Geocentrix

Repute 2.5

User Manual

Onshore pile design and analysis

Set in Optimum using Corel® WordPerfect® X7. Printed in the UK.

Acknowledgments

Repute 2.0 was developed with the generous support of Corus, Atkins, and Stent Foundations.

Repute was designed and written by Dr Andrew Bond of Geocentrix, with assistance from Ian Spencer of Honor Oak Systems.

PGroupN was designed and written by Dr Francesco Basile of Geomarc. Special recognition goes to the late Dr Ken Fleming of Cementation Foundations Skanska for his invaluable advice and support during the development of PGroupN.

The *Repute 2 User Manual* was written by Joe Bond and Andrew Bond.

The following people and organizations assisted with the production of the program and its documentation: Francesco Basile, Jenny Bond, Joe Bond, Tom Bond, and Jack Offord.

Revision history

Last revised 25th March 2021 (for version 2.5.10).

Table of contents

Chapter 1
Documentation

Repute® is supplied with a detailed *Quick-start Guide*, comprehensive *User Manual*, and authoritative *Reference Manual*. The latest versions of these manuals (including any corrections and/or additions since the program's first release) are available in electronic (Adobe® Acrobat®) format from the Geocentrix website. Please visit www.geocentrix.co.uk/repute and follow the links to Repute's documentation.

Quick-start guide

The *Repute Quick-start Guide* includes six tutorials that show you how to use the main features of Repute. Each tutorial provides step-by-step instructions on how to drive the program. There are three tutorials dealing with single pile design and three with pile group design. The tutorials increase in difficulty and are designed to be followed in order.

User manual (this book)

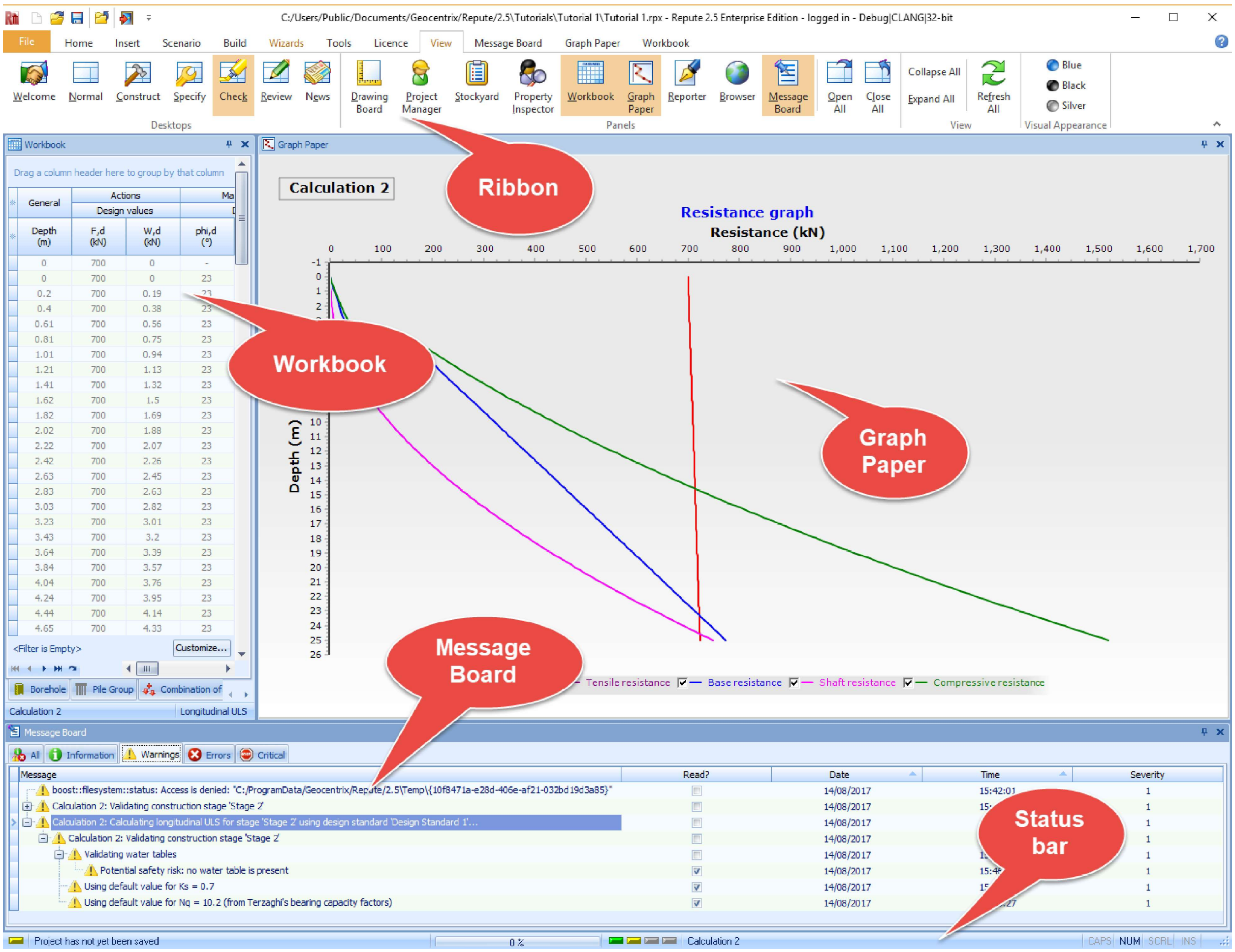
The *Repute User Manual* explains how to use Repute. It provides a detailed description of the program's user interface, which is being rolled out across all of Geocentrix's software applications. The manual assumes you have a working knowledge of Microsoft Windows, but otherwise provides detailed instructions for getting the most out of Repute.

Reference manual

The *Repute Reference Manual* gives detailed information about the engineering theory that underpins Repute's calculations. The manual assumes you have a working knowledge of the geotechnical design of single piles and pile groups, but provides appropriate references for further study if you do not.

