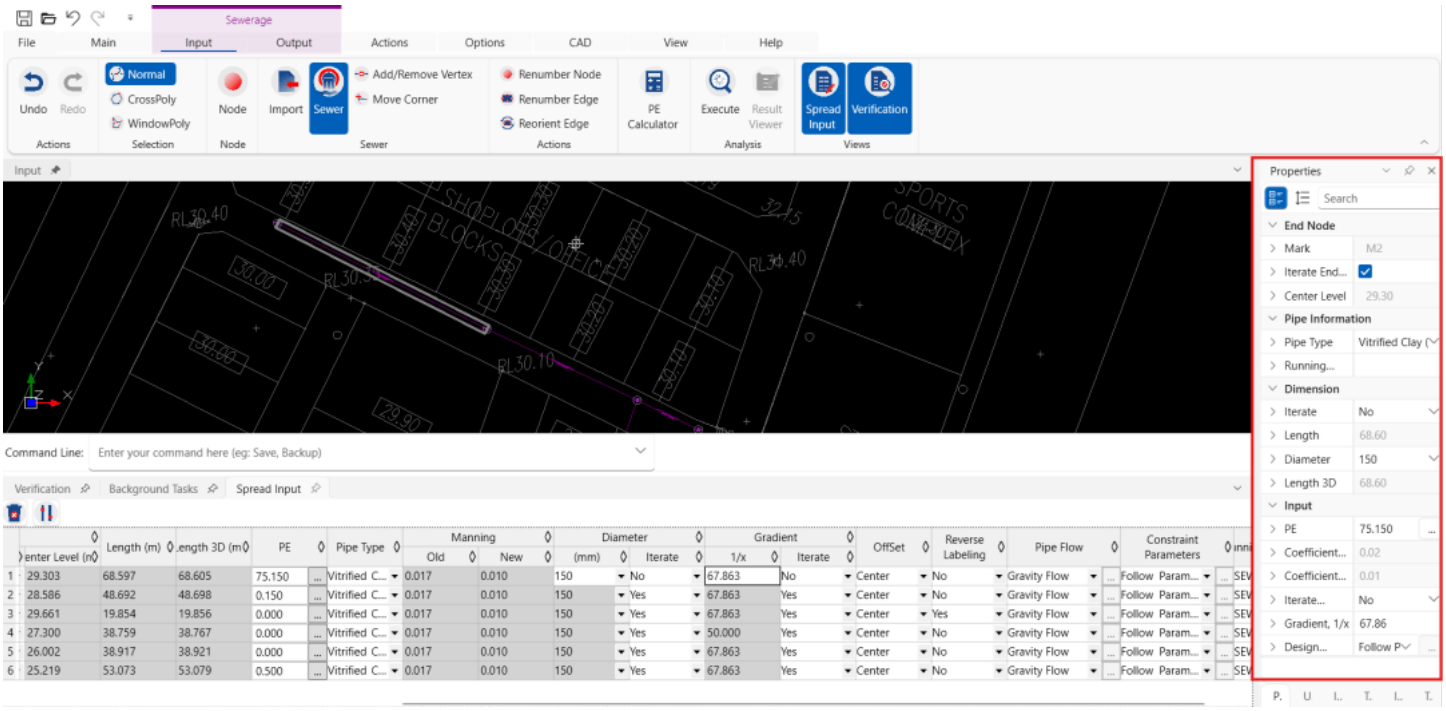
Inputting Sewer Properties

Sewer · https://mes100.com/docs/inputting-sewer-properties/

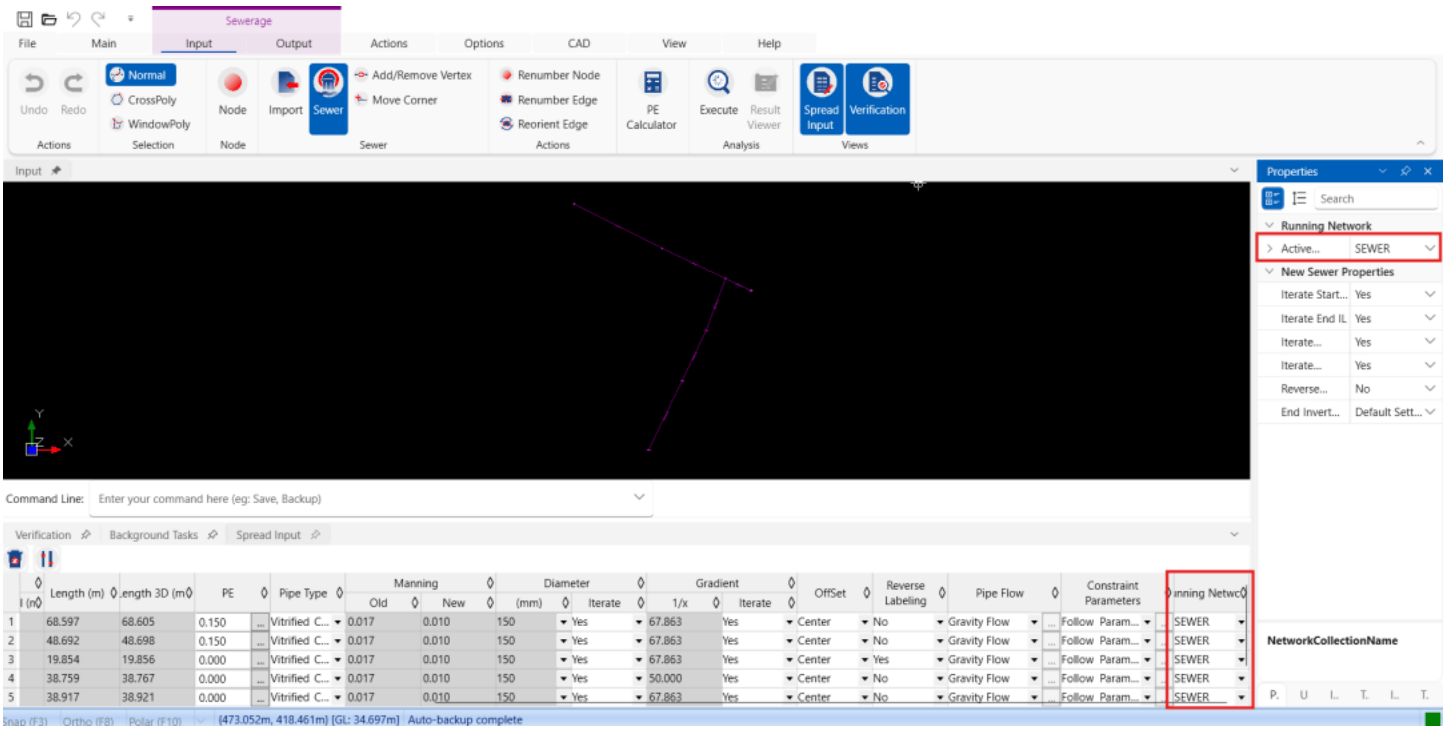
Properties Tab (RHS)

Used to display properties of the selected node. Select any pipes in the workspace and go to Properties Tab (RHS) to put in the sewer pipe properties



