

Time of Concentration

The amount of time that it will take for water landing on the roof area to enter the system. The inflows from the area will then be evenly spread over this time when the area is analysed.

This amount of time can be calculated with the [Time Of Concentration Calculator](#). The **Percent Impervious** is defined as the pervious portion of the [Inflows](#) area.



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

Analysis

The analysis is the same as the [Time Area Diagram](#) method with the time area diagram being built with an even spread of the area over the time of concentration.

Eg. Time of Concentration = 3 mins, Area = 0.75ha

If the timestep is 1 minute, A1 = 0.25, A2 = 0.25, A3 = 0.25.

The rainfall profile and the time area diagram are combined with the volumetric runoff coefficient in the following way:

$$Q_1 = (I_1 \times A_1) \times 2.78 \times C_v$$

$$Q_2 = (I_1 \times A_2 + I_2 \times A_1) \times 2.78 \times C_v$$

$$Q_3 = (I_1 \times A_3 + I_2 \times A_2 + I_3 \times A_1) \times 2.78 \times C_v$$

And so on.