

## Welcome to NRG V 2010

Once again our programmers have been busy chipping away at the ever growing wish list and we are proud to announce the release of our latest version. NRG 2010.

The first thing you will notice this year is that we have called it by the release year rather than V13, not that we are superstitious or anything, we just thought Twenty Ten had a nice ring to it and for those of us old enough to remember makes it sound a bit futuristic.

Listing through the new features this year I am once again astounded at how much the programmers get through in what seems such a short space of time.

There is a major update with volumes and how the results can be manipulated as well as making the use of boreholes easier and more intuitive.

Printing has had an overhaul in the way it deals with tables and allows the user greater control over the output.

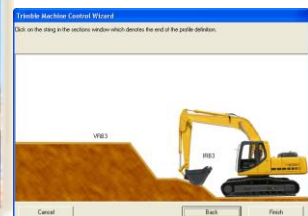
A series of minor improvements, including machine control support and yet more select options

A major step for us this year however has been our joining the Open Design Alliance. The ODA is a consortium of software developers creating CAD solutions and who share with it's members the DWG and DGN file formats. For us it means much less head scratching and for you it means a vastly improved interface for a variety of CAD applications such as AutoCAD and Bentley.

### What's New

DWG & DGN File support	2
Volumes	3
Job Templates	4
Projects Overview	4
Printing	5
Minor changes	6
Machine control	7
CoGeo	7

### Machine Control

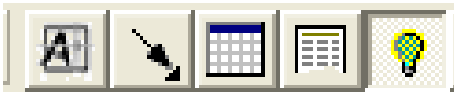


### Exciting news for CAD Users



A Mobile Level book based on CoGeo is available to all FREE of Charge !

## DWG & DGN file support



There has been a major change in the way we deal with DXF files and also with our having joined the ODA we are now able to support DWG and DGN files. We no longer append your features library with the lines and blocks in the Cad file but simply make a new file which contains all of the information and reference to it.

To import data from a Cad file select File, Load, CAD Drawing or use the CAD toolbar and a dialogue appears which allows you to open the file.

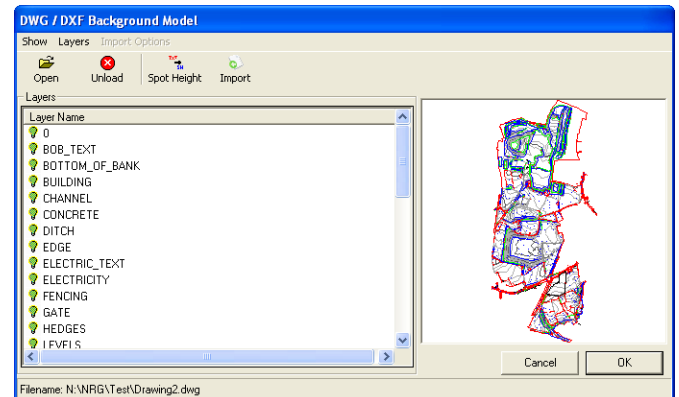
Once a CAD drawing is loaded it will sit in background, you can either use the select options to choose which elements to import or select import to load the whole file. The option to pull in spot heights that have been drawn on the drawing as text is available under a separate button.

Once data has been imported from a CAD file you will see the points in your grid but the code will begin with **CAD\_** this tells the software to look in a separate CAD file that we have created defining how to draw the line or the block.

Blocks may be exploded by right clicking on the line in the grid with the block reference and selecting explode. Exploding will add the points from the block into the grid. The block insertion point will remain but will now be coded **CAD\_Exploded** telling the software to only use the insertion point in the model. If you want to remove the insertion point, simply delete the row in the usual way.

*Importing DWG, DXF and DGN without loss of linework or colours*

Blocks often contain other blocks inside and can be nested several levels deep. NRG will only explode one layer of blocks at a time and so you may wish to explode separately the nested blocks.



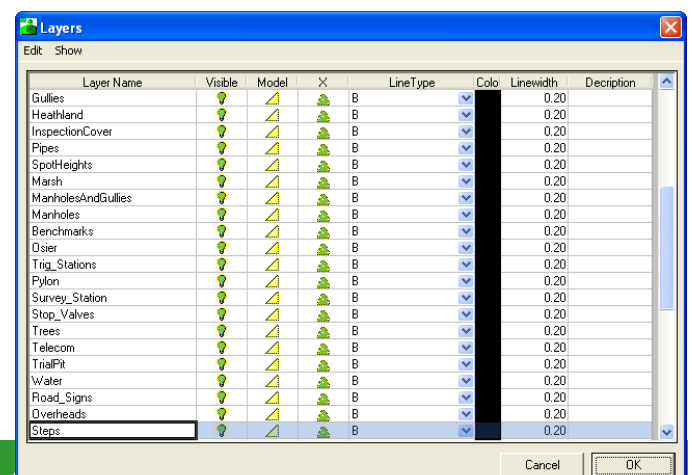
*Either import the whole file using the import option or use the select tools to select parts of the drawing which you want to import.*

## Layers



You now have much more control over layers and we have added a simple drop list on the toolbar to access them.

