12d® Model™
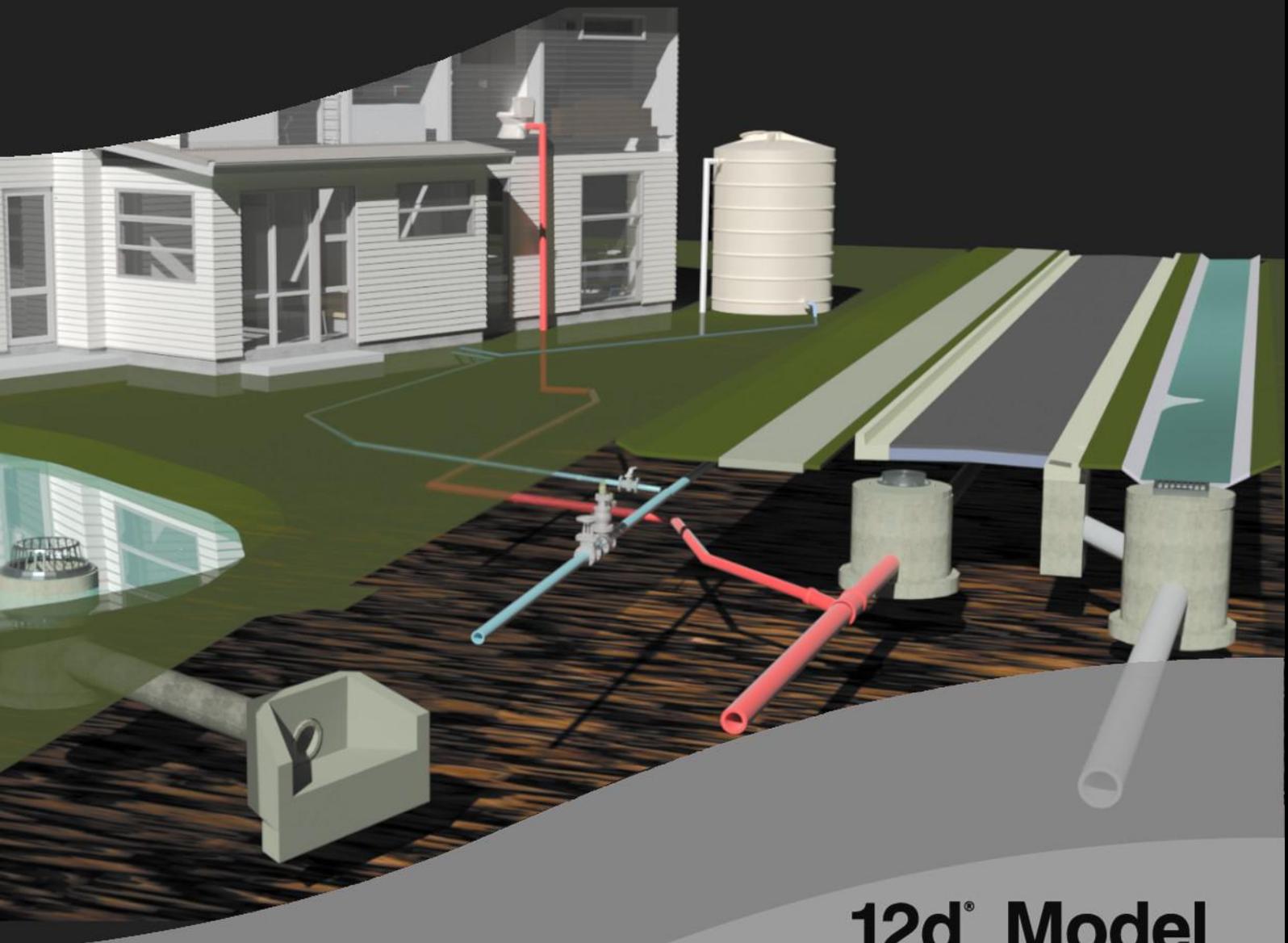
CIVIL AND SURVEYING SOFTWARE

Three Waters

Storm Water
Waste Water
Water Supply

12d® Model

Do More With Your Software.

ROADS AND HIGHWAYS LAND DEVELOPMENT RAIL DRAINAGE, SEWER AND SERVICES AIRPORT INFRASTRUCTURE PORTS AND DREDGING MINING INFRASTRUCTURE SURVEYING OIL AND GAS RIVERS, DAMS AND HYDROLOGY CONSTRUCTION ENVIRONMENTAL

12d Model Advantages

Modular Software

Tailor your software licences to contain only the modules you need
 Why pay for functionality you don't use?