Chapter 2
Overview

This chapter gives an overview of the components of Repute's user interface.



User interface

Repute's user interface comprises the Ribbon (see Chapter 3), the Desktop (displaying any number of panels, such as the Workbook, Graph Paper, and Message Board shown above), and a Status bar.

Ribbon

The Ribbon is based on Microsoft's 'Fluent user interface', first introduced in Microsoft Office 2007. The features of the Ribbon as it appears in Repute are described in Chapter 3.

Desktop

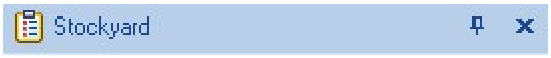
At any one time the Desktop can display any number of the following panels:

- The Drawing Board (Chapter 4)
- The Project Manager (Chapter 5)
- The Stockyard (Chapter 6)
- The Property Inspector (Chapter 7)
- The Workbook (Chapter 8)

- The Graph Paper (Chapter 9)
- The Message Board (Chapter 10)
- The Reporter (Chapter 11)
- The Browser (Chapter 12)

Buttons on the Ribbon's View tab allow you to select one of the pre-defined Desktop arrangements to change the panels being displayed.

Each panel contains a caption bar which is located at the top of the panel's window. This displays the name of the panel and, on the right-hand side, it provides a button to minimize or pin the panel in place and a button to close it.



Status Bar

The status bar is located at the bottom of the program's user interface.

The Status Bar displays the name of the project you currently have opened, the name of the item currently selected in the Project Manager, as well as a number of useful indicators and a sizing grip.

Modified project indicator

The indicator on the far-left of the status bar turns from grey to yellow if you make unsaved changes to the project. When the project is saved this indicator will be reset to grey.

Progress bar

The progress bar gives an indication of how long a task takes to complete (e.g. calculation).

Message indicators

The four boxes in the middle of the status bar indicate whether there are unread messages in the Message Board. When a new message appears, the indicators turn from grey to a colour depicting the type of message that has appeared. From left to right the indicators turn green, yellow, red, and black representing Information, Warnings, Errors, and Critical errors respectively.

Left-click on the tick boxes in the 'Read?' column of the Message Board panel to mark messages as read and reset the indicators to grey.

Keyboard indicators

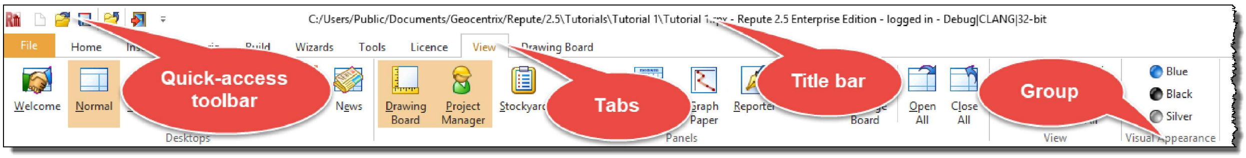
The various letters on the right-hand side of the status bar indicate whether certain keys are in an on or off state, by turning black or grey respectively. From left to right, the indicators refer to the following keys: Caps lock, Number lock, Scroll Lock, and Insert.

Sizing grip

The sizing grip allows you to resize the program's main window, which, for example, might be needed to see all the information given in one of its detailed reports. To resize the window, left-click on the sizing grip and drag the window to the desired size. The sizing grip is only displayed if the program has been restored down (i.e. not maximized).

Chapter 3
The Ribbon

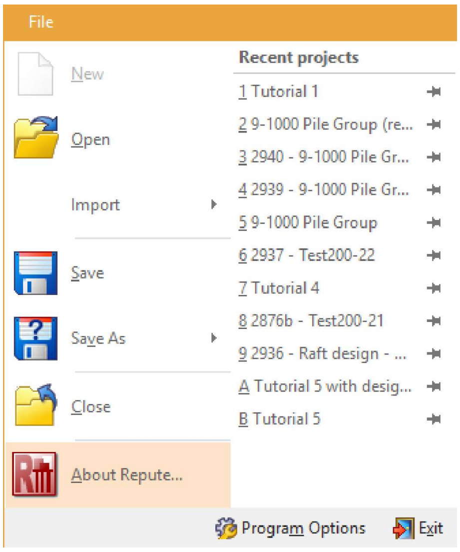
The Ribbon is located at the top of the program’s user interface.



The key components of the Ribbon are the Quick-access toolbar; the Title bar; and a row of Tabs containing Groups.

File menu

The File menu displays a list of commands that allow you to manipulate files.



- To create a new project, click on **New**
- To open an existing project, click on **Open** *or* select from the list of recent projects you have worked on from the **Recent projects** panel
- To import load or pile group data from a spreadsheet, click on **Import**
- To save the current project, click on **Save**
- To save the current project under a different name or in a different format, click on **Save As**
- To close the current project, click on **Close**
- To display product and licence information about the program, click on **About Repute...**
- To edit the program’s default settings, click on the **Program Options** button at the bottom of the menu which will open the Program Options box (see Chapter 14: Program Options)
- To exit the program, click on the **Exit** button at the bottom right of the menu

Importing data files from Piglet

To convert a Piglet 5.x data file:

1. Click the **Open** button from the Application menu, Home tab, or Quick-access toolbar
2. Navigate to the folder where the file is located
3. Click the drop-down arrow next to **Files of type** and select *Piglet 5.x spreadsheet (*.xls)*
4. Select the file and click **Open**

Repute will read the data file and automatically convert it from .xls to .rpx format. This will open the Piglet data file as a new project in Repute.