Layers can be turned on and off for displaying, viewing in sections and modeling. The ability to turn layers off from the model is an important new feature which compliments the additional CAD support. Pressing the layers button will take you to the full layers dialogue



# Volumes

Volumes have undergone a major change to make it easier to generate comprehensive earthworks reports.

The interface has been simplified so all of the information is on one tab



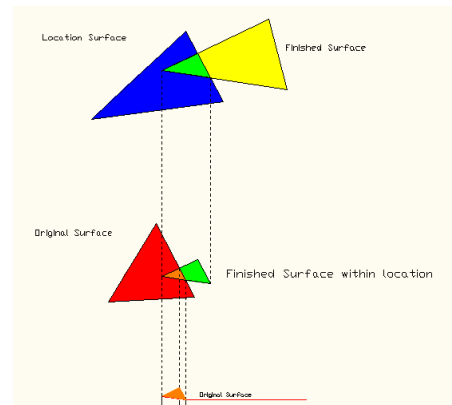
Once a volume has been calculated. You will see an excel style form with tabs for each group of answers.

september 2009 conference						
Categories				Excavation	Location	Fill
Finished Surface	Original Surface	Location	Material	Cut	Location	Cut
				19.97	0	94.72
				124.08	1, Ch 34 - 380	3985.06
				2031.89	2, Ch 380 - 770	2980.62
				480.94	2, Ch 770 - 1034	2752.60
				<b>2636.87</b>	<b>Total</b>	<b>9603.00</b>

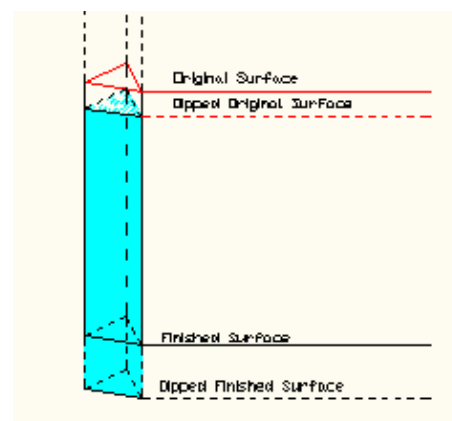
Quantities are broken down as detailed below and specific answers can be viewed by clicking on the underlined answers, this then expands the sheet to show it's components

Reports now include various statistics to give confidence in the measure and the volume compiler allows the user to combine and filter results to produce as comprehensive a schedule as required.

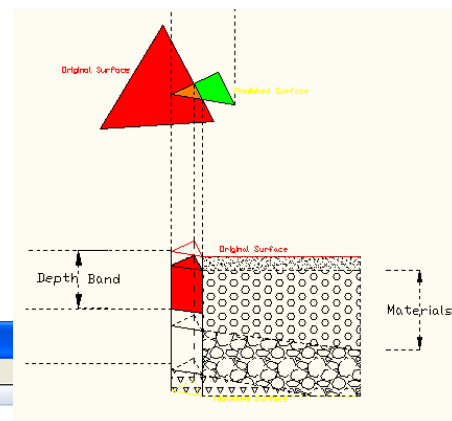
september 2009 conference								
Title	E.O. Hard Material	Location	General			Fill		
			Embankments etc	On Cut Base, Capping etc	Landscaping	Selected Granular		
Below Earthworks Outline 3					4	6A	6B	
					Fill to Landscape Areas	Starter Layer	Starter Layer - Coarse	
2.32	3.24	Ch 34 - 380	3985.06	2136.50	0.00	0.00	0.00	
0.99	563.77	CH 380 - 770	2980.62	1387.09	0.00	0.00	1.72	
0.00	31.30	CH 770 - 1034	2752.60	1360.53	0.00	0.00	0.00	
<b>3.31</b>	<b>598.30</b>	<b>Total</b>	<b>9718.28</b>	<b>4884.12</b>	<b>0.00</b>	<b>0.00</b>	<b>1.72</b>	



Finished surfaces are split into locations and then by surfaces of the original model



