NEWSLETTER 2014

Welcome to NRG V 2014

Several new major functions this year plus lots of additional tools and features, the main additional functions include

Land XML

We now have a viewer for Land XML files which enables the user to import various aspects of models and import them selectively into NRG

Pipes and Drainage

In response to our users requests at the last user group we have made major changes to the drainage measurement and have developed a stand- alone module for reporting manhole and pipe schedules

Long Sections

A nice easy interface to produce long sections has been added, it is particularly useful for roads where you can show the centre line and channels together.
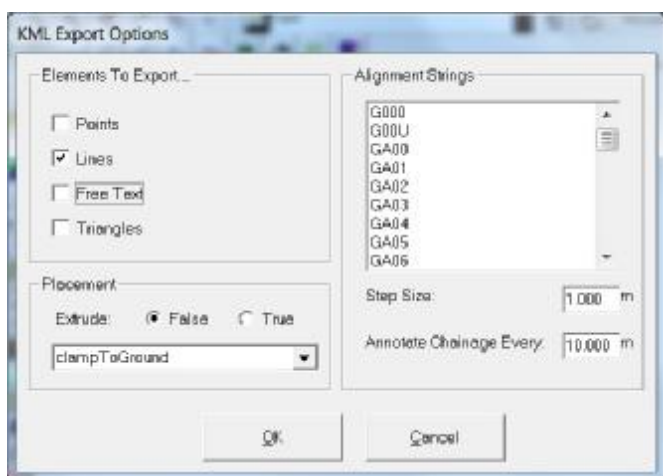
What's New

Practical Solutions to Technical Problems

KML Export

Whilst you can view google maps in the background of a survey it is sometimes useful to send the data to google earth

This can be done by using ; File: Export: KML File

A dialog appears asking which elements you want to export, once selected press OK and save the .KML file somewhere
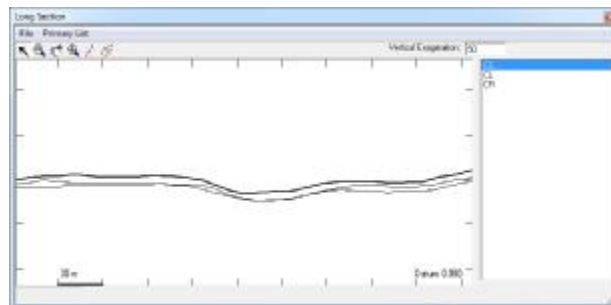

To open the file in google earth either double click the KML file or use google earths file open dialogue

Long Sections

Under the Model menu option select view long sections

Use the [button] button to select lines by left clicking on a point on the line or use the [button] button to select all lines crossing a line you draw


The line used as the primary line is highlighted with the mouse in the right hand lines list.

An exaggeration may be set and the long section printed from the file menu.

XML Import

LandXML was developed some time ago to provide a standard format for transferring data between modelling and Civil Engineering applications, it is used by some design packages in particular Civil 3D and so we have developed an import routine which enables the user to make sense of the import.
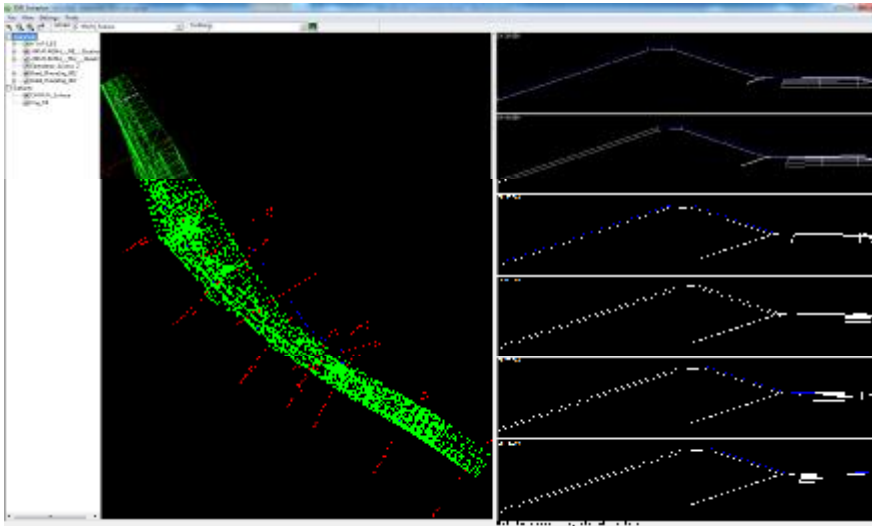

On opening an XML file the list of primary components will be displayed on the left.
In this example there are alignments , triangulated surfaces and cross sections within the alignments.

To export these as they are select the elements you need and select File, Export

Exploding an alignment will show the list of sections by their chainage and the highlighted alignments sections will be displayed on the right.

