



News Letter

NRG Survey System for Windows Version 10.0

V 10.0 Available 13th September 2006

NRG Re-built

Summary of new features

DTM / Map

- Undo !!!
- Multiple background models
- Volumes categorised by OGL surface
- Volume for selected triangles
- Improved borehole handling
- Borehole materials shown on live sections
- Add line of points (tadpoles)
- Taped measurements
- Improved 2 and 3 point rectangles
- Line and point features editing improved
- More select options added
- Printing interface improved
- Multiple plot windows and DXF import supported on custom banners.
- Volume centroid
- Break Line
- 3D Polar intersections

3D Render

- User interface changed
- Boreholes shown
- 3D point and line features added

Cross Sections

- Batter rails and profiles added

As well as developing new features we have also been looking to the future. As many of you may know, Microsoft is currently planning a new operating system release: code name *Vista*. This event poses many challenges to the modern software developer, most especially their deviation from the traditional component object model (COM). Microsoft has instigated something called the .NET Framework (*dot net*). We have been beavering away to ensure that our software will integrate seamlessly with *Vista*

User Forum

You may have spotted the new user forum we've introduced.

http://s9.invisionfree.com/NRG_Surveys/

The idea is that users will have a forum to exchange ideas and make suggestions, there's a technical support area there, which is open to everyone.

The forum also contains an area where users can post jobs available or wanted, this is intended so for surveyors who find themselves available for work, although in our experience if a surveyor has the foresight to use our software then it is unlikely they will ever be, but use it as you wish, it is not however intended as a general advertising opportunity, posts will be deleted after a short time by the moderators.



Undo

Probably the most requested facility we've ever had. The software was designed long before undo was a common feature in packages and it's retrospective implementation has been a huge task. We hope you think it's been worthwhile.

To use Undo;

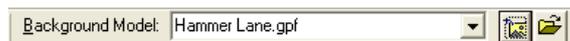
- Select Edit, Undo
- Or press Ctrl Z together

Undo will only undo the most recent event, if several events have been logged since the event you want to undo, then it will be necessary to undo each event in turn until it has been reached.

Multiple Background Models

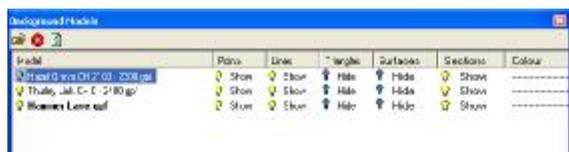
Possibly the second most popular feature request has been the ability to view multiple background models for volumes, sections etc.

Open a model into background using **file, load**. Or press the file open dialogue on the toolbar



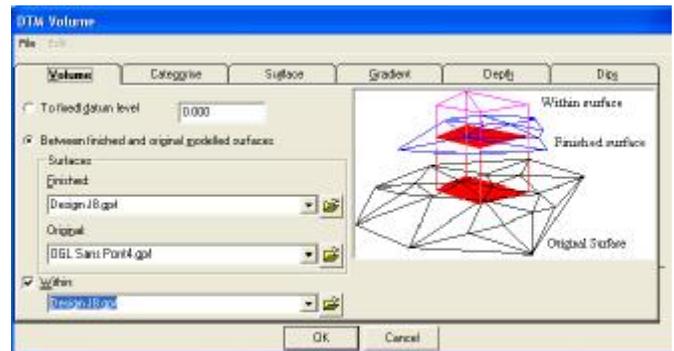
The current background model will be used for Isopachs, height differences and quick volumes. To set the current background model select it from the drop list

To customise what is displayed for each of the models press the  settings button and toggle the options by single clicking the lamps

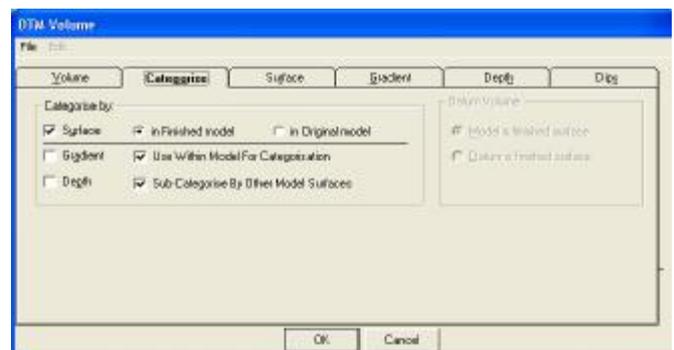


Volumes Categorised by OGL Surface

The volumes dialogue has been changed to reflect the use of multiple models as well as making it a little more intuitive.