Multi Module Discounts

Volumetric discounts on module purchases for perpetual licences

Perpetual or Subscription Licensing

No need to worry about not being able to access your Project data after the project ends. With perpetual licences, you have control of how and when you access your data, without worrying about hidden costs.

Hardware (dongle) activation

Have multiple people need to access 12d Model but not at the same moment?
Don't pay for multiple licences or access!
Local or network licensing without time zone limits.

A Single Software Solution

All 12d Model functionality is exclusively 12d Model. No third-party bolt-on solutions required
Produce almost all aspects of civil design and surveying within the same platform.
Water, geometrics, flooding all sharing the same models.

Local Support

Help is just a local phone call or car trip away. Our regional support representatives know your local requirements and standards and understand what you do.

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Three Waters

BIM and Digital Engineering

Open-Source data Collaboration

Share your water models, complete with all important metadata attributes to other Project Partners outside of 12d Model with fully compliant IFC (Industry Foundation Class) file authoring. Including the latest Infrastructure IFC 4x3 format.

Compliance with Metadata Standards

From Design to Construction. Create, capture and store metadata attributes on all water assets in preparation for handover to asset owners.

12d Model's Metaconnex system allows compliance with digital asset metadata standards required by Asset Owners.

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Large Datasets

Using large LIDAR or scan datasets? No problems!
You can import, triangulate or manipulate data both small and very large.


True 3D water network models

12d Model water networks are designed the way they are meant to be built.
Position, size and orientate nodes and links spatially with linked relationships to roads and base/riser positioning.

Clash Detection

Because the network is truly 3D, clash detection and reporting can be carried out with other design model elements with ease the moment the design changes.
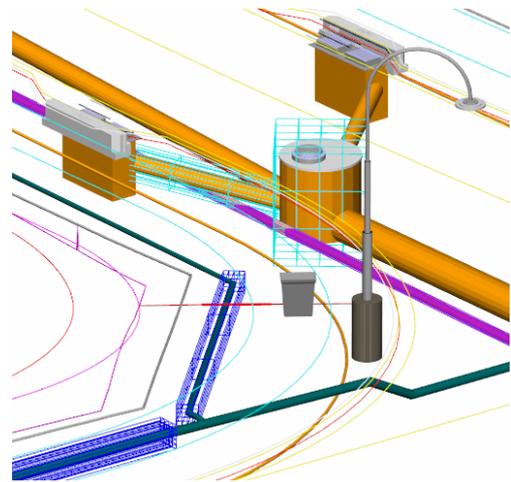
Regional Customisation

Don't settle for trying to fit a round peg in a square hole. With 12d Model you have customisation for region specific water standards and methods.
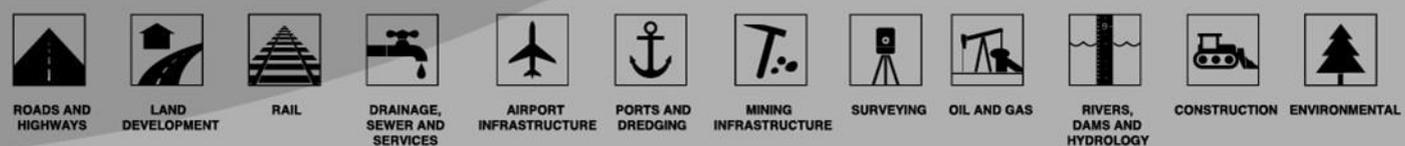You can even take control of your own customisation

For whatever hydrological method, node or link requirements and types you need.

Select Choice

NZ CATCHPITS

CP
DCP
CHANNEL CP
CHANNEL DCP
STREET CP 1.2m
STREET CP DOUBLE
STREET CP SIDE 2.4m
HUSHPIT
METROPIT CP 1.2m
METROPIT CP 2.4m