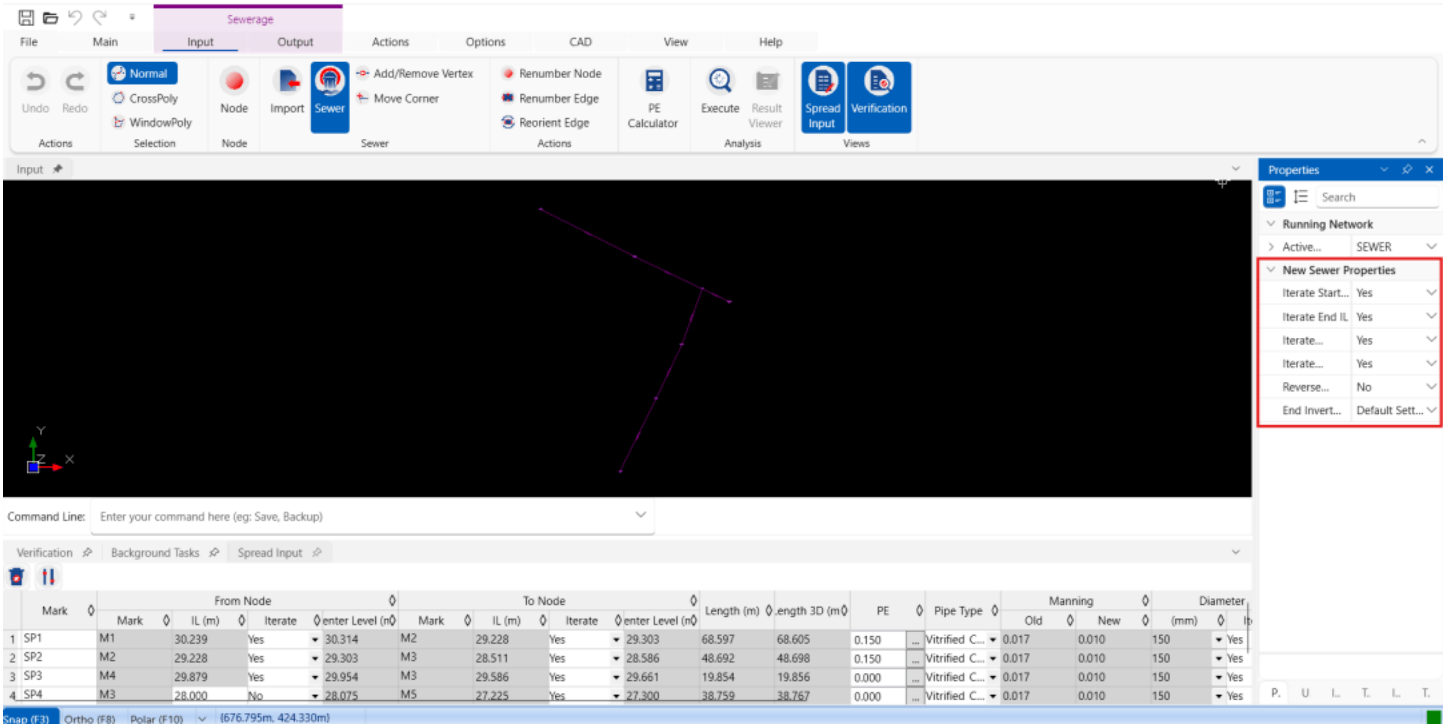
Running Network

For ease of organization, the running network can be defined prior to adding or importing the pipe network. Once set as the Active Running Network (in the Properties Tab – RHS), all newly added or imported pipes will automatically follow the defined network name.



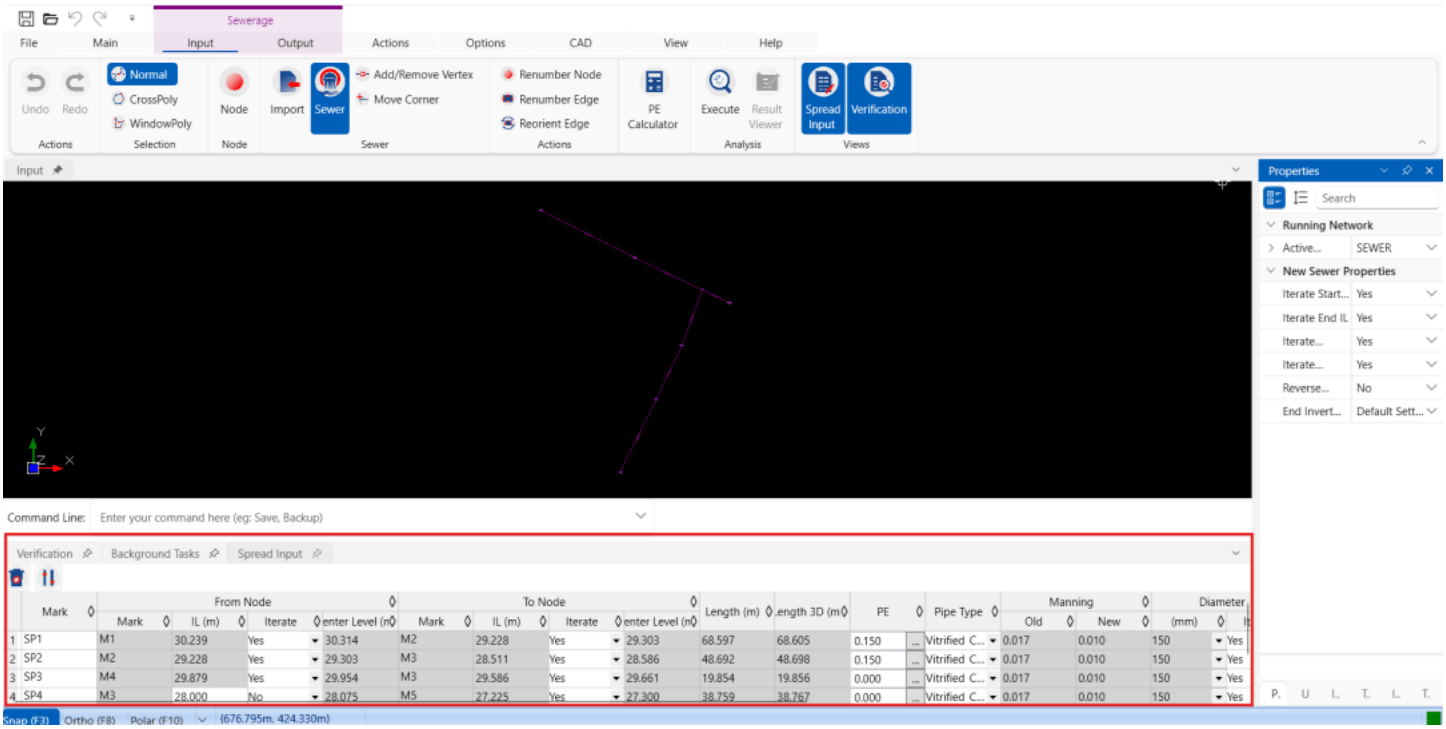
New Pipe Properties

Can be found at the Properties Tab (RHS) when clicking the **Pipe button without selecting any pipes in the workspace**. The properties can be configured prior to adding or importing sewer pipes. Any sewer pipe added afterwards will automatically follow the configured settings.



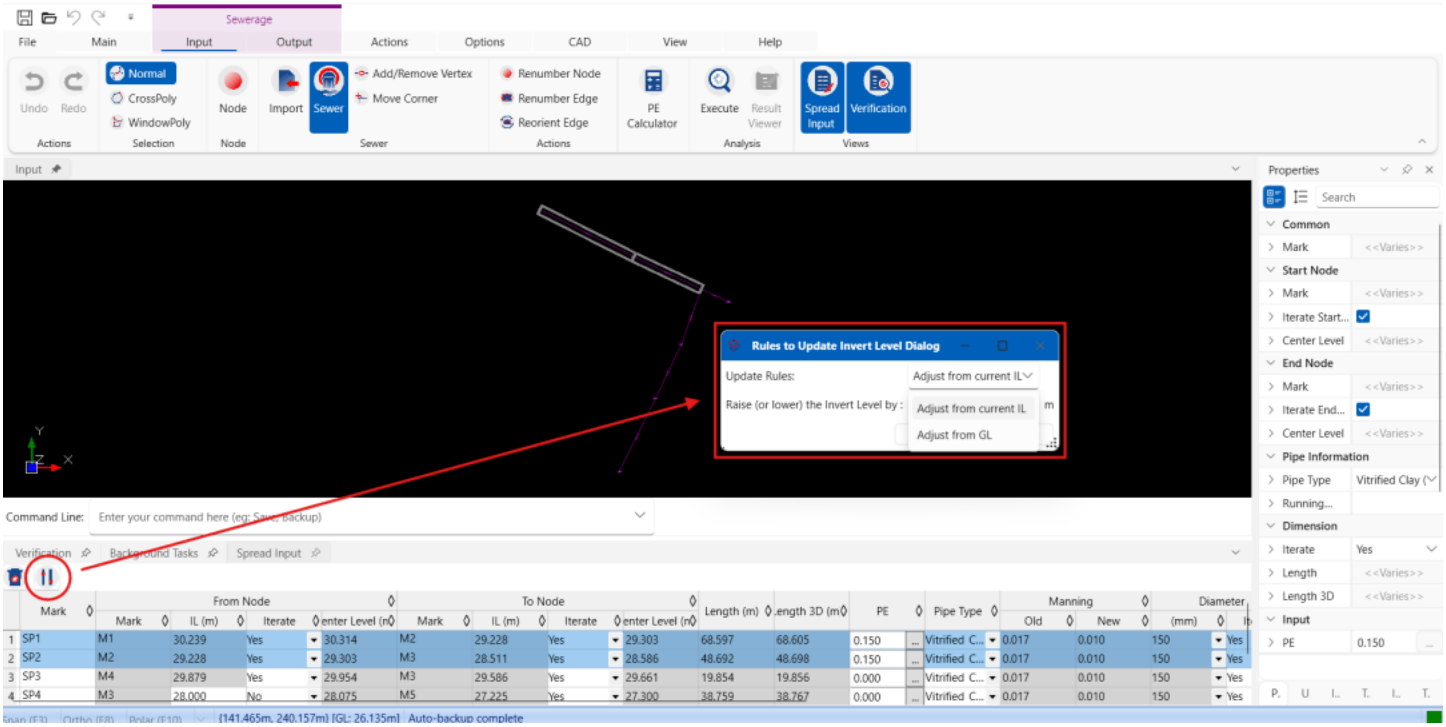
Spread Input

Used to display information of all entities for better clarity. Sewer pipe properties can be modified in the Spread Input tab.