Quick-access toolbar

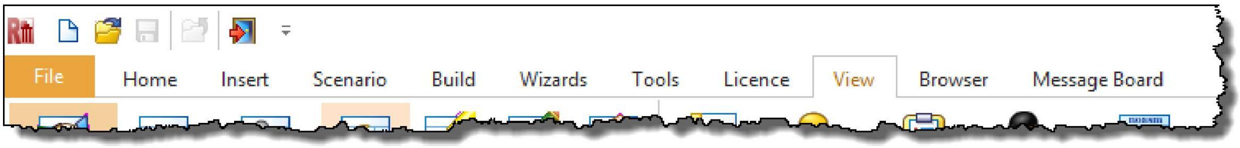
The Quick-access toolbar is a small, customizable toolbar, that displays frequently used commands. The quick-access toolbar is located immediately to the right of the Application button.

- To create a new project, click the New button (1)
- To open an existing project, click the Open button (2)

- To save the existing project, click the Save button (3)
- To customize the toolbar, click on the down-arrow at its right-hand end (4)

Tabs

The row of tabs at the top of the Ribbon organizes commands into logical groups.



The following tabs always appear on the Ribbon:

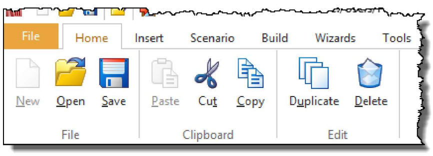
- Home
- Insert
- Scenario
- Build
- Wizards
- Tools
- Licence
- View

Further 'contextual' tabs appear after the View tab, depending on which panels are currently displayed (e.g. the Reporter and Message Board tabs).

To display a particular tab, click on the corresponding heading beneath the program's title bar.

Home tab

The Home tab provides easy access to the program's most frequently used commands.



The commands on the Home tab are arranged into the following groups: File, Clipboard, and Edit.

File

- Click the **New** button to create a new project. This button is disabled if a project is already open
- Click the **Open** button to open a previously saved project. If a project is already open then it automatically closes. If the project has been modified then it asks you if you want to save it before closing
- Click the **Save** button to save changes made to the project. The button is disabled if the project is unmodified

Clipboard

The Clipboard buttons allow you to copy, cut, and paste items in the Project Manager. If no item is selected in the Project Manager then the **Copy** and **Cut** buttons are disabled. If no item is currently being copied then the **Paste** button is disabled.

These buttons can be used to copy items to Windows' Clipboard for later inserting into other external applications (e.g. Microsoft Excel and Word). If you are running two copies of Repute on the same computer, then these buttons can be used to copy and paste items from one project to another.

Edit

The Edit buttons allow you to duplicate and delete items in the Project Manager. If no item is selected in the Project Manager then these buttons are disabled. When you click the **Delete** button a box appears asking if you want to delete the selected item. Click **Yes** to continue.

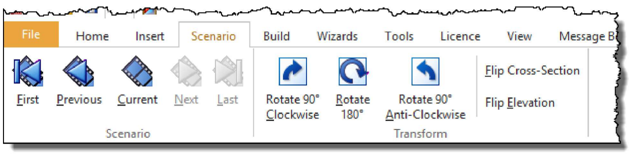
Insert tab

The Insert tab provides buttons for inserting new items into the project.

The Stockyard is closely associated with the Insert tab. Clicking buttons on the Insert tab automatically opens the Stockyard to the corresponding group (e.g. the Section button opens the Stockyard to the Sections group of items).

Scenario tab

The Scenario tab provides buttons for viewing and transforming scenarios in the Drawing Board.



The commands on the Scenario tab are arranged into the following groups: Scenario and Transform.

Scenario

These buttons allow you to navigate through scenarios in the Project Manager (e.g. Stage 1). As you select a scenario in the Project Manager, the scenario that is displayed in the Drawing Board changes.

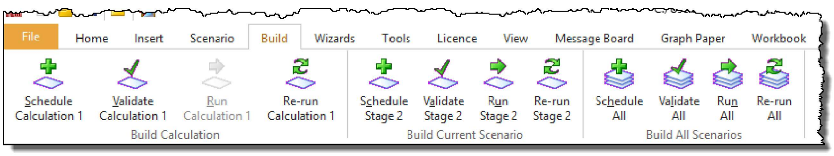
Transform

These buttons allow you to transform aspects of the scenario.

- Click the rotation buttons to rotate the pile group within the Drawing Board
- Click the **Flip Cross-Section** button to change the sign of the x co-ordinate of all the piles in the Drawing Board (e.g. a pile at x = +3 m becomes x = −3 m)
- Click the **Flip Elevation** button to change the y co-ordinate of all the piles in the Drawing Board (e.g. a pile at y = +3 m becomes y = −3 m)

Build tab

The Build tab provides buttons for validating and running calculations, either individually or for collectively, for one or more scenarios.



The buttons on the Build tab are arranged into the following groups: Build Calculation, Build Current Scenario, and Build All Scenarios.

Buttons on the Build tab

If a scenario hasn't been created yet then the buttons on the Build tab are disabled.

The Status category in the Property Inspector shows the current status of a scenario's calculations. This can be:

- Suspended
- Scheduled
- Running
- Cancelled
- Finished

The Build tab's buttons affect the status of the calculations in either one or all the project's scenarios:

- Click the **Validate** button to check that all the data in the calculations is valid. If the data fails a validation then the calculation is suspended
- Click the **Run** button to run scheduled calculations. This automatically validates the data before the calculations are run. This either results in the calculations being finished (if successful) or cancelled (if unsuccessful)
- Click the **Schedule** button to mark calculations as scheduled to be run the next time the run button is pressed. When calculations are created they are automatically scheduled. Calculations that have already been run (whether successful or not) will need to be scheduled in order to be run again
- Click the **Re-run** button to schedule calculations that have been run before (whether successful or not) and then instantly run scheduled calculations

Build Calculation

These buttons allow you to validate and run an individual calculations that is currently selected in the Project Manager. The buttons' names indicate which calculation is selected: e.g. 'Run Calculation 1'.

Build Current Scenario

These buttons allow you to validate and run calculations linked to the scenario that is currently selected in the Project Manager. The buttons' names indicate which scenario is selected: e.g. 'Run Stage 2'.