Dips are applied to both the finished and original surfaces



Volumes are then split into depth bands then into materials

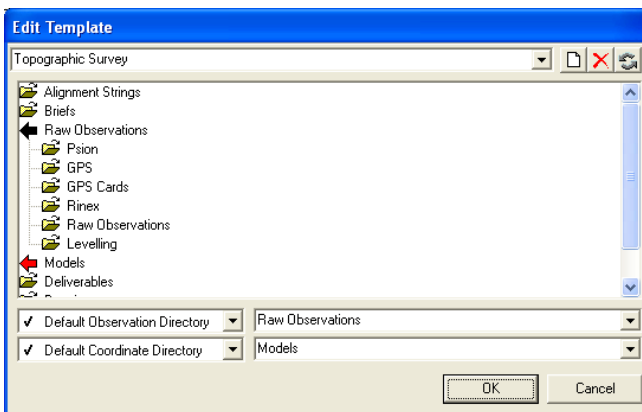
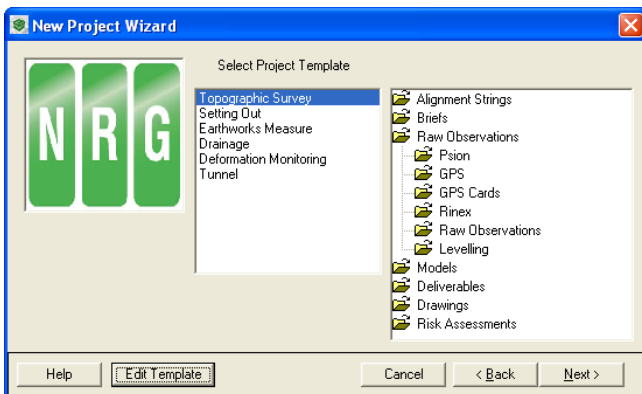
The new volume compiler simplifies reporting on quantities using an Excel style of interface with easy adding and removal of measurement items.

Several pre-defined templates have been provided to conform with MMHW and CESMM which are easily customised.

## Job Templates

Job templates are a means by which you can organise your data with a well designed directory structure.

During the New project wizard you will see a step to select a project template, a group of templates have already been provided but please feel free to edit these or create new ones to suit the way you work



To edit a template press the 'Edit Template' button and drag and use the right click option to add and remove directories.

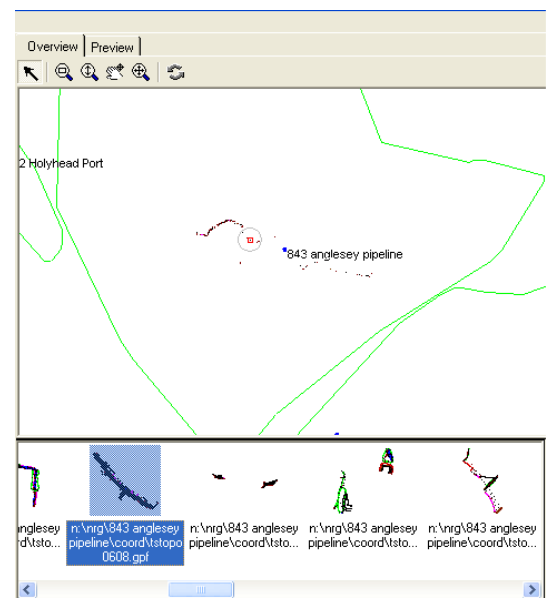
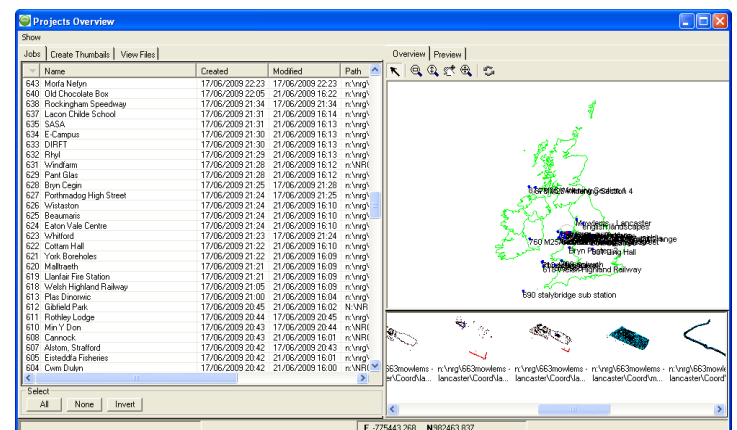
You will need to define a default directory to use for your raw observations and models so that NRG knows where to start looking or to use for downloading from our loggers.