Invert Level Adjustment

Select the pipes and click on the “Adjustment” button to adjust the pipe invert level in reference to the current Invert Level (IL) or Ground Level (GL).



The depth below invert settings can be set to follow:

1. Adjust from the current IL
2. Adjust from GL

Note:

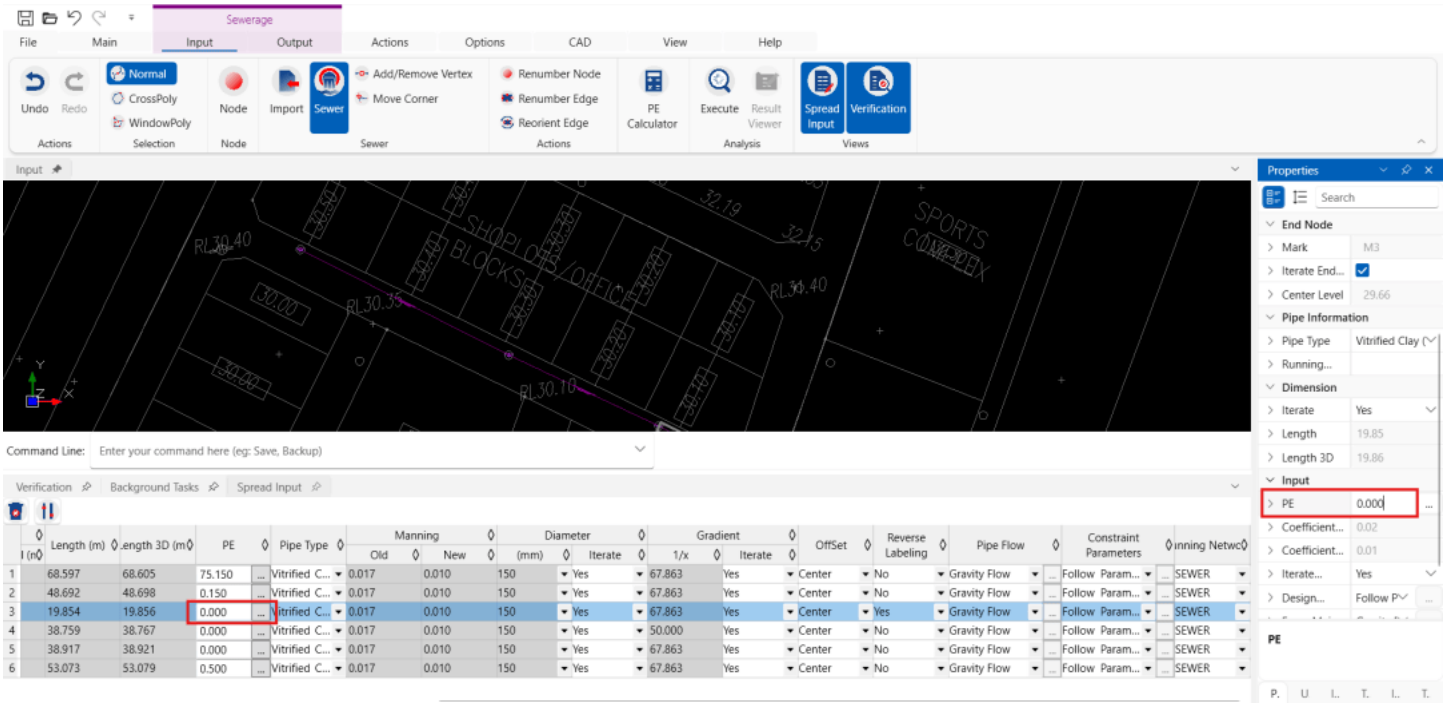
1. Users can select multiple pipes to raise/lower the sewer pipes.
2. Positive (+ve) value is to raise the IL
3. Negative (-ve) value is to lower the IL

PE (Population Equivalent)

Assign PE value to the sewer pipe.

Manual Input

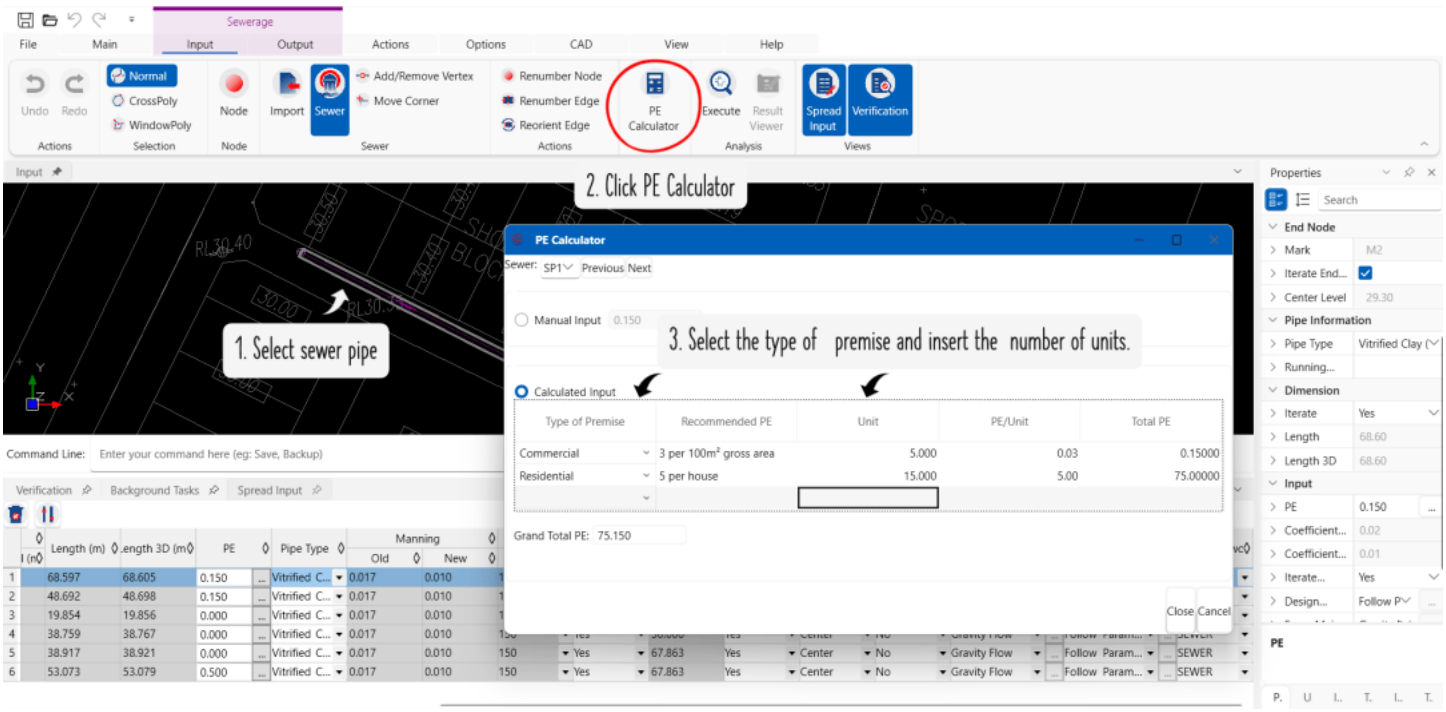
You can assign PE value by entering the value manually in the Spread Input table or in the Properties tab (RHS).



