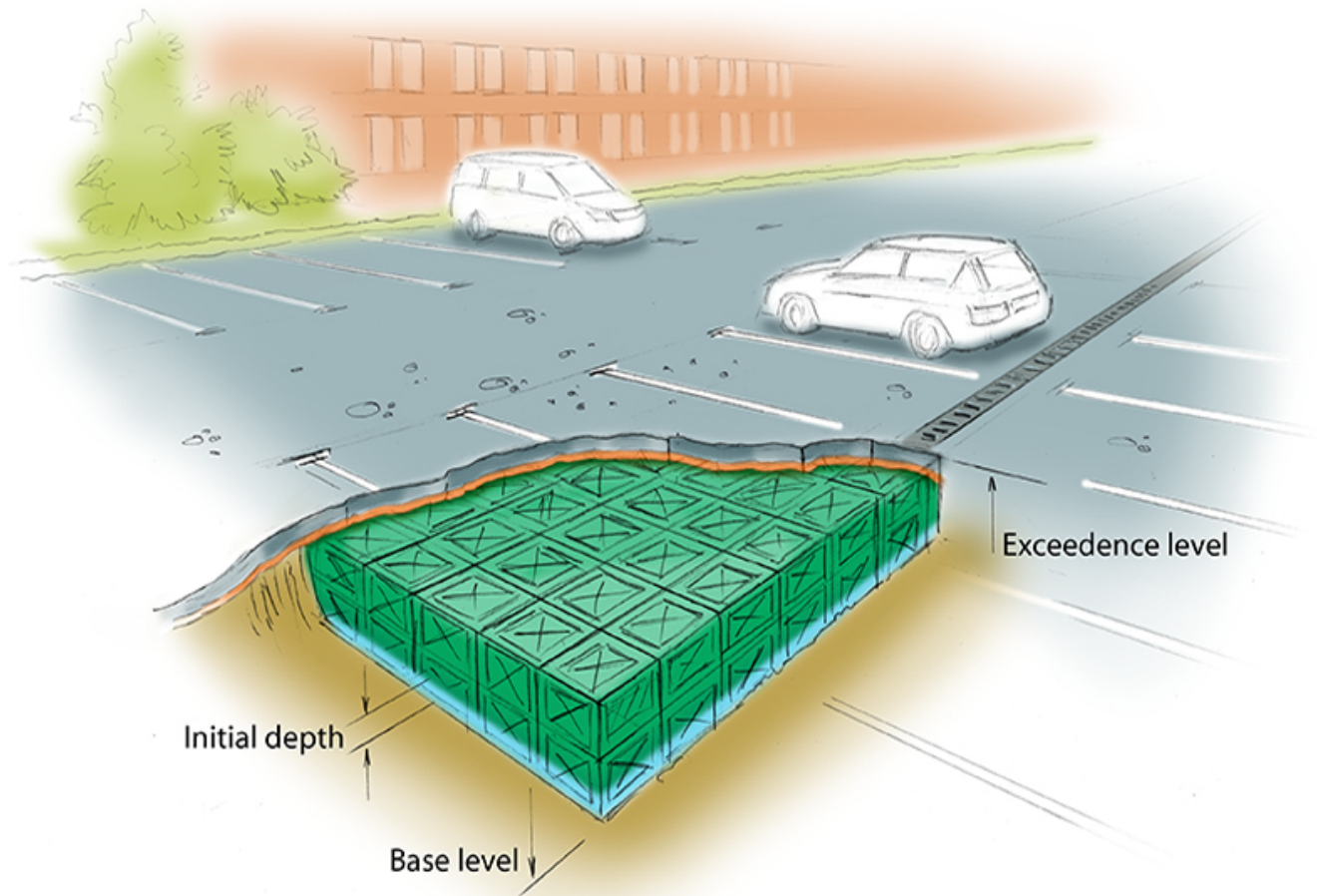


# Tank

Tank stormwater controls may be used to model a range of stormwater controls including, but not limited to, tanks and municipal harvesting tanks.



## Total Volume

The Total Volume value shown in the bottom-right corner of the data form shows the volume available in the system up to the Freeboard level.