Capture Curve: METROPIT CP 2.4m

Capture Curve Node:
Node Type: METROPIT CP 2.4m

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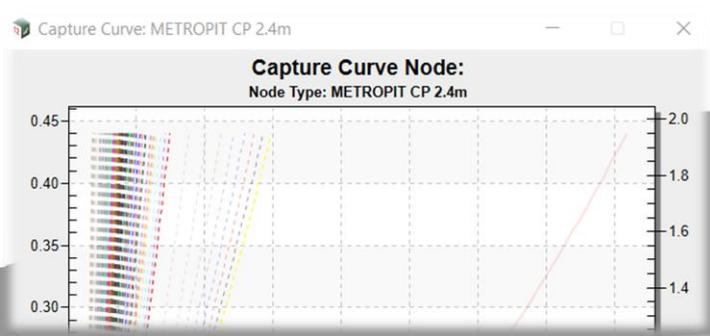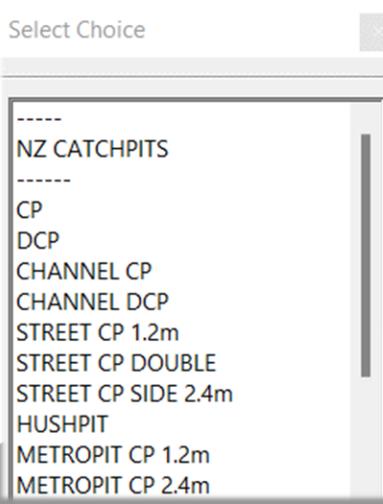
Cover all Levels of Stormwater Analysis

Don't limit yourself. Whether you require an HGL, Dynamic Wave 1D, 2D or 1D/2D coupled network analysis modes, 12d Model contains many levels of hydrological and hydraulic analysis all within the same software solution!

Hydrology

12d Model offers multiple hydrological analysis methods which can be customised to suit your Regional Authorities standards and practices.

Whether it is custom temporal patterns or infiltration methods such as Horton or SCS curve numbers, we have you covered.

Select Choice

None
Rational
ILSAX 2
Laurenson
NZ SCS Curves
EPA SWMM
SCS method
Water supply
Sewer tractive

Hydraulics

With our Dynamic Wave 1D hydraulics you can model complex stormwater systems with conduits, weir and orifice controls as well as basin storage, attenuation and infiltration. And you can even couple this with a 2D flood analysis!

Interfaces

From quick concept tools to an all-in-one network editor, you have choices as to how you model your network.

If you are modelling a Stormwater, Wastewater or Water Supply network, 12d will deliver you relevant interface modes and settings to suit.

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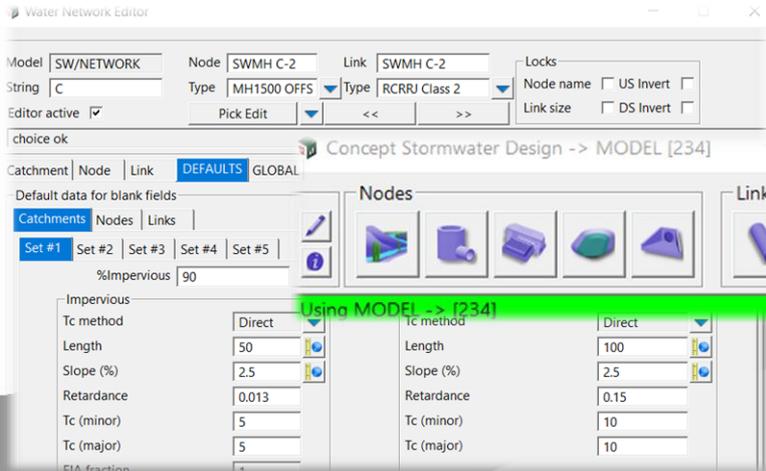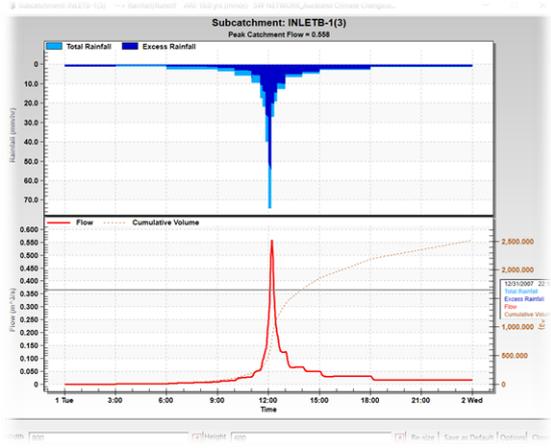
2D Flood Models

A Trusted Engine

12d Model 2D analysis utilises the TUFLOW analysis engine which is used extensively throughout the world.

Users with existing TUFLOW licences can use their existing licences combined with the spatial power of 12d Model or licence and run their 2D flood models completely within 12d Model.

2D models created in 12d Model can be run outside the 12d Model interface should a non 12d user wish to peer review the model

1D/2D Coupled Models

2D analysis models can be easily coupled and run, in conjunction with a 12d Model dynamic network, utilising the powerful hydrological inputs from the 1D model.