Calculated Input

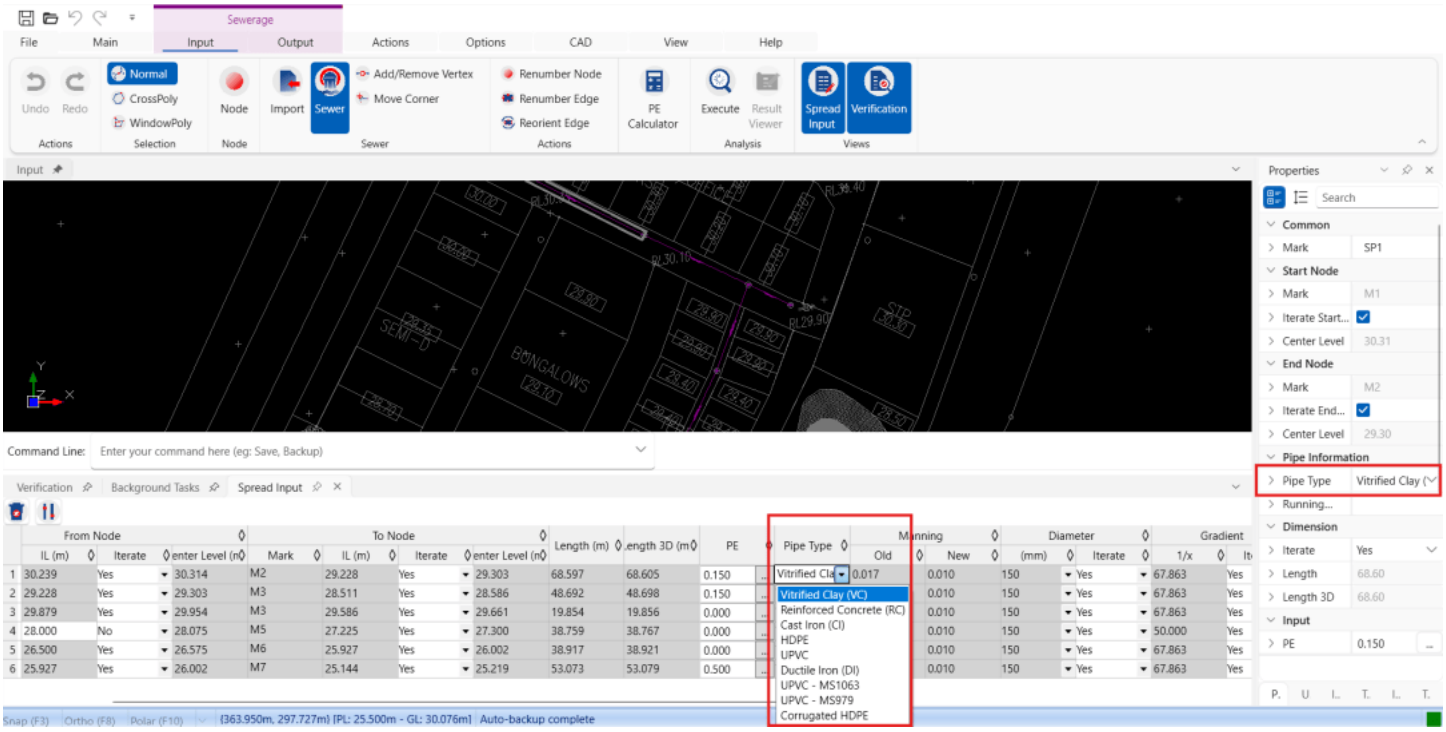
You can use the PE Calculator to let the program calculate the total PE. Follow the steps below:

1. Select the sewer pipe
2. Click Water Demand Calculator or  in the Spread Input.
3. Select the Type of Premise.
4. Enter the number of units and press “Enter’ to commit the PE value.



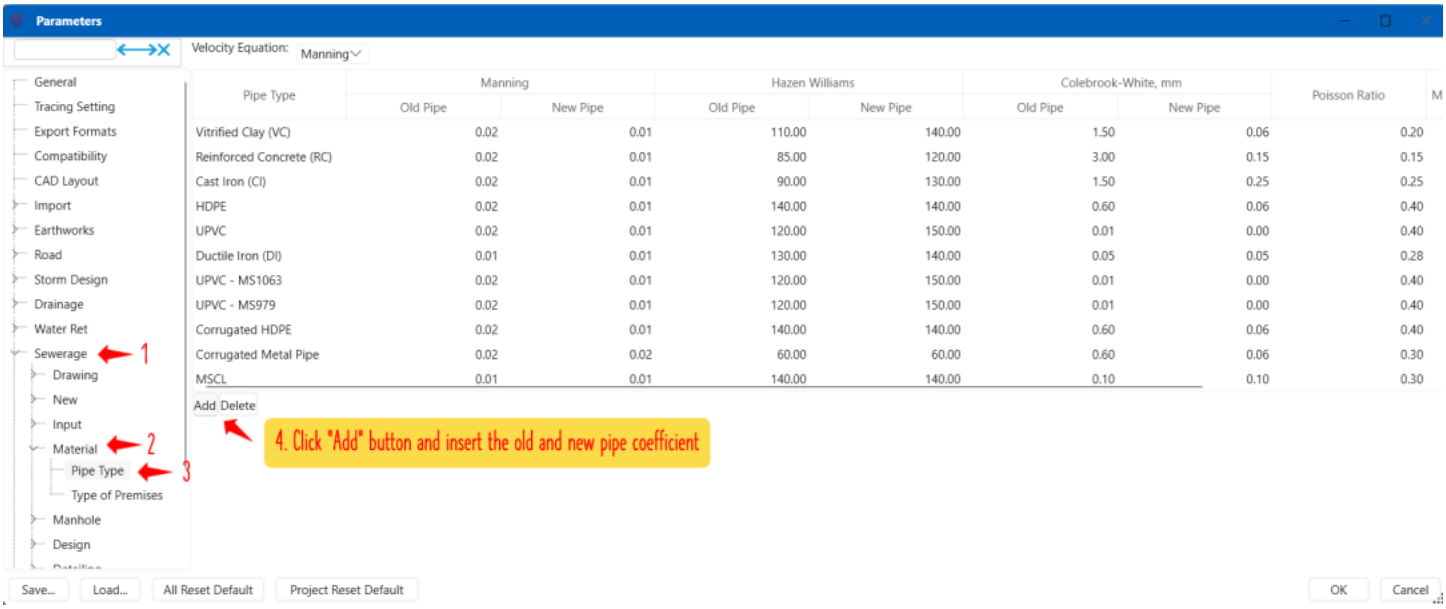
Pipe Type

Select the sewer pipe type from the dropdown list.