Build All Scenarios

These buttons apply to all the calculations in the project regardless of which scenario is selected in the Project Manager.

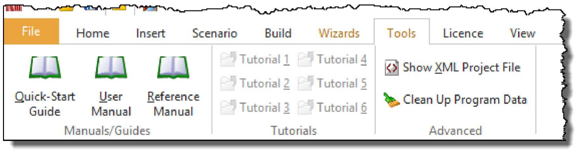
Wizards tab

The Wizards tab provides buttons to run various wizards.

Greyed-out buttons indicate that a particular wizard cannot be run. For more information on the buttons that this tab provides, see Chapter 13: Wizards.

Tools tab

The Tools tab provides buttons for accessing various utilities provided by the program.



The commands on the Tools tab are arranged into the following groups: Manuals/Guides,Tutorials, and Advanced.

Manuals/Guides

These commands provide a convenient way to open the program's various manuals and guides in Adobe PDF format.

- **Quick-Start Guide**: guides you through 6 different tutorials to help you become familiar with the program
- **User Manual:** gives a detailed description of Repute's user interface
- **Reference Manual:** gives information regarding the program's geotechnical capabilities

These manuals are located in the folder:

C:\Program Files (x86)\Geocentrix\Repute\2.5\Manuals

Tutorials

These commands provide a convenient way to open the program's tutorials, which are described in details in the Quick-Start Guide.

- **Tutorials 1-3** deals with single pile design
- **Tutorials 4-6** deals with pile group design

These tutorials are located in the folder:

C:\Users\Public\Documents\Geocentrix\Repute\2.5\Tutorials

Advanced

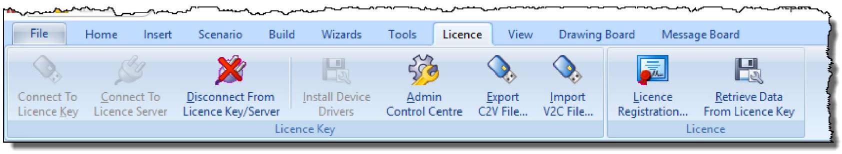
The **XML Project File** command displays the project (.RPX) file in XML format. This feature may be useful if you require technical support.

The **Clean Up Program Data** command deletes any temporary files that exist in Repute's working folder, which is located at:

C:\ProgramData\Geocentrix\Repute\2.5\Temp

Licence tab

The Licence tab provides facilities for managing your Repute licence.



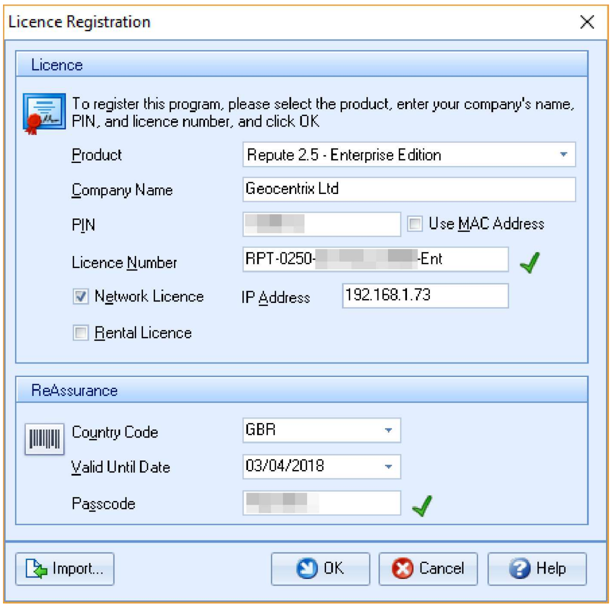
The commands on the Licence tab are arranged into two groups: Licence and Licence Key.

Licence

The **Licence Registration...** command displays a box that allows you to enter your licence details into the program. Until you have entered a licence for Repute, only those features included in the Trial Edition of the program are available.

The easiest way to enter your licence details into the program is to click on **Import...** and to select the LIC file provided by Geocentrix when you purchased or updated the program.

Alternatively, you can enter your licence details manually, as follows:



1. Select the **Product** you have purchased from those listed
2. Enter your company's name in the **Company Name** box
3. Enter the licence key's **PIN**
4. Enter your **Licence Number**
5. If you have purchased a network licence, tick the **Network Licence** box and enter the **IP Address** of the computer to which the licence key is attached
6. Select your country in the **Country Code** box
7. Enter the expiry date of your ReAssurance agreement in the **Valid Until Date** box
8. Enter your ReAssurance **Passcode**

If you have entered the information correctly, a green tick mark will appear beside the Licence Number box and the OK button will be enabled. If this does not occur, please contact Geocentrix for assistance.

9. Click **OK** to register the program

The **Retrieve Data From Licence Key** command retrieves data from your locally-connected licence key and displays it in the Message Board.

Licence Key

The **Connect To Licence Key** command attempts to establish a connection between Repute and a Geocentrix-supplied licence key attached to your local computer (at IP address 127.0.0.1). This button is disabled if Repute is already connected to a licence key.

The **Connect To Licence Server** command attempts to establish a connection between Repute and a Geocentrix-supplied licence key attached to a computer on your local or wide area network Repute looks for the key at the IP address specified in the Licence Registration box. This button is disabled if Repute is already connected to a licence key.

The **Disconnect From Licence Key/Server** command attempts to break the connection between Repute and a connected licence key. This is useful if you move your licence key from your server to your local machine, or vice versa. This button is disabled if Repute is not connected to a licence key.

The **Install Device Drivers** command runs external setup program HASPUserSetup.exe (aka the "Sentinel Runtime Installation Wizard"), which is located in the folder C:\Program Files (x86)\Common Files\Geocentrix. This Wizard installs the device drivers needed for Repute to communicate with your licence key. This button is disabled if the device drivers are already installed on your computer.