### **i** Note

The analysis will assume a 1m<sup>2</sup> plan area shaft up from the soffit of the tank up to the exceedence level. As such the Total Volume value will include this additional volume up to the freeboard level if present

## Dimensions

The Dimensions tab has the following fields:

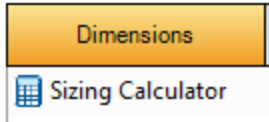


Whilst the Area at each depth specifies the circular cross-sectional area at that depth, the volume is the cumulative volume for all depths up to the depth the next row. If the Editable Column drop-down list box is 'Area' then the user can specify an area and the volume in the same row is calculated. Conversely if 'Volume' is selected in the Editable Column drop-down list box then the user can specify a volume in a row and the area is calculated in the subsequent row (keeping the area in the same row the same). Note that in this case it is possible to specify a volume that is too small for the area of the current row and height between the current and next rows, in which case the area will be set to -1 and a higher volume will need to be specified.

### Depth Increment (m)

Enter the depth increment for the tank area spreadsheet. Small values lead to a more accurate result but limit the height of the structure.

## Sizing Calculator



The Sizing Calculator option allows the user to re-size the Tank by specifying a volume and a parameter to modify to achieve that volume. It also allows the user to specify a Side Slope for the Tank. The Sizing Calculator is discussed in more detail in the [Stormwater Control Sizing Calculator](#).

## Inlets

Explore the [Inlets](#) page for more details on the different types of Inlets that can be specified.

## Outlets

Explore the [Outlets](#) page for more details on the different types of Outlets that can be specified.

## Advanced

The Advanced tab has the following fields:

Tank
✕

Name

Dimensions	Inlets	Outlets	Advanced	Pollution
<input checked="" type="checkbox"/> Base Infiltration Rate (m/hr)	<input style="width: 60px;" type="text" value="1.2"/>	Length (m)	<input style="width: 60px;" type="text" value="11.09"/>	
<input type="checkbox"/> Side Infiltration Rate (m/hr)	<input style="width: 60px;" type="text" value="0.0"/>	<input type="checkbox"/> Consider Longitudinal Delay		
Safety Factor	<input style="width: 60px;" type="text" value="1.0"/>	Manning	<input style="width: 60px;" type="text" value="0.000"/>	
Perimeter	<input style="width: 60px;" type="text" value="Circular"/>	n		

Click to show image(s)

Name
Total Volume (m<sup>3</sup>): 1072.207

**Base Infiltration Rate** - Defines the rate of infiltration through the base of the filter area. This should be determined from a performance site test.

**Side Infiltration Rate** - Defines the rate of infiltration through the sides of the filter area. This should be determined from a performance site test.

**Safety Factor** - Reduces the infiltration rate during the analysis to account for silting up or poor maintenance. This is required for the UK.



This option may not be available for your region. For more information, refer to the [Regionalisation](#) topic.

**Perimeter** - Specified whether the perimeter shape for the side infiltration calculation is to be circular or square. The default is circular.

**Length** - The maximum path length through the stormwater control, used only for the purpose of calculating Time of Travel. The Length will be automatically set from the dimensions of the stormwater control unless over typed, in which case it is set to "user specified".

**Consider Longitudinal Delay** - Determines if a time of travel needs to be considered across the structure. This may not be required as they are laid flat and can be considered as filling instantaneously. If the travel time is to be considered a roughness method and value should be selected.

**Friction Scheme** - Specifies the formula used to calculate velocity and time of travel. Select from: Manning's, and Colebrook-White. The variable below the combo box depends on the option selected.

**n** - Manning's n roughness value. Used by the [Manning Formula](#) equation to calculate the velocity and therefore time of travel when using the Manning's option.

**Roughness** - Colebrook-White roughness value. Used by the [Colebrook-White Formula](#) equation to calculate the velocity and therefore time of travel when using the Colebrook-White option.

## Pollution

The Pollution tab has the following fields:

Tank ×

Name

Dimensions		Inlets		Outlets		Advanced		Pollution	
Name	Aspect	Background Concentration (mg/L)	Method	Percentage Removal (%)	$\tau$ (mins)				
TSS	Aspect	0.0	Percentage Removal	0	0				
TP	Aspect	0.0	Percentage Removal	0	0				
TN	Aspect	0.0	Percentage Removal	0	0				

Click to show image(s)

Name Total Volume (m<sup>3</sup>): 1072.207 [?](#) Help

**Name** - Name of pollutants. This is populated based on the [Pollutants](#) set up as part of the Site Data.

**Background Concentration** - Value below which the pollution concentration cannot fall during analysis. When concentration reaches this level, no further removal occurs.

**Method** - [Percentage Removal](#) or [First Order Decay](#) method can be chosen. Click on the links for more information about each method.

**Percentage Removal** - Available if Percentage Removal entered. The value entered will be deducted from the Inflow into the system.

- The decay time constant or (mean) lifetime of the pollutant. It can be entered manually or calculated from the decay constant or decay half-life. See Pollutant Removal Method - First Order Decay for more details.