Networks

A network is a dendritic route through the site that is used to perform a **Pipe Sizing** calculation. This is required as the route which the flows will take must be dictated in order to perform a sizing calculation using the Rational Method approach. A dendritic route does not allow for loops or bifurcations, so a single outfall is required for a given sizing to be performed. As such it is possible to define multiple Paths /Networks through the site to size different part of the system.

A dendritic network defines a main route and branches that end at a unique outfall.

Workflow - What's next...?

Inflow → Inlet → Stormwater Contol → Outlet → Inlet → Junction → Outlet → Inlet → Stormwater Contol → Outlet

Inflows connect to either **Junctions** or **Stormwater controls** via **Inlets**. Specify an **Networks** on these objects then choose to connect to another Junction or Stormwater Control.

Fig 1 - A dendritic drainage network

A network is constructed by using a **Flow Path** as the main drainage route (mainline) and any additional connecting runs (branchlines) are also considered. A **Flow Path** is used as the basis for building a network as it allows the user to make the decisions of where to begin and end the network for sizing, as well as the route to take at a bifurcation (fork).

The network used for sizing is constructed by walking backwards up the Flow Path (mainline) from the most downstream element (outfall) to the first. When branchlines are found these are then walked up in parallel, with additional branchlines (and subsequent branchlines etc.) from each also considered. At this stage only Connections (as apposed to Associations) are considered as these are the items that can be seen as Pipes/Channels and therefore require sizing.

It is possible to view the network calculated by the software from a Path on either:

- **Plan** - By highlighting the **Flow Path** in the **Tree View**. The Plan View will show the Path in the Mainline colour and then incoming branches in the Branchline colour.

  Note: The colors can be changed on the **Display Settings**.

- **Connections** - Either by highlighting the **Flow Path** on the **Tree View** with the form open, or by selecting the **Flow Path** by name from the form filter.

Once constructed the network is then available for use in **Pipe Sizing**.