The **Admin Control Centre** command loads the Sentinel Admin Control Centre (ACC for short) – if it is installed – into Repute's internal browser. The ACC provides toolsfor inspecting and managing Sentinel keys that are attached to your network. You can also load the ACC into an external browser, suhc as Firefox or Chrome, by entering the following address into the address bar: http://localhost:1947. The ACC should only be used under the direction of Geocentrix technical support.

The **Export C2V File...** command retrieves data from your locally-connected licence key and allows you to save it in a format (Customer-to-Vendor, or 'C2V') suitable for sending to Geocentrix. Only use this command as instructed by Geocentrix Technical Support.

The **Import V2C File...** command re-writes the data stored in your locally-connected licence key, usually to upgrade or crossgrade your licence. The new data will be provided by Geocentrix in a format (Vendor-to-Customer, or 'V2C') suitable for updating the key. Only use this command as instructed by Geocentrix Technical

Support.

View tab

The View tab contains controls that allow you to change the display of the program's user interface.

The commands on the View tab are arranged into the following groups: Desktops, Panels, View, and Visual Appearance.

Desktops

The Desktops group contains buttons that allow you to change which of the program's pre-defined Desktop arrangements appears on your screen.

The table below summarizes which panels appear in each Desktop arrangement.

Panel	Desktop arrangement						
	Welcome	Normal	Construct	Specify	Check	Review	News
Drawing Board		✓	✓	✓			
Project Manager		✓	✓	✓		✓	
Stockyard			✓				
Property Inspector				✓			
Workbook					✓		
Graph Paper					✓		
Message Board							
Reporter						✓	
Browser	✓						✓

By default, the Welcome Desktop arrangement is automatically displayed when Repute starts up. The program start-up Desktop arrangement can be changed in Program Options (accessed from the Application Menu).

The Normal Desktop arrangement is automatically displayed when a previously saved project is opened.

The Construct Desktop arrangement is automatically displayed when a new project is created.

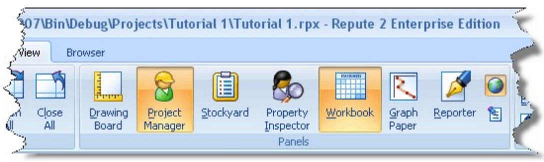
The Check Desktop arrangement is automatically displayed when a calculation has run.

The Message Board panel is not included in any pre-defined Desktop arrangements but once it is opened it remains open until the user closes it manually.

Panels

The Panels group contains buttons that allow you to select which panels appear on your screen.

To open or close a particular panel, click its corresponding button.



Buttons on the View tab are highlighted to indicate which panels are currently open: e.g. in the picture above the Project Manager and Workbook are currently open.

To open all the panels, click on the **Open All** button.

To close all the panels, click on the **Close All** button.

To toggle the appearance of a particular panel, press **`Ctrl+Alt+letter`** on your keyboard, where “letter” corresponds to the letter that is underlined on the corresponding button, e.g. D for **Drawing Board**, P for **Project Manager**, S for **Stockyard**, etc.

View

- Click the **Collapse/Expand All** button to collapse or expand all controls in every panel (whether displayed or not)
- Click the **Refresh All** button to refresh all the panels (whether displayed or not)

Visual Appearance

The Visual Appearance group contains buttons that allow you to change the program’s colour-scheme.

- Click the **Blue** button to apply a blue skin to the program
- Click the **Black** button to apply a black skin to the program
- Click the **Silver** button to apply a silver skin to the program

A blue skin is selected as the default visual appearance but this can be changed in Program Options (see Chapter 14).

Contextual tabs

The following panels have their own contextual tabs which are displayed only when those panels are open:

- Drawing Board
- Graph Paper
- Message Board
- Reporter
- Browser

For information on the buttons that these tabs provide, see later chapters.

Title Bar

The title bar runs across the top of the Ribbon.

The title bar displays the program’s name, version number, and edition (e.g. Repute 2.5 Enterprise Edition) plus – when a project has been opened or saved – the full path name of the current project (e.g. C:\Program Files\Repute\Projects\Tutorial 1.rpx).

Double-click anywhere on the title bar to restore or maximize the program’s main window.

The three buttons at the right-hand end of the title bar provide quick ways of minimizing, restoring, or closing Repute.

Help button

The Help button is located at the right-hand side of the row of tabs on Repute's Ribbon.

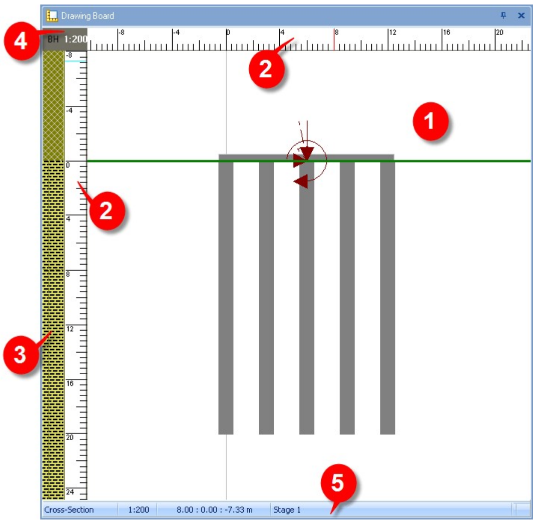
Click on this button to open Repute's help file, which has extensive information about how to use the program.

Chapter 4
The Drawing Board

The Drawing Board provides a scaled representation of the selected scenario.

The Drawing Board consists of:

1. The drawing
2. Vertical and horizontal rulers
3. A soil column
4. A scale indicator
5. A status bar



Drawing Board tab

When the Drawing Board is visible it has its own contextual tab, which provides commands that control its appearance. The commands on the Drawing Board tab are arranged into the following groups: Select/Zoom, Orientation, Scale, and Show/Hide.

The following paragraphs explain the functions available via the buttons on the Drawing Board tab.

The mouse cursor can be used to select an item on the drawing or alternatively you can select an area to enlarge using the zoom key.