Under categorise, you will now find options to use within model for categories and sub categorise by other model surfaces.



The purpose of this is so that you can use a third model to break down the measure into areas. Previously the within model did this, but now you can surface the within model and the measure will be split into the volumes within those as well.

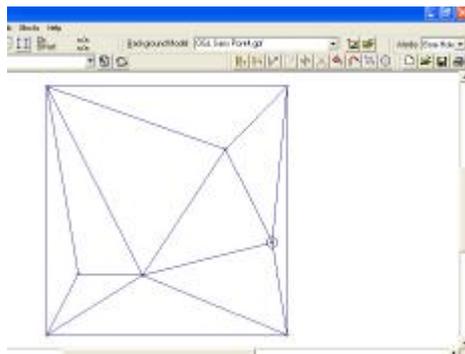
Also we have added the ability to sub categorise by the OGL model, this will prove invaluable in measuring overlay works where you want to separate hard excavation, overlay, regulating etc

Volume for selected Triangles

This has been added in order that quick volumes or volumes within specific areas can be done easily. Having a model loaded, in both the editor and background, select the option from the Model menu, then draw a polygon around the area where the volume will be calculated, this will then compare the two models and calculate volumes for the triangles in the editor model that fall within the polygon, categorising and volume settings are controlled via the volume settings under the model menu.

Boreholes

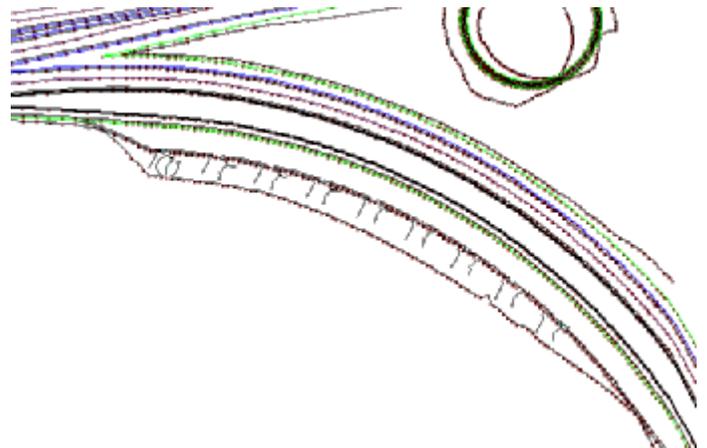
Triangulating boreholes has been made simpler by adding only the extents of the model rather than dozens of points on the OGL boundary. You'll need to add borehole details for these dummy ones so the sub surfaces can be created properly and perhaps add in extra dummies so the interpolation works as you want it to.



Cross sections however can now view the sub surface materials so you can see at a glance how the models are working.

Add Line of Points

Adding features such as tadpoles have been handled by complex line styles, this however isn't always suitable when exporting to CAD so we have added a facility much like the autocad Extrude which allows you to add a line of points and features, scaling them within a polygon.



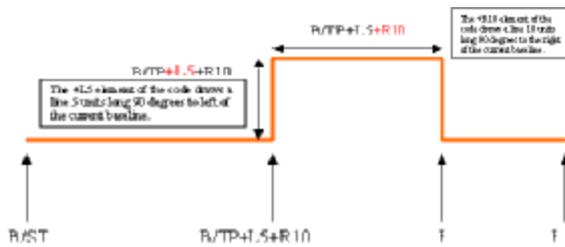
Curve the line by applying the radius and move the four corners of the polygon using the mouse to control the rotation and widths of the points.



Taped Measurements

TP commands can now be used in field coding to add taped points to the last point surveyed.

TP+direction+length



Rectangles, Squares and Circles

New features and alterations to existing ones, we now deal with these as follows

DSQ Draw square from diagonal corners

CSQ Draw rectangle from 3 points

RCR Draw rectangle from 2 pts and dimension to Right

RCL Draw rectangle from 2 pts and dimension to Left

The additional points may be added to the model later using the Add Consequential points.

For more information on the use of these codes please refer to the manual or help file.

Point and Line features editor



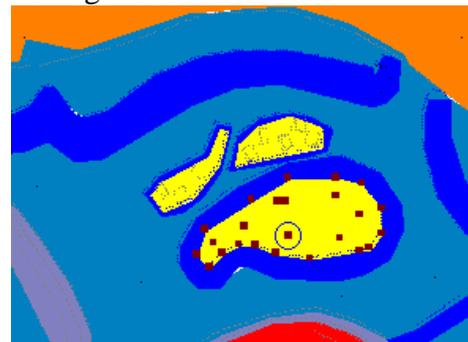
Edit point feature. Click on the point with the feature attached and use the left mouse press to resize using the corners of the block, or right mouse to rotate.