Roadflow

The Roadflow module is a rapid start/setup for a 2D analysis and can be run and results viewed independently from the 2D Open modules. This is a perfect solution for creating and analysing simpler models and is a gateway to 2D flood modelling for all 12d Users.
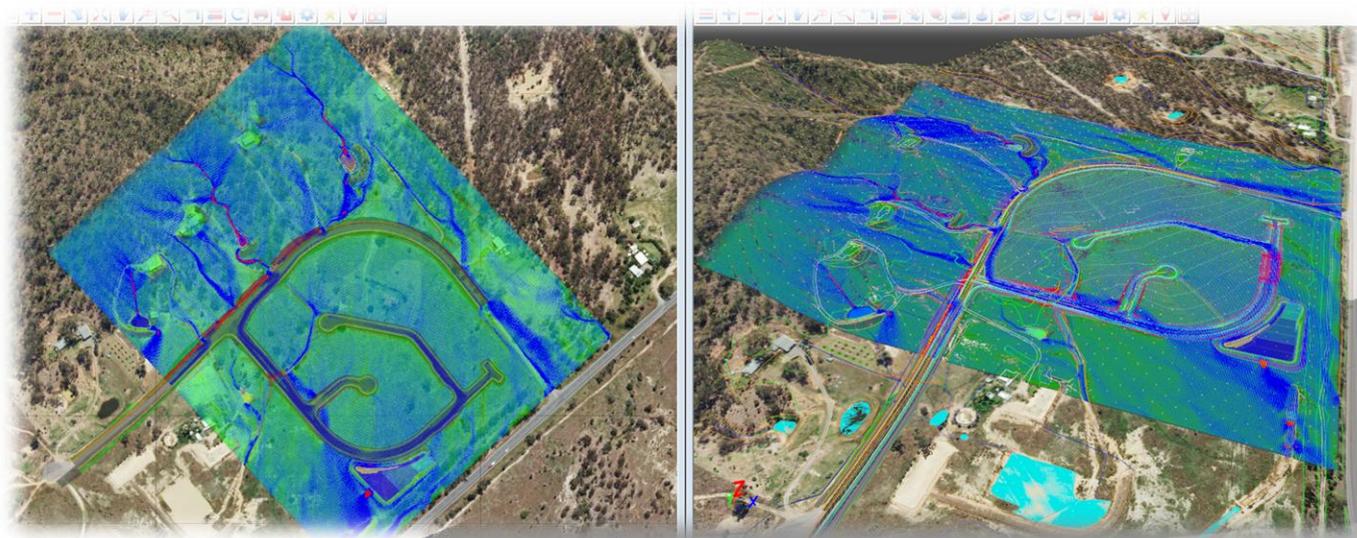
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Waste Water

Tractive Force, HGL or Dynamic Wave

There are multiple ways you can model your wastewater hydraulic flows.
Tractive force grading, HGL for peak flow methods or Dynamic Wave for modelling diurnal flow inputs.

Automated CAD

For any network type, automatically produce network labelling and plotted longsections directly from the one-source-of-truth 3D network model.
Then produce and plot your 2D plans directly from 12d Model.

Pumps and Rising Mains

With the Dynamic Wave method you can incorporate pumped flow and rising mains into your analysis.
Define your own pump types based on your local manufacturer's standards.

	Name	Curve type	Head,Volume or Eff	Flow
1	CSM240VF	Flow-Head (Dynamic)	1.72	0.247
2	CSM240VF	Flow-Head (Dynamic)	2.18	0.2365
3	CSM240VF	Flow-Head (Dynamic)	3.89	0.1897
4	CSM240VF	Flow-Head (Dynamic)	5.29	0.1498
5	CSM240VF	Flow-Head (Dynamic)	6.24	0.1235
6	CSM240VF	Flow-Head (Dynamic)	6.93	0.0994
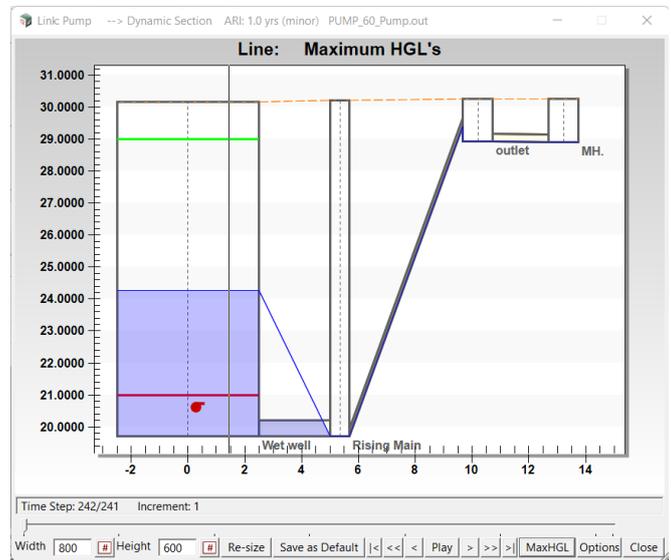
Custom Reports

For all 12d Model water networks, custom reports and outputs can be defined and run so you can review the analysis in whichever way you want to.
Model editing in spreadsheets is also available which can be used to update the water model.