By choosing the appropriate mode, you can switch between one of three orientations:

- Cross-section
- Plan
- Elevation

All these orientations follow the left-hand notation. By switching orientation, the direction of the x, y, and z axes change as shown in the table below.

Orientation	x	y	z
Cross-Section (Default)	→	**Into screen**	↓
Plan	→	↑	**Into screen**
Elevation	**Out of screen**	→	↓

The scale can be adjusted on the tab from a ratio of 1:10 to 1:1000.

By selecting the appropriate option you can show or hide a variety of drawing features:

- **Origin** – by selecting the Origin button you can display horizontal and vertical grey lines whose intersection indicates the point of origin. To turn off this feature left-click on the button again
- **Grid** – by selecting the Grid button the program displays points on the drawing which form a grid
- **Mirror Image** – the Mirror Image button reverses the direction of axes whose positive direction points to the right (see table above). For example, under Cross-Section orientation, the x-axis would point positively to the left

Selecting an item

10. To select an item on the Drawing Board, first make sure the **Select** mode is chosen under the Drawing Board tab
11. Then move the mouse cursor over the item and left click (when the mouse is over the item, the cursor will change from a cross-hair to a hand)
12. This will automatically select the item in the Project Manager and display its properties in the Property Inspector (if open)

Repute synchronizes panels so that when an item is modified in the Property Inspector, it is automatically updated on the Drawing Board.

Zooming in (increasing scale)

To zoom in on the Drawing Board you can either choose the **Zoom** button or the **Increase Scale** button on the Drawing Board tab.

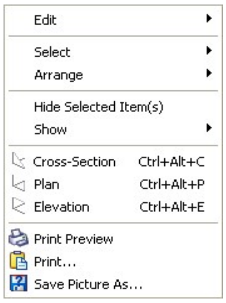
- If you chose the Zoom button then left click and drag inside the drawing to form the area which you would like to enlarge to the full screen
- If you chose the Increase Scale button then continue to left click until the desired scale is reached (alternatively you can select the scale size from the Drawing Board tab e.g. 1:100)
- Right-clicking on the horizontal or vertical rulers will also give options of scale size to choose from

Moving the drawing

To move the drawing within the Drawing Board:

1. Left-click anywhere in the Drawing Board
2. Drag the mouse cursor to reposition the drawing
3. The vertical and horizontal rulers will automatically adjust to match the origin on the drawing

Context menu



For more options to select, edit, and arrange items, right-click inside the Drawing Board or directly on an item to display the panel's context menu. This will also give you shortcuts to change the drawing's orientation and display settings, as well as options to print and save.

Selecting items in the Soil Column

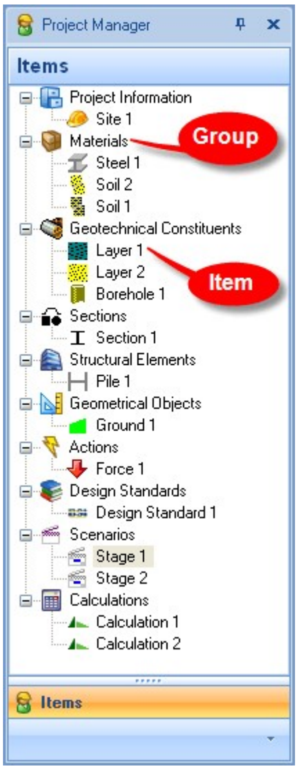
The Soil Column displays the Borehole that is currently present in the scenario shown in the drawing.

- Left-click in the Soil Column to select the borehole in the Project Manager and display its properties in the Property Inspector (if open)
- Ctrl + left-click to select individual layers of the borehole
- Shift + left-click to select the soil within the layer

Drawing Board status bar

The Drawing Board status bar is located at the bottom of the panel and displays the current orientation, scale, position of the mouse cursor from the origin, and scenario selected in the Project Manager.

Chapter 5
The Project Manager

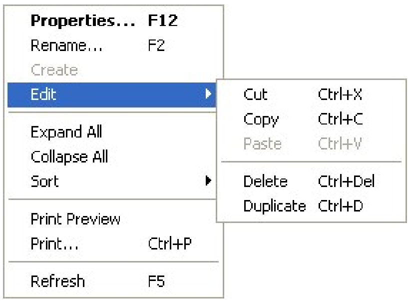


The Project Manager organizes the items already created in a project. It displays items in a hierarchical structure under separate **Groups** (e.g. Materials).

Context menu

For options to edit and sort items, right-click inside the panel. It also allows you to print the Project Manager.

Clicking the **Sort > Into Groups** button shows or hides the group names.



Viewing an Item's properties

An item's properties are displayed in the Property Inspector.

If the Property Inspector is open:

- Left-click on an item in the Project Manager to display its properties

If the Property Inspector is not open:

- Right-click on an item and select **Properties** to open the Property Inspector to that item's page
- *Or...* Double-click on that item
- *Or...* Select the item and press **F12**

Creating Items

Items are created in the Stockyard panel. To access this from the Project Manager:

1. Right-click on the group name of the item type you want to create
2. Click **Create**
3. This opens the Stockyard displaying the panel corresponding to the item's group, from here items can be created (see Chapter 6: The Stockyard)

Editing Items

- Either:
    1. Right-click on the name of the item you want to edit
    2. Click **Edit** to **Cut**, **Copy**, **Paste**, **Delete** or **Duplicate** an item
    3. When you click the **Cut** or **Delete** button, a box appears to check that you want to delete the selected item, click **Yes** to continue deleting
- *Or...* Type **Ctrl+X** to cut, **Ctrl+C** to copy, **Ctrl+V** to paste, **Ctrl+Del** to delete, or **Ctrl+D** to duplicate the selected item
- *Or...* Select the **Paste**, **Cut**, **Copy**, **Duplicate**, or **Delete** button from the Home tab on Repute's Ribbon

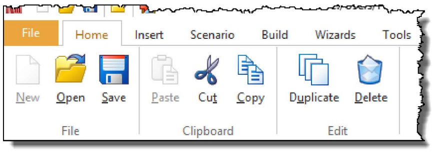
Duplicating an item creates a carbon copy with identical properties but a different name.