Line feature editor will allow you to control the line width using the corners of the box, or the spacing of the feature using the right mouse key and dragging the scale.

Select Options

Select by individual surface area, allows you to select points using the cursor to specify a homogeneous surface



Select by crossing line. Selects points on all the lines which cross a line drawn.

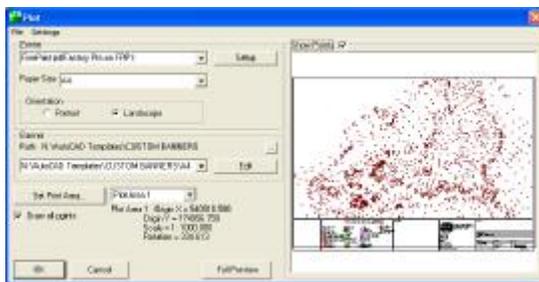
Printing

The print option has been split to print plan and tables.

Print plan now shows a print preview, of just the points initially but a full preview is also available.

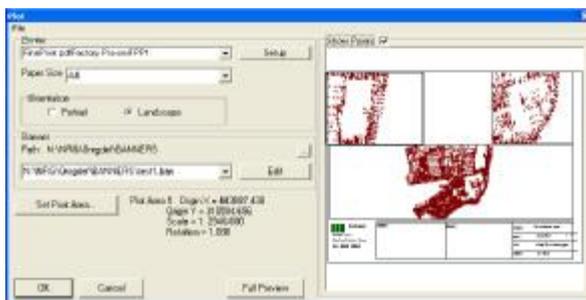
Banners have been rationalised better, so that once the paper size and orientation is chosen all of the banners that match that size will be offered in the drop list.

You can adjust the tolerance for the banner size under the settings menu.



Multiple Plot Windows & DXF Import

Custom banners now support multiple plot windows with the ability to import a banner from Autocad.



Use the define plot space button as many times as you wish to create new plot windows, the plot areas can then be defined from the print window by double clicking the window or selecting the appropriate plot space and pressing the set print area button.

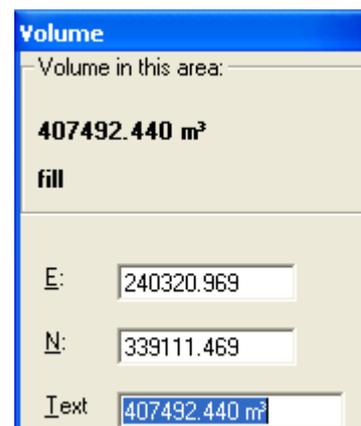
To import a banner from Autocad, first using Autocad make sure the banner is in paper space and create a DXF file. Then go to banner editor and select File, import DXF.

Volume Centroid



Using the volume button, place the cursor within a cut or fill area, the system will then track around the boundary of that cut / fill and calculate the volume within that area and report the centroid position. Text can be placed at that position with the quantity by pressing ok.

The centroid can then be used for determining mass haul etc.

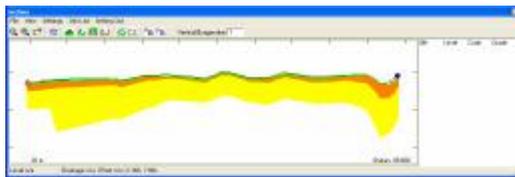
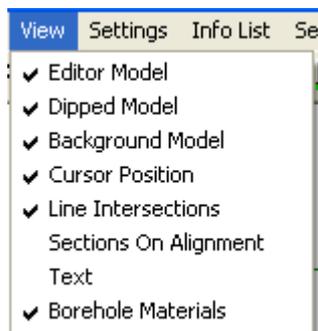




View Sub Surfaces From Boreholes

The sub strata interpolated from boreholes can now be viewed in live sections.

With a borehole file loaded set the option to view borehole materials and your live section will show, the sub strata in the colours set in your materials settings.