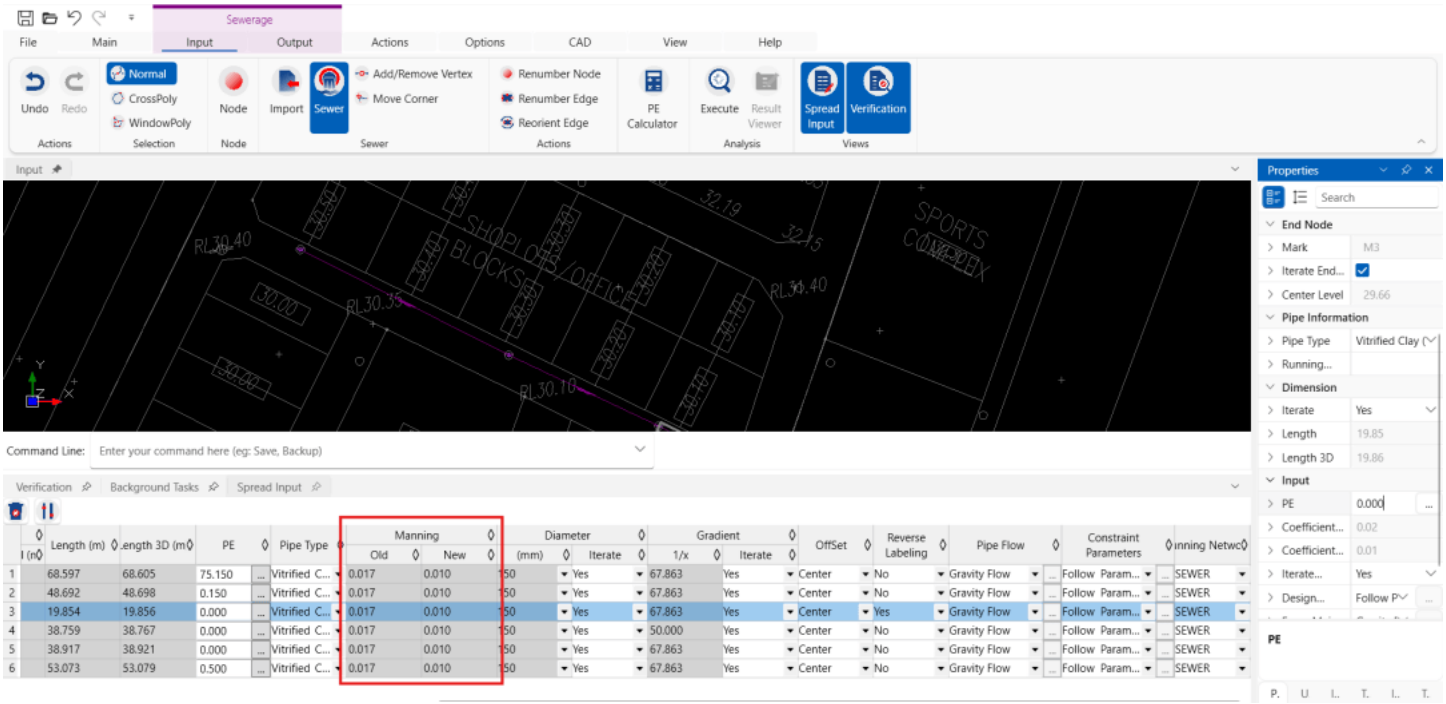
Add New Pipe Type

To add a new pipe type, go to: Options > Project Settings > Sewerage > Material > Pipe Type > Add the Pipe Type description and insert the old and new pipe coefficient > Press Enter to commit the changes.



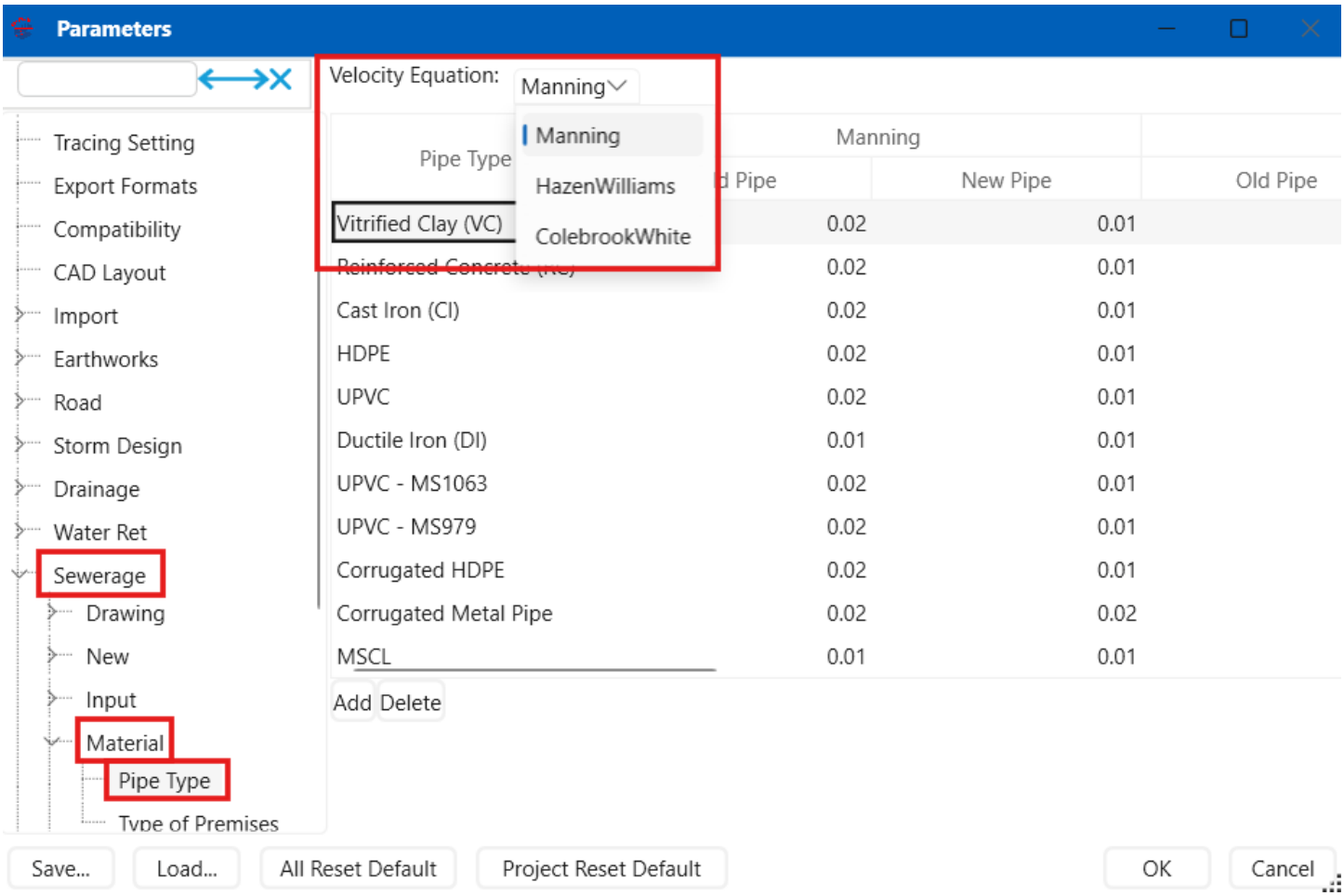
Manning (Sewer Pipe Coefficient)

Displays the old and new pipe coefficient of the velocity equation (Manning, Hazen – Williams, and Colebrook – White Equations). The column headings follow the names set in Options > Project Settings > Sewerage > Pipe Condition Headings. If Pipe Condition to Analyse (Options > Project Settings > Sewerage > Design) is set to New Only or Old Only, only that condition's column is shown. See Old and New Pipe.