Renaming an Item

- Right-click on an item and select **Rename**
- *Or...* Select the item and press **F2**
- *Or...* Select the **Rename** button from the Home tab on Repute's Ribbon

Home tab

The Project Manager is closely associated with the Home tab. The Home tab provides a number of buttons for modifying items in the Project Manager (see Home tab in Chapter 3: The Ribbon).



Chapter 6
The Stockyard

The Stockyard stores a wide range of pre-built items for inclusion in the project.

Items available to be added are organized into groups, e.g. Structural Elements, Project Information, Geotechnical Constituents etc. Above the **divider** is a list of all the items included in the currently expanded group.

The **group caption bar** displays the name of the currently expanded group. This is also highlighted in the list of groups below the divider. The **Common** group includes the most frequently created items (all of which are repeated in other groups).

Surplus groups go into the **overflow bar** at the bottom of the panel. These can be selected by clicking on the image representing them. Further commands are available via the drop down arrow on the right hand side of the bar (see below).

Greyed-out items

If an item is greyed-out then it is not available in the edition of Repute that is running.

To hide unavailable items:

1. Click on the Application Button (program logo in the top left of the screen)
2. Click on the **Program Options** button
3. Select Stockyard
4. Tick the box that says “Hide disabled items”

Context menu

Right-clicking anywhere inside the panel reveals its context menu which gives options to expand Stockyard groups, create items, and print the panel.

Expanding Groups

To expand a group:

- Left-click on the group name from the list below the divider or on the group icon in the overflow bar at the bottom of the panel
- *Or...* Right-click and select the desired group name
- *Or...* Click on the relevant button on the Insert tab

Creating Items

To create an item:

- Left-click on the item name and drag it into the Project Manager (the mouse cursor picture will change when in the Project Manager to illustrate the item being created)
- *Or...* Right-click on the item name and select **Create <Name of item>**

Creating an item opens the Project Manager (if not already displayed), which automatically selects the new item. The item is also selected in the Property Inspector (if open) so that its properties can be altered.

Drop-down menu

The drop-down menu is shown by clicking on the drop-down arrow in the bottom right-hand corner of the panel.

This menu allows you to see all available groups and adjust which are displayed in the panel's list of groups.

Adding/Removing groups from the panel's list

To add or remove specific groups from the list displayed in the panel:

1. Select **Add or Remove Buttons** from the drop-down menu to view a list of all available groups
2. Left-click on specific group names to add or remove them

Adjusting the number of groups in the panel's list

- Select **Show More Buttons** or **Show Fewer Buttons** from the drop-down menu
- *Or...* Left-click and drag the divider up or down

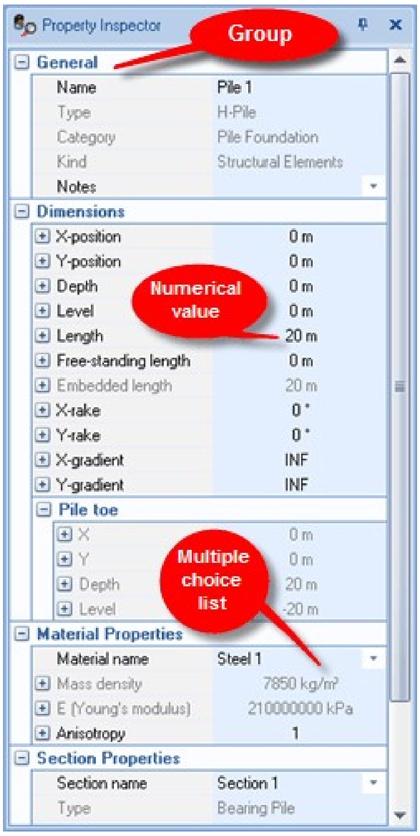
Surplus groups not displayed in the panel's list go into the **overflow bar** at the bottom of the panel and any remainder are shown at the bottom of the drop-down menu.

Insert tab

The insert tab provides buttons for inserting new items into the project.

The Stockyard is closely associated with the Insert tab. Clicking buttons on the Insert tab automatically opens the Stockyard and displays its corresponding group.

Chapter 7
The Property Inspector



The Property Inspector allows you to inspect and change the properties of items already created.

Properties are split into groups, e.g. Dimensions, Material Properties etc. When there is a lot of information being displayed some groups are collapsed by default. To expand or collapse a group, press the + and – buttons respectively.

The General group is common to all items. Other groups are item-specific.

There are a variety of types of property value boxes:

- Numerical boxes
- Tick boxes
- Multiple choice lists
- Paths (links to the internet)
- Names (single line of text)
- Notes (multiple lines of text)

Changing an item's properties

To change the numerical properties of an item:

1. Left-click on the row of the desired property to change
2. Type in the new value
3. Press enter *or* tab

Left-clicking in the numerical box displays a drop down arrow on the right-hand side, which can then be clicked on to reveal a built-in calculator.

For tick box properties, simply click on the tick box to select or deselect that option. Properties with a multiple choice box can be chosen via the drop down arrow.