## Projects Overview

If you have trouble finding jobs or just want to know if you have any control nearby a new project then you will like the new thumbnail viewer.

DTM Map will now save a GIF file of every survey as you save the file. These are stored with scaling parameters so they can be viewed on a background image of your country.... Assuming you are working in a standard coordinate system.

We have provided a background in the form of a file UK.DAT in your application directory. It is simply a .CSV file with Code, Easting, Northing, Level so if you want to change to suit your country just create a .CSV files with your boundary and register it using the Show menu, 'Set Background File'



### Projects Overview...

The thumbnail viewer has three tabs; the first tab allows you to select the projects to view by highlighting them in the table or by right clicking on the project in the picture window.

Once the projects have been selected the create thumbnails tab can be used to view models in the selected jobs and to see if they already have thumbnails associated with them. If you wish to create thumbnails for particular models highlight them and press the 'Create thumbnails' button. Files that have thumbnails are used in the display are shown in the view files tab.

The picture window has the main overview and a filmstrip style of preview showing the individual files. Thumbnails are shown in their world position and to scale.

Click on the file in the overview to highlight it on the filmstrip, right clicking gives you the options to edit the model in DTM Map or set that project as the current one.

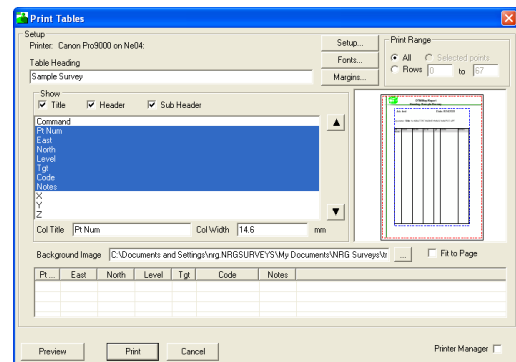
## Printing

A new dialogue printing tables gives you more functionality and is easier to see how the column layout will look.

Simply drag the column widths using the header bar or check the 'Fit to Page' box to spread the columns evenly about the width of your paper


A header may be typed into the box titled Table heading and the 3 main components of the report may be switched on and off by checking and unchecking the items under 'Show'.

This is now standard for all table prints in NRG and a background image can be user defined to give your reports a custom look.

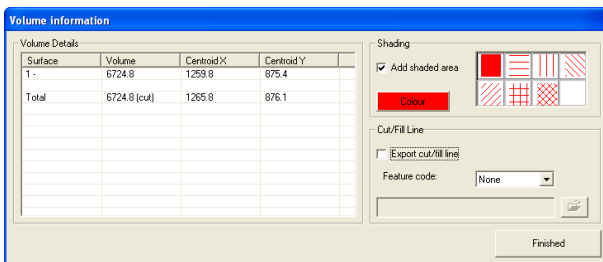


*New print tables dialogue*

## Volume Centroids

The show volume button  will now show the centroid as well as the volume for a particular cut or fill.

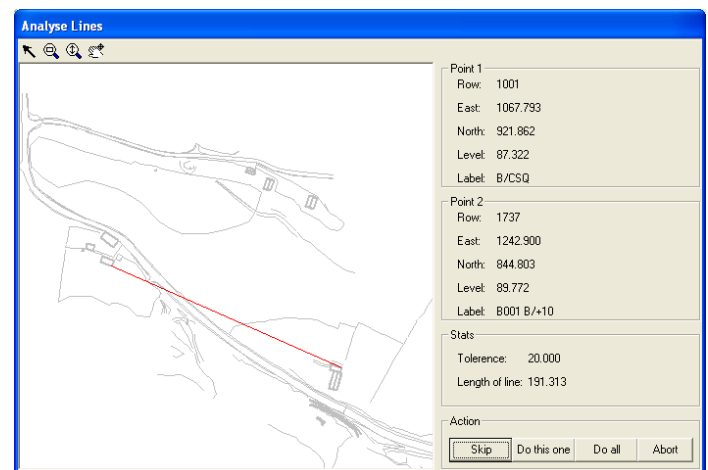
After selecting the button, the user selects an area of cut or fill and the system tracks around to the boundary of it calculating the volume contained within it. We now show the centroid of the mass and let the user shade the area with hatching for presentation purposes.



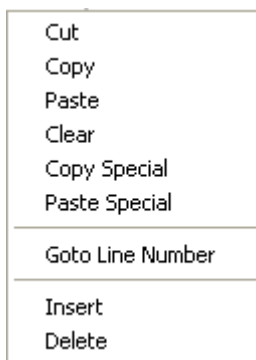
## Long Lines

We seem to forget to put starts on lines far too often and so we have incorporated a function found on the Edit menu which will ask for the maximum length of a line.