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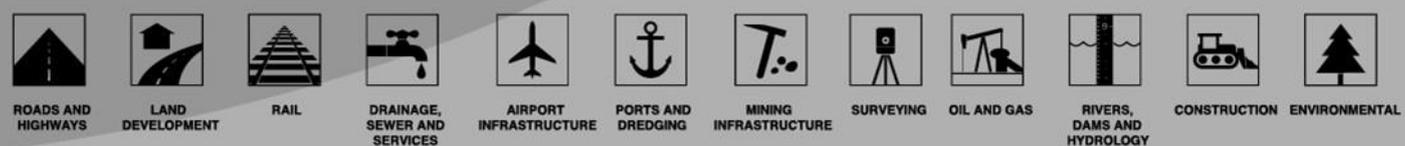
Water Supply

Single Object Type

Whether you are modelling a Stormwater, Wastewater or Water Supply network the 'water string' object type is common for all. Simply tell 12d Model which of the three waters it is, and you will be delivered only the relevant choices and settings.
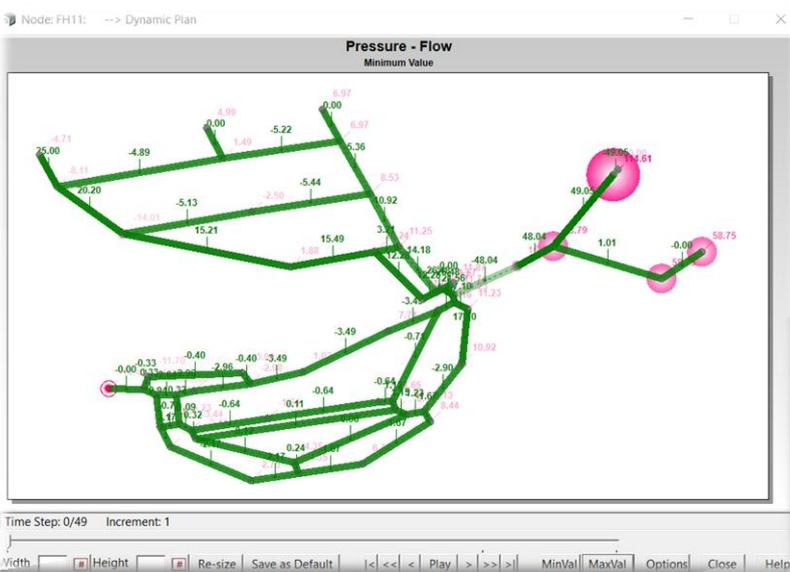
Spatial 3D Design

The watermain creation tool in 12d Model allows users to create spatially accurate water supply networks allowing for prefabricated bend deflections, pipe join deflections and nominated pipe lengths resulting in less construction time errors with the design
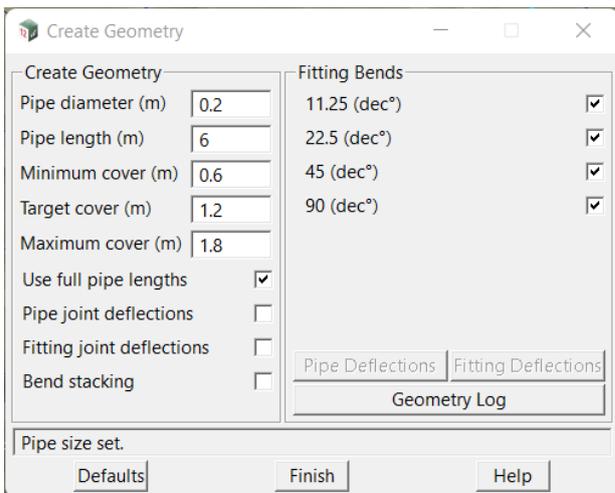
A Proven Engine

Utilising the EPANet analysis engine allows 12d Model users to create their networks directly from an existing EPANet model whilst enjoying the network tools that come with 12d Model.
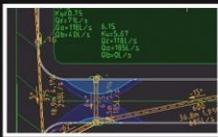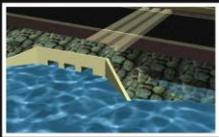

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