Surfaces can be attributed to triangles on the models
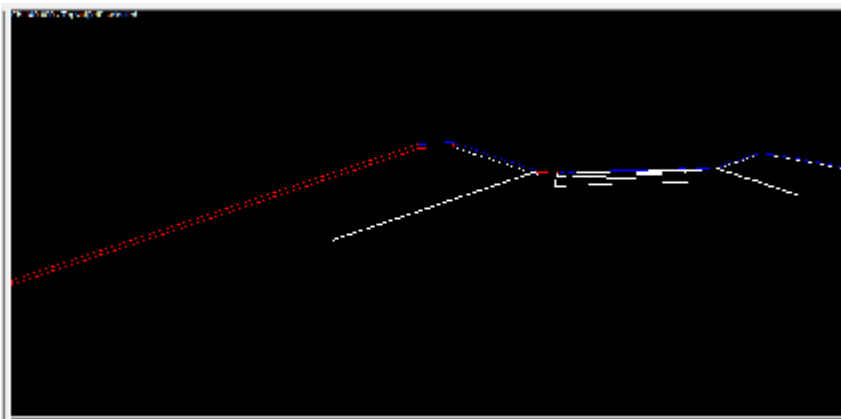
Right click on an element of the section and choose a surface from the list which will then be applied to all of the triangles of the selected model that lay under that element.

Photo Libraries

Using a camera with built in GPS such as an iPhone the location of the picture is stored with the image, these may be referenced onto a drawing
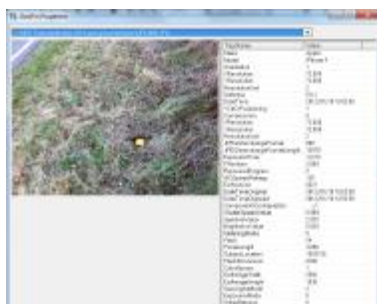
Define locations where your pictures are stored under default display settings, Geo Tag Pins and set a colour for each location.

Under the show menu select 'Geo Tag picture pins' and the locations will be displayed with the camera icon.
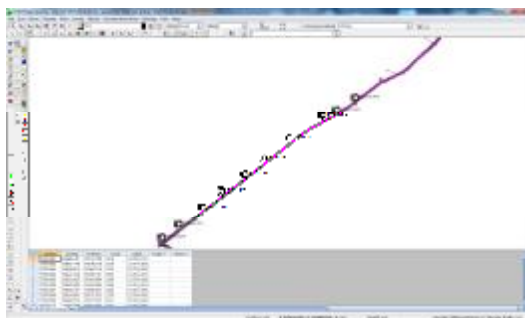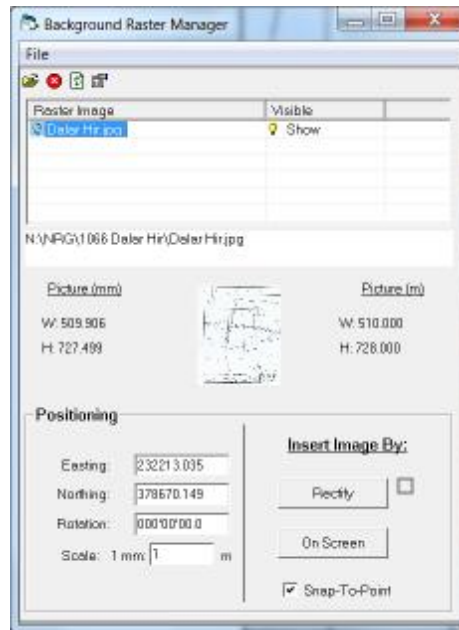

Properties of a picture can be display by right clicking near the icon and choosing Show closest geo pin properties

Raster Management

Raster image management has been altered and contained all within one function which can be accessed from the File Load menu option or the toolbar

Load the picture with the file open dialogue

Use 'On Screen ' to set the image using the mouse or press 'Rectify' to set the image by matching points on the picture to the model

We have now introduced a least squares best fit option that allows multiple points to be chosen, set the cursor in the row and click on either the picture or your model

Filter Points

It is common to be supplied with models that have unnecessarily large numbers of points, contours for instance that have been output from another modeling system.