The system will then look at the length of each line segment and offer to put a /ST forcing a discontinuity to remove the long line, all the details about the points found and a picture of the line is shown so we can choose to let the system do it or ignore it.



## Right Click



For ease of editing in the grid we have added a short cut menu to appear after right clicking on a cell in the grid

## Select Duplicates

Duplicate points can be a nuisance in a survey and so we have added an option to find them all and put them in the selected points list. They can then be examined, deleted or written to another file using the selected points options.

## Machine Control



Many of our users are now using machine control and report significant improvements in machine performance as well as accuracy and reduced setting out costs. We have made every effort to make the link between the design and the cab as seamless as possible.



Topcon and Trimble are currently available from the FILE, EXPORT menu. With both Trimbles 2D and 3D systems supported

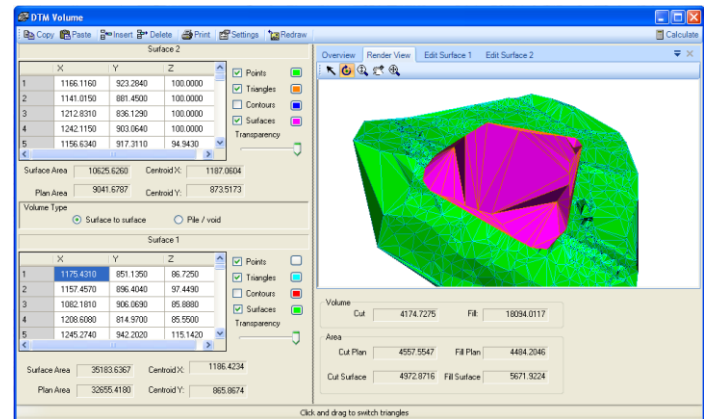


Trimbles 2D system is generated from the live sections window with a wizard guiding you through the process



## CoGeo

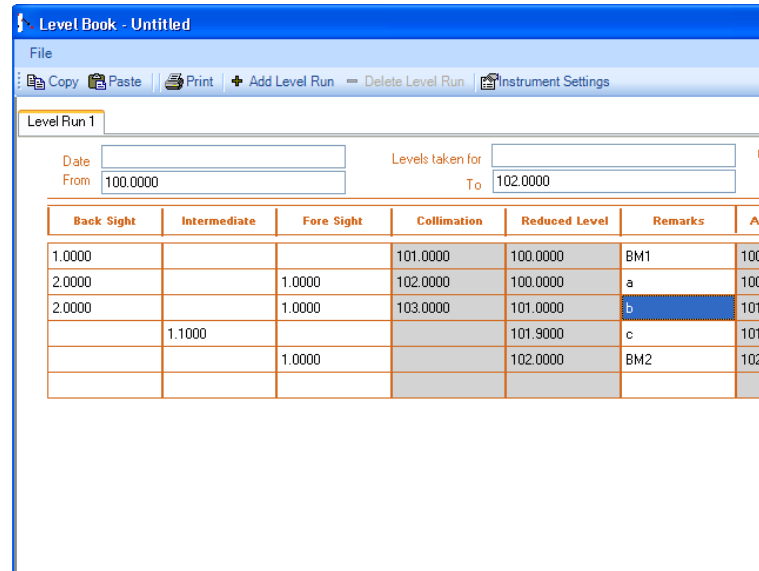
We have altered the interface slightly for volumes in CoGeo with a new tab for viewing the models in a rendered view. Full pan, zoom and tilt options are provided for the user to navigate around the model.



## Mobile Level Book

The level book within CoGeo has now been translated to work on windows mobile devices such as phones and PDA's running windows mobile.

We have made this handy piece of software free for a limited time and it can be downloaded from CoGeo's website [www.CoGeo.co.uk](http://www.CoGeo.co.uk)



## User Group 2009

Once again we held out user group in Llandudno at the St.Georges hotel. And it proved to be a huge success.

Roger got steaming drunk as usual and spent a large part of the evening dancing on the table. John Speak danced with the chairs but let go during ‘balls of fire’ and knocked a little old lady unconscious. Maria showed up briefly but ran off muttering something in Spanish, or was it Portuguese ?

We will probably have to find a new venue for next year’s event They were getting a bit expensive anyway.

The event is a great opportunity to extend your knowledge of the software. You will meet the programmers and other experts and join in lively discussions. Users also have plenty of time to ask questions and receive training in the system.



*That is about it for this year, 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*

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