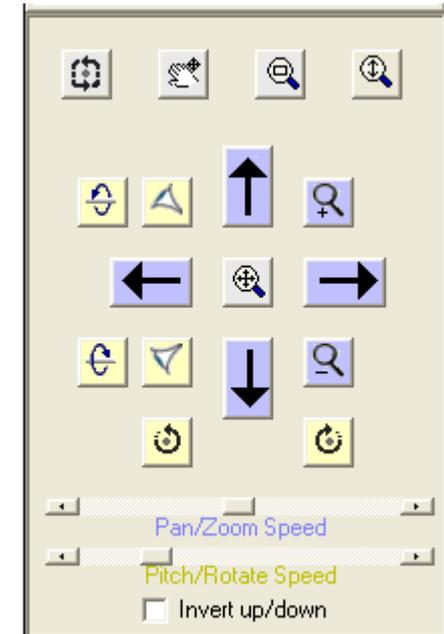
Break Line



Use the break line tool by drawing a line across other lines and it will add /ST commands breaking the lines where they intersect.

Render Interface

The interface for render has been vastly improved and made more intuitive



We've moved the movement buttons into one area for ease of use. Now you can pan, zoom tilt rotate etc all using the mouse wheel or the buttons. The speed of movement is controlled by the slider bars and we've colour coded them so you can see which controls are effected.

Some new controls have been added to make getting around the model easier and the mouse rotate option automatically sets the cursor position as the centre of the rotation.

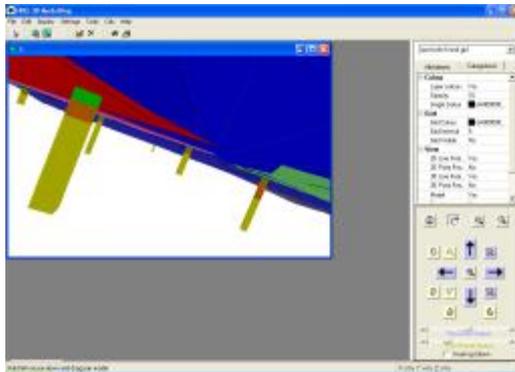
Polar Intersections

From the calc menu, this will look through an observation file and compute the 3D intersections point of pairs of observations, we use it for remote monitoring and ridge heights. Set the point selection criteria to specify which points get included.

Boreholes in Render

The option to load a borehole file into the render window is now available under File.

This will display the boreholes to scale (in depth) with their colours set as per the materials schedule.



The borehole details can be altered from the main menu Edit option



Boreholes can now be set as Boreholes or trial pits, the only difference being trial pits are drawn square and boreholes circular.

3D Point and Line Features

Render can now handle 3D point and line features.



A library of textures is provided with the installation and will be installed into a textures directory by default. Change or add to the library using any bitmap editor such as Paint.

The textures are then attached to a feature using the features manager and double clicking on the left picture box. The default height can be set in switches.



Textures can also be added using a fields switch `/TTfilename` No path or file extension is needed, the path will be set to that set in settings along with it's sub directories.

`/H` will set the height for individual features.

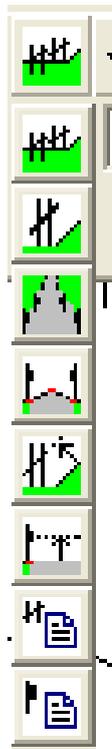
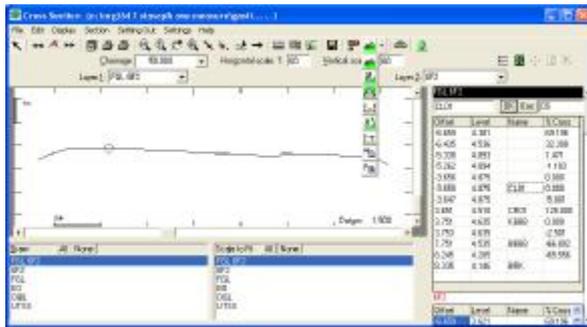
Nice realistic drives throughs and visualisations can be achieved using these, limited only by your imagination, time and inclination !.

Please send us any particularly nice views you create for next years news letter, we might even start a competition.



Cross Sections – Batter Rails and Profiles

The setting out option in cross sections has been altered to match the way it is done in DTM Map, it doesn't allow for quite as many levels projected to an offset, but who needed them anyway, now it is much more intuitive.



The full range of batter rail and profile options as offered in DTM map can now be accessed using from cross sections.

Multiple, or single batter rails can be calculated and the results are written to a list which can be exported in various formats, including the custom ASCII format.

Help

The help files have been re built with this release.

We're often asked for step by step guides to do various tasks, although this is difficult however since every user has different requirements and we like to think of the software being a box of tools with which the user learns to use in the appropriate manner. We are however building up a series of 'Task Guides' which guide the user step by step, they can be found at the end of the help file. If you have a ny particular task you would like documenting then please by all means contact us.

Hope to see you at the conference !!

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