You can filter these with a set of parameters that will maintain the integrity of the drawing within limits that you can set.
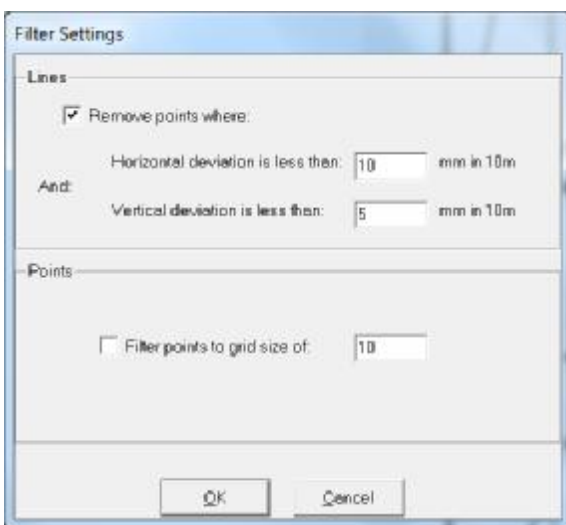
A further option of Points allows you to set a grid size and it will retain only the closest point to each of the grid intersections

Fill Down

If you want to copy the contents of a column to subsequent columns like the fill down command in a spreadsheet

Highlight the cells to be filled down, starting at the cell containing the contents to be copied

Right click and select fill down

sting	Northing	Level	Label	N
4.000	378100.000	0.000	TA	
8.859	378196.219	-999.000	b/st	
9.891	378212.188	-999.000	b	
6.234	378231.000	-999.000	b	
4.219	378205.906	-999.000	b	
1.047	378187.688	-999.000	b	
4.031	378214.469	-999.000	b	
0.609	378118.188	-999.000	crnr	
2.719	378129.000	-999.000	crnr	

Project Search

If like us you have thousands of projects all over the world (we wish) then it is useful to be able to view the projects geographically

You can do this from NRGWIN from the file menu using 'Project Search Viewer'
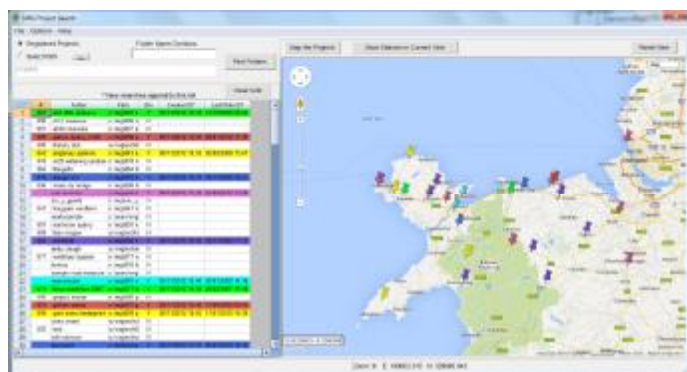

This uses the coordinates of the stations in the station file and places a pin onto google maps at the mean position of these stations. It uses the transformation parameters in the project to convert to WGS84 being the grid system used in google

Each project will be assigned a colour which is used in the grid and the pin

Hover the mouse over a pin and a tooltip will appear giving the details of that project

Press the show stations in current view button to display the stations within view.
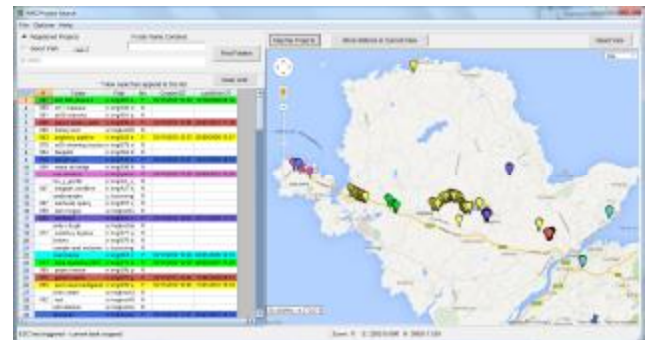
The search path for projects can be set to use the registered projects or you can specify a search path to start from and enter a name or partial name of a project.

The grid displaying the projects it added to with each search so you may want to press the clear grid button occasionally.

Pipes and Drainage
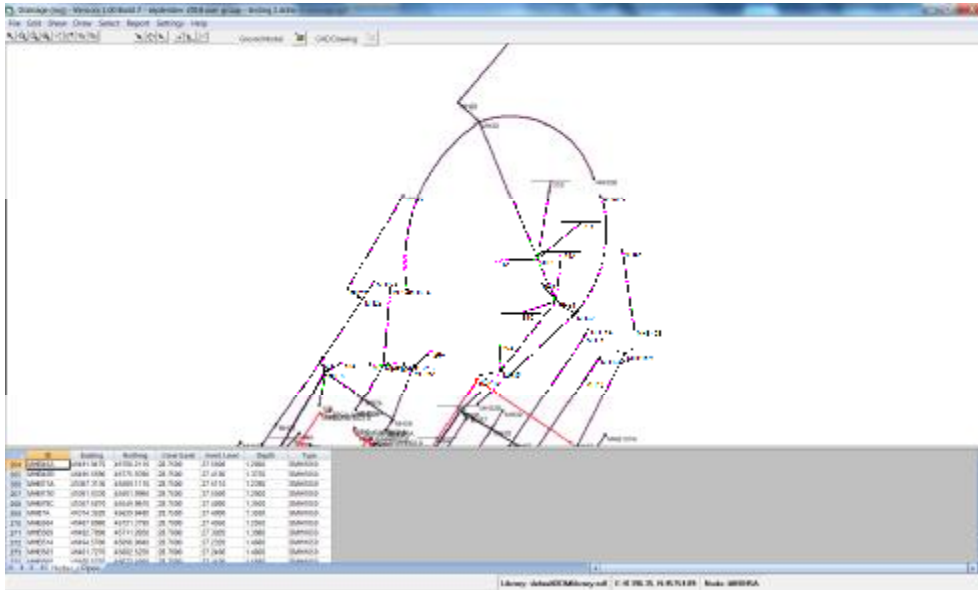
In V2012 we introduced drainage features into DTM Map and in response to users comments we created a separate module where we can build in the plethora of functions that have been requested.