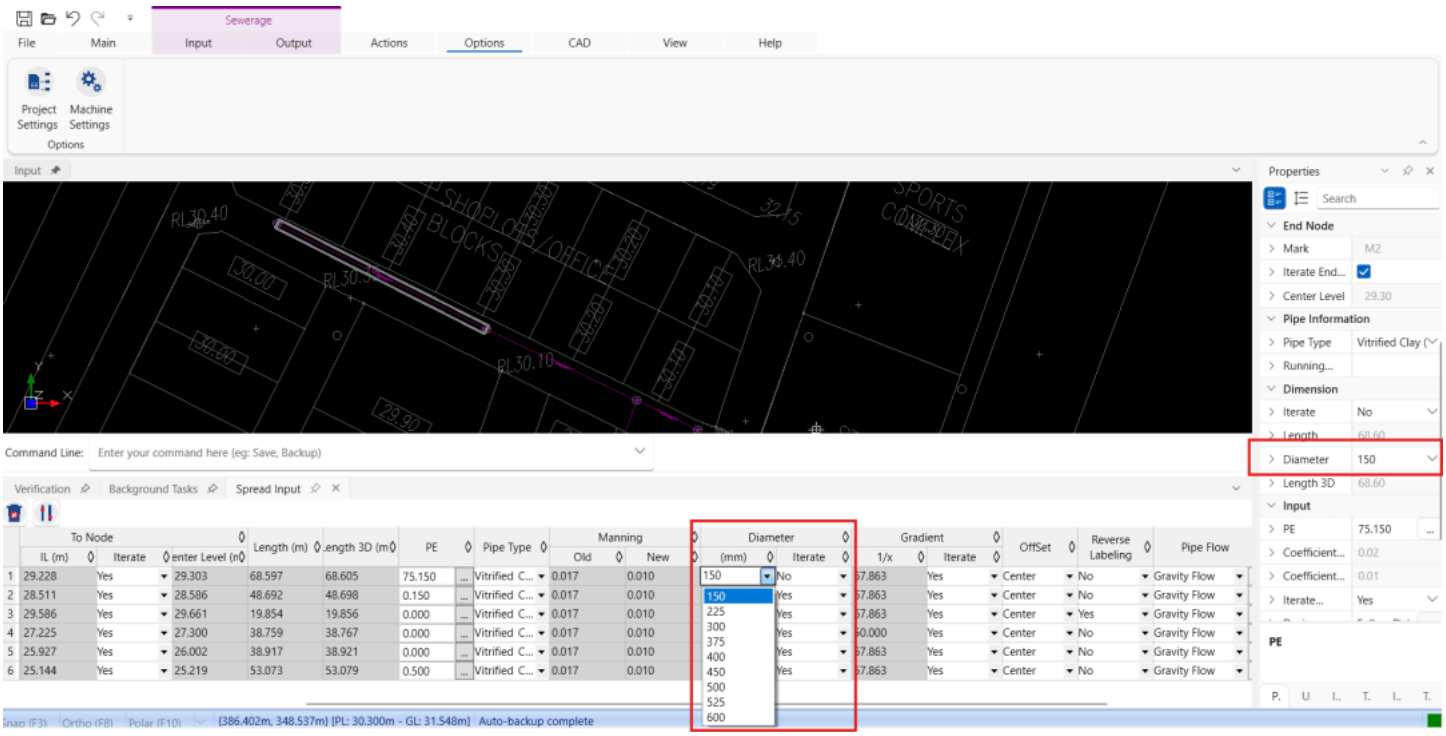
Changing Velocity Equation

Go to Options > Project Settings > Sewerage > Material > Pipe Type > Change the Velocity Equation



Pipe Diameter

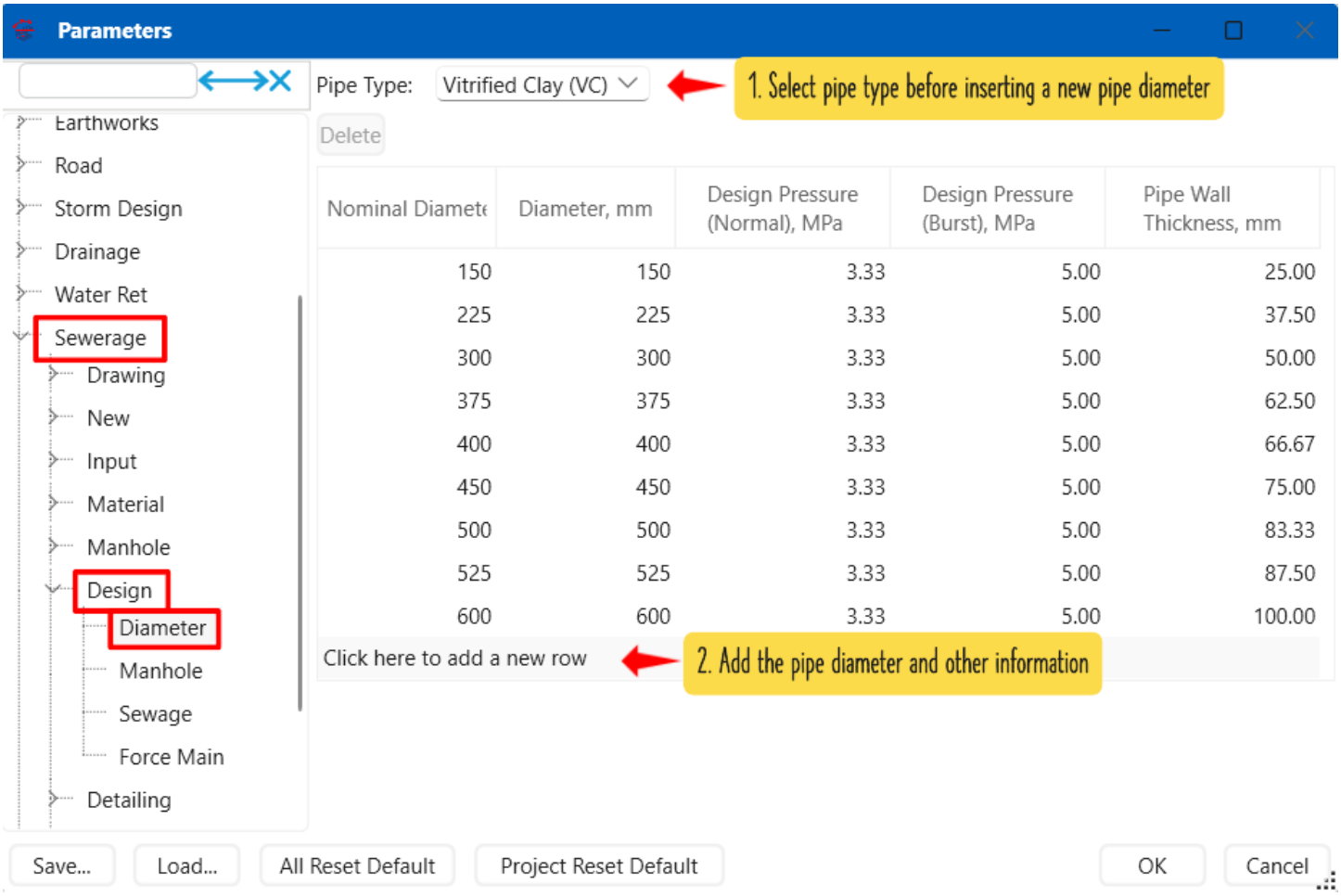
Display the inner diameter of the water pipe. Toggle the “iterate” column from “Yes” to “No” to select different pipe diameters from the drop down list.



Add New Pipe Diameter

To add new pipe diameter, go to:

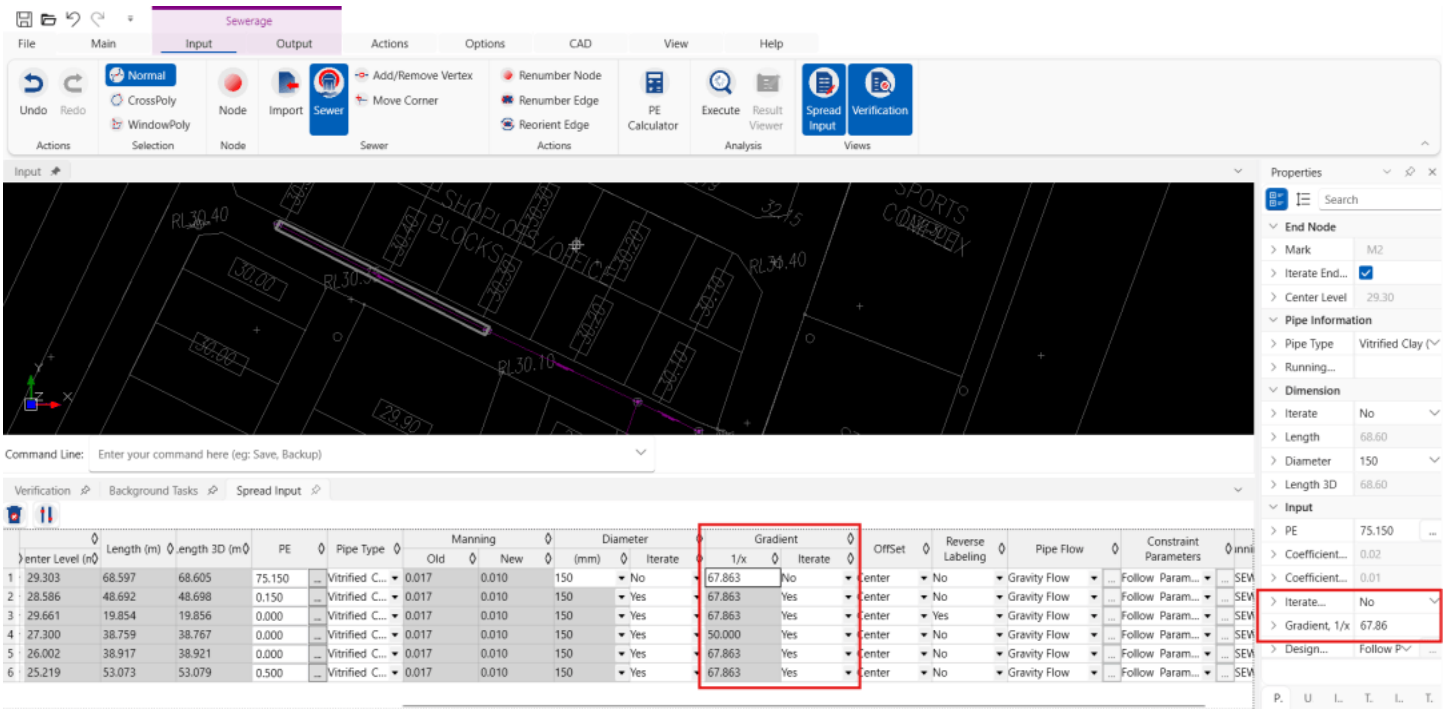
Options > Project Settings > Sewerage > Design > Diameter > Select the pipe type from the dropdown list > Add the new pipe diameter and other information.