To change the units of a numerical property:

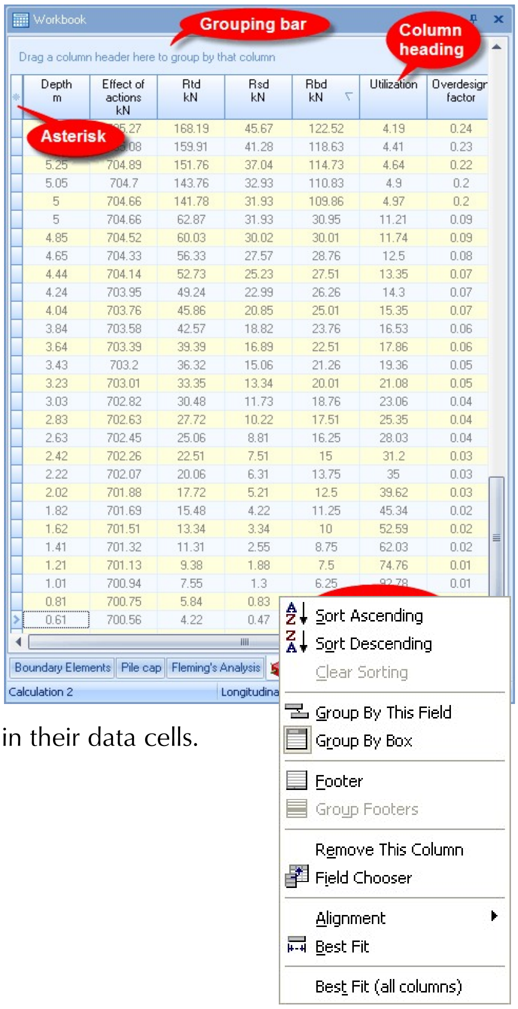
1. Click the + button on a property so that it expands to reveal its units
2. Click on the drop down arrow in the units row to display available units
3. Select the desired Imperial/SI units

Repute synchronizes panels so that when an item is modified in the Property Inspector, it is automatically updated on the Drawing Board.

Context menu

Right-clicking anywhere inside the panel reveals the context menu which gives options to expand or collapse groups, and to print the panel.

Chapter 8
The Workbook



The Workbook shows results from calculations in tabular format.

The data is presented on separate worksheets (e.g. Longitudanal ULS, Randolph's Analysis etc.) which can be selected by clicking on the **worksheet tabs** at the bottom of the Workbook. Some worksheets have no data to display, in which case the worksheet displays a message to that effect.

In a worksheet, results are presented in a table where columns indicate properties and each row depicts a different result.

The default display only shows a small proportion of the available results.

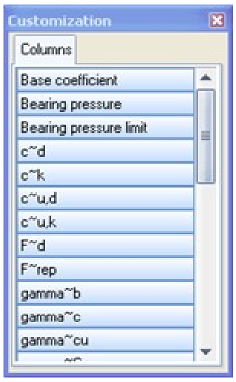
Left-click on a **column heading** and drag it across the worksheet to change the column order.

Column context menu

Right-click on a column heading for more options to sort and group the data, as well as to remove that column.

- Left-click on **Alignment** and select **Align Left**, **Right**, or **Center** to adjust the positioning of the results values within their data cells.
- Left-click on **Best Fit** to re-size the column
- Choose **Best Fit (all columns)** to re-size all the columns

Displaying a different selection results



1. Left-click on the asterisk * in the top left corner of the table to see a drop-down list of all available columns
2. Left-click in the relevant tick boxes to show or hide the results you want displayed

Or...

1. On the column context menu, choose **Field Chooser** to open a Customization dialog box
2. Left-click and drag columns onto the worksheet to add them to the results table

Grouping results

To group identical values in a particular column:

- Drag the desired column into the **Grouping bar** found above the column headings or choose **Group By This Field** in the column context menu

This sorts all the results in ascending order by value for that column's property. It also groups results with the same numerical value for that property

- Left-clicking on the + button on each row expands the group to show all results with that value

- Left-clicking on the drop down arrow in the column that has been dragged onto the Grouping bar allows you to filter the grouped results (see Filtering results)

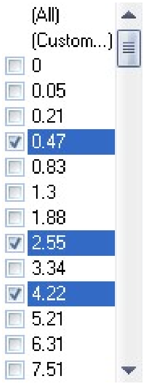
Sorting results

To sort the numerical values by a particular property:

- Left-click on the column heading that you want the data to be sorted by (data ascends from lowest value) or select **Sort Ascending** on the column context menu
- Left-click on the column heading again to reverse the order (data descends from highest value)

By default, data is sorted in ascending order by value in the furthest left column.

Filtering results



To filter results by their numerical values in a particular column:

1. Left-click on the drop down arrow in the column heading of the property you want to filter by
2. Left-click to tick the boxes of the values that you want to keep *or* left-click on **(Custom...)** for more advanced filtering options (see Custom filter box below)

This hides all results apart from those which have one of the ticked numerical values for that property.

- Left-click on the drop down arrow and select **(All)** to restore filtered data

Deselecting current filters

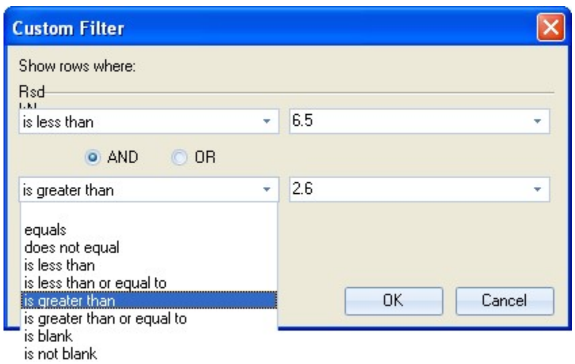
Current filters are displayed at the bottom of the workbook (above worksheet tabs).

- Left-click on the checked tick box to temporarily deselect the current filter
- Left-click on the button to cancel the current filter

To the right-hand side of the line describing the current filter, there is a drop down arrow which gives a list of previous filters so that they can be returned to easily.

The **Customize...** button in the bottom right corner of the Workbook links to the Custom filter box.

Custom filter box



The custom filter box allows you to select from a list of parameters to filter the data by. The list is accessible from drop down arrows in the left hand boxes.

Parameter values are entered in the right-hand boxes which have built-in calculators accessible from the drop down arrows.

Changing results

To change the values shown in the results:

- Left-click on the data cell you wish to change
- Type a new value and press Enter
- You can left-click on a data cell and drag the mouse down to select multiple data cells to change to the same value

Note: if data values are greyed out then they can't be modified.

Workbook context menu