This is a work in progress and we intend to add a great deal to it. In this release we have the ability to prepare manhole and pipe schedules and measure quantities of excavation / arisings from a drainage scheme

The nodes of a drainage / service duct scheme are entered into the 'nodes' tab with the cover level and outlet invert level

These are linked together in the pipes tab by entering the ID's of upstream and downstream nodes or by drawing on the picture


	Down Node			Up Node						
	ID	Outlet Level	Inlet Level	ID	Outlet Level	Type	Radius	Gradient 1:n	Length	J Node
1	S2502	25.2290		MH1	25.2580	S225		1:335	11.465	
2	MHB610	27.2320		MHB626A	27.6250	S225	60.0000	1:135	41.367	
3	MHB79C	27.4000		MHB626A	27.6260	S225		1:138	24.397	
4	MHB511	27.0670		MHB510	27.2320	S225		1:179	29.604	
5	MHB606	27.1420		MHB606	27.3320	S225		1:139	35.997	
6	MHB501	27.2400		MHB500	27.4050	S225		1:225	37.071	
7	MHB511	27.0670		MHB512	27.9020	S225		1:35	30.154	
8	MHB607	26.9520		MHB606	27.1420	S225		1:138	35.744	
9	MHB902	27.0750		MHB501	27.2400	S225		1:257	44.088	
10	MHB513	27.0670		MHB514	27.2320	S225		1:250	41.286	

The down node has a column for Inlet levels to accommodate backdrops, if this is left blank it will use the outlet level. The gradients and lengths are calculated dynamically and cannot be changed other than moving nodes or invert levels.
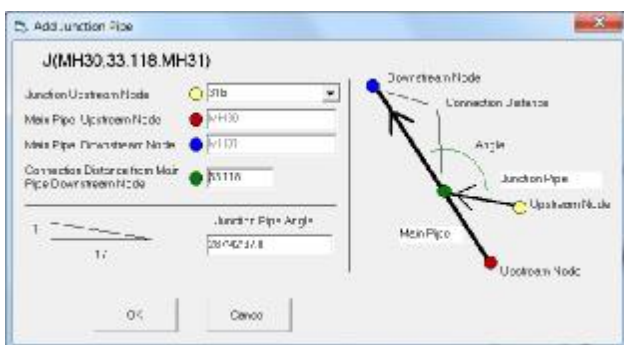
Junction to gullies etc. are accommodated by the add junction function ⟋ where the gully or fitting is selected and then the pipe it will connect to is highlighted and the junction position set by either clicking on the pipe or entering wither the distance from the downstream node or entering a junction angle

A default nodes and pipes library is contained within your support directory and copied to your project directory which can then be edited to suit, this contains the information about manhole and pipe sizes etc.
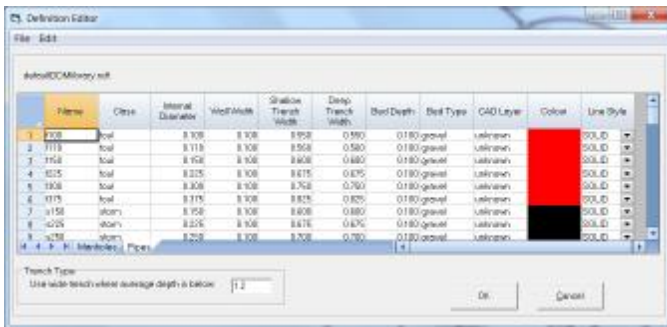
There are several other minor changes that you might come across that we have either forgotten about or thought too trivial to mention but keep us informed on how you are using the software and please feel free to let us have your suggestions and comments

User Group

The user group was a great success this year.
The delegates made the most of the time working through sets of pre-prepared questions which we were pleased to be able to help with and there were a great many useful and productive suggestions that our programmers cannot wait to implement.

If you would like to add your comments and suggestions we are always pleased to hear them but do try to join the user group next year as it is an excellent opportunity to keep us informed on the use being made of the software and the areas we should be developing

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