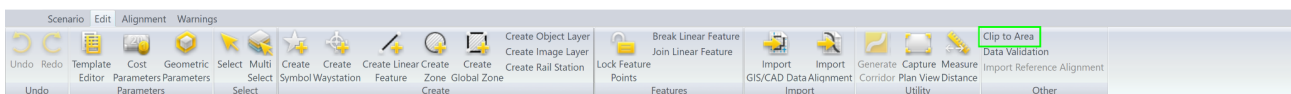
Vehicle Parameters

Cancel

Not new, but just a reminder that these exist.

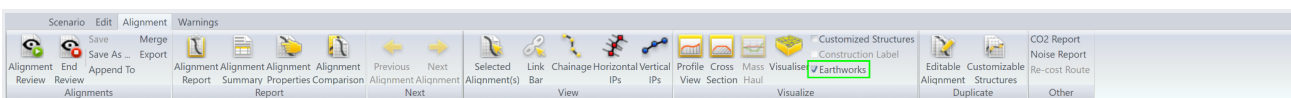
Clip to Area:

The Clip to Area tool enables you to clip data that is not required for the project. The main use of this tool is to remove data that is not located on the project TMQ. The excess data can slow processing down since it is still considered during processing.



Earthwork:

Display the earthworks for the selected alignment in the Plan View window and the Profile View window.





Fixed

- **Local-, Global-Zone and Linear features.** When creating a new one it automatically opens the correct dialogue box.
- **It is now possible to visualize a 1m DTM in the Visualizer.**

Reaching Sales, Support, and the Community

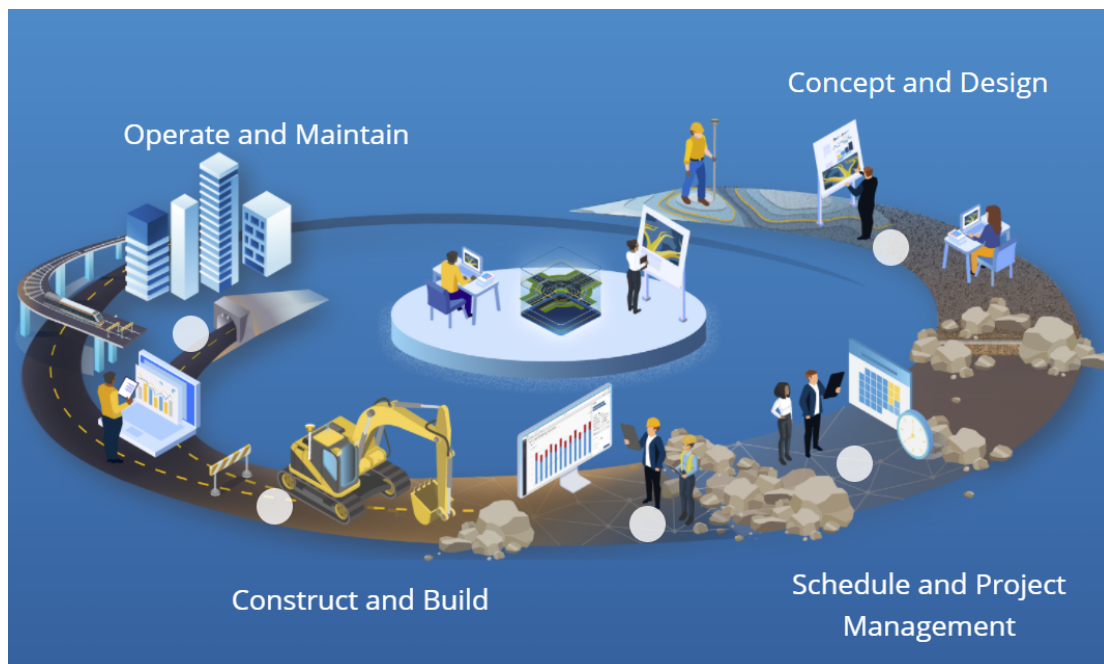
For more information, please use these resources:

Quantm Resource Center

Search for release notes, installation guide, license activation guide, learning guides, and technical articles, and more in the [Quantm Resource Center!](#)

Quantm Support mail: civil.support@trimble.com

Trimble Connected Construction, Read more [here](#).



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