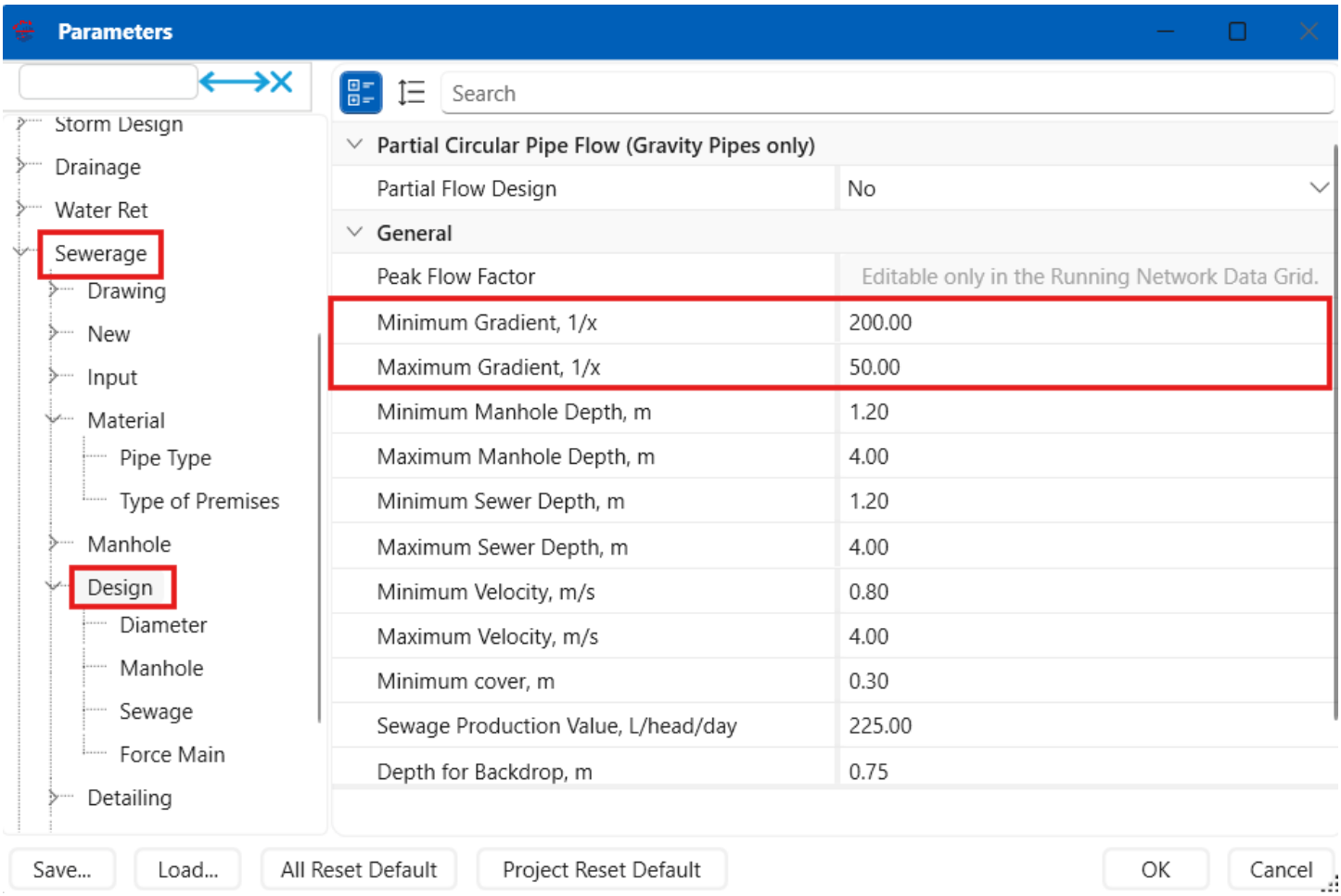
Gradient

Display the gradient of the sewer pipe.

1. Toggle the **“Iterate” column to Yes** to let the program propose a suitable gradient
2. Toggle the **“Iterate” column to No** to input a user-defined gradient.



Note: For a user-defined gradient, it should be within the gradient limit under the Project Settings or Customized Parameter.



Options > Project Settings > Sewerage > Design > Minimum and Maximum Gradient

Constraint Parameter

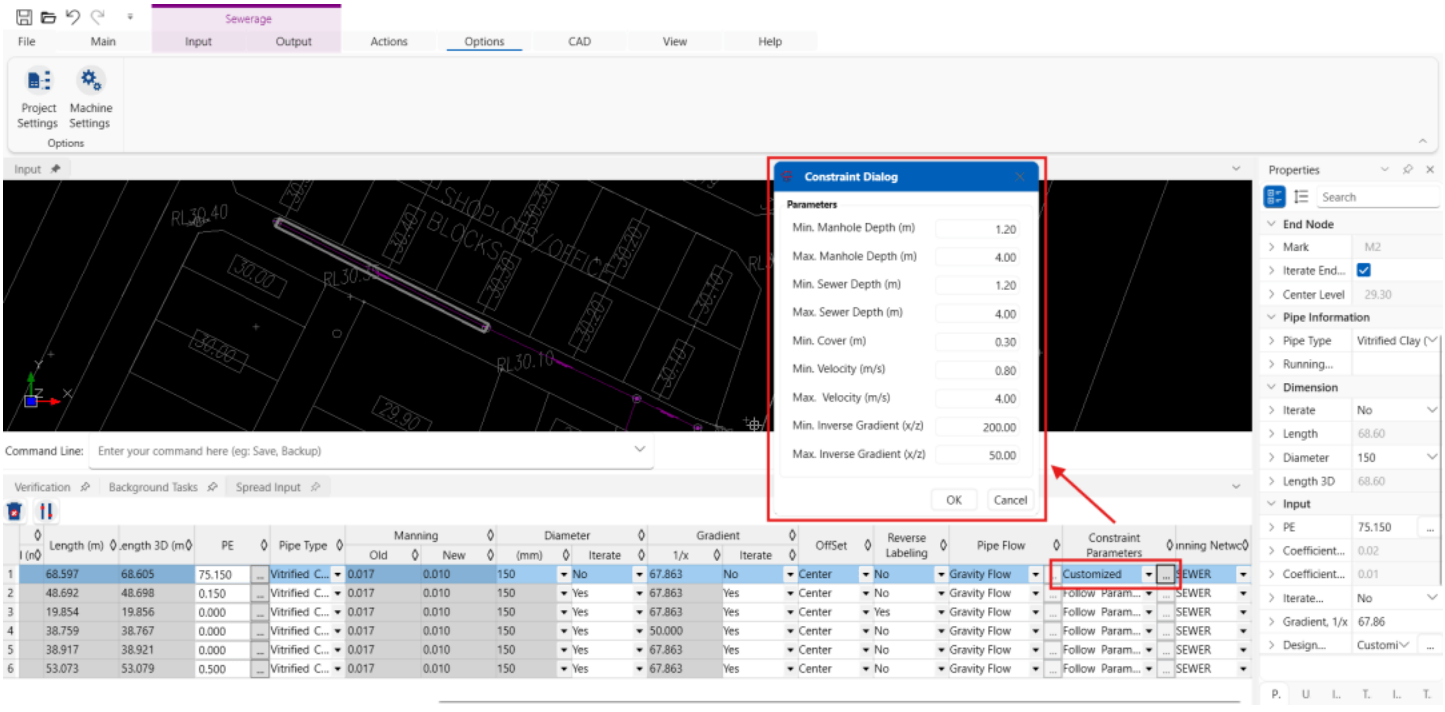
Follow Parameters

The analysis will check the output, such as depth, gradient, velocity etc against the parameters under the Project Settings.

Customized

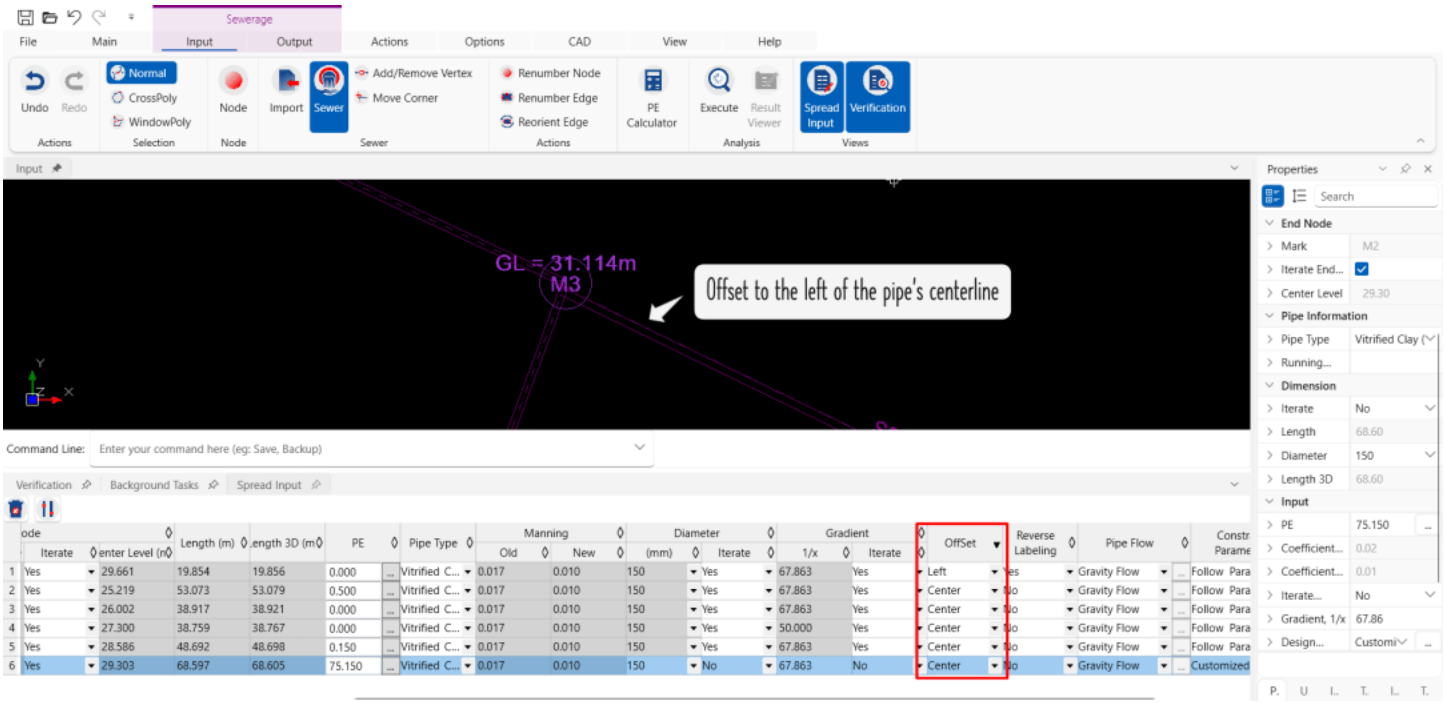
Users can customize the parameters for each of the sewer pipes. It can be used if certain sewer pipes fail/ cannot abide with the design criteria defined in the Project Settings due to site constraint.

To set custom parameters, go to Constraint Parameters column > Select Customized from the drop-down > Click on the ... button



Offset

Refers to the position of the water pipe from the centerline, either Center, Right or Left. The offset detail can be seen clearer if the line type is changed to inner/outer profile. See here.



Reverse Labeling

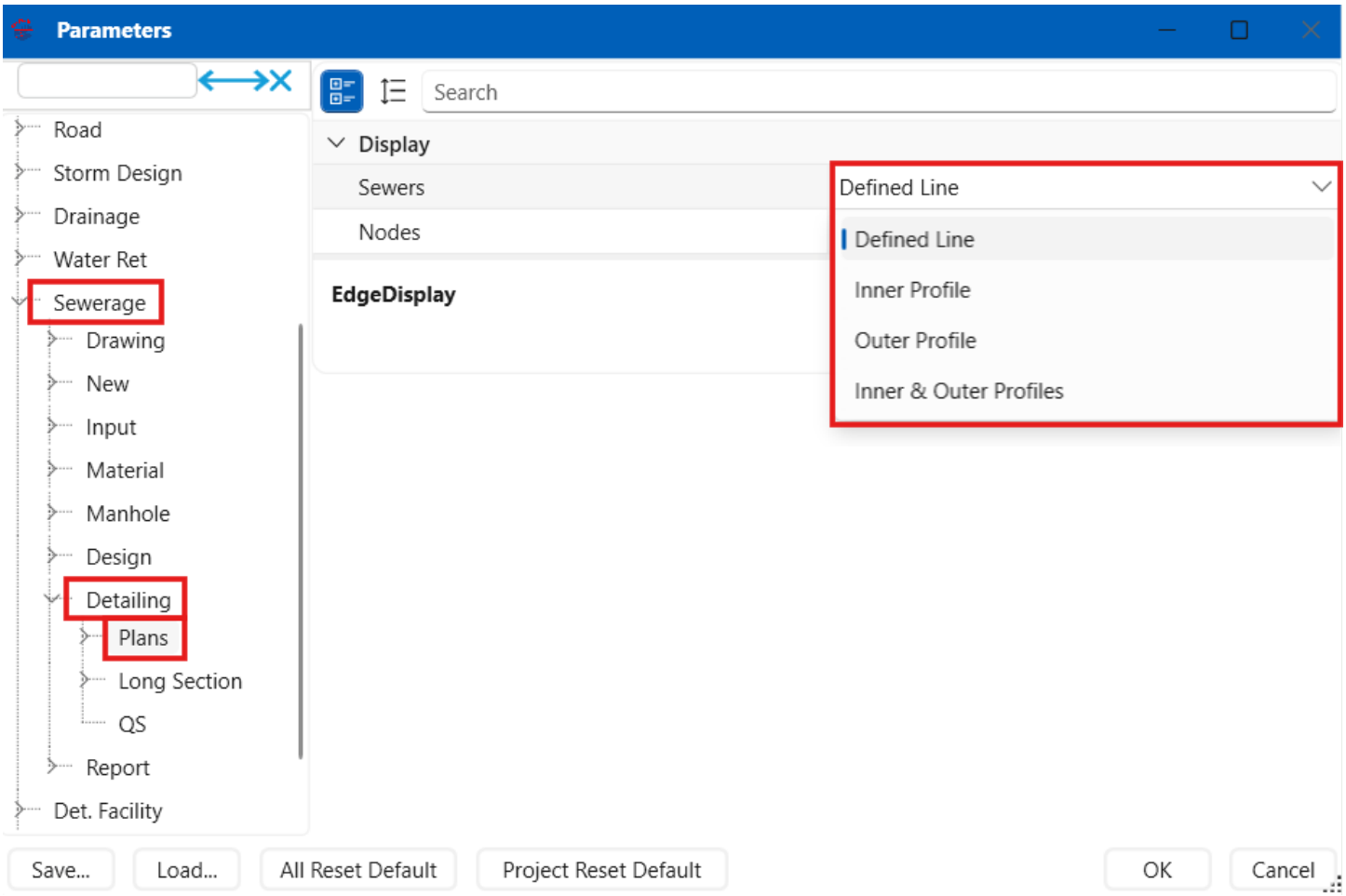
Refers to the orientation of the pipe description. Reverse Labeling only flips the pipe label position for display purposes and does not affect the flow direction or analysis.

To **change pipe flow direction**, double click the arrow at the pipe to reverse the direction. Refer tutorial below:

Embedded media: https://mes100.com/wp-content/uploads/2022/09/Reverse-Labelling-and-Flow-Direction.mp4?_=1

Changing Line Type

To change the type of the line shown in the drawings. Go to Options > Project Settings > Sewerage > Detailing > Plans > Sewers > Change the line type



Descriptions:

1. Defined Line	: Display the centerline of the sewer pipe
2. Inner Profile	: Display the inner diameter of the sewer line, (not including the pipe thickness)
3. Outer Profile	: DIsplay the outer diameter of the sewer line, (including the pipe thickness)
4. Inner & Outer Profile	: Display both inner and outer diameter of the sewer line

Related



Ngu Soon Hui

I’m the Benevolent Dictator for Life for MiTS Software cum Editor of this website. Read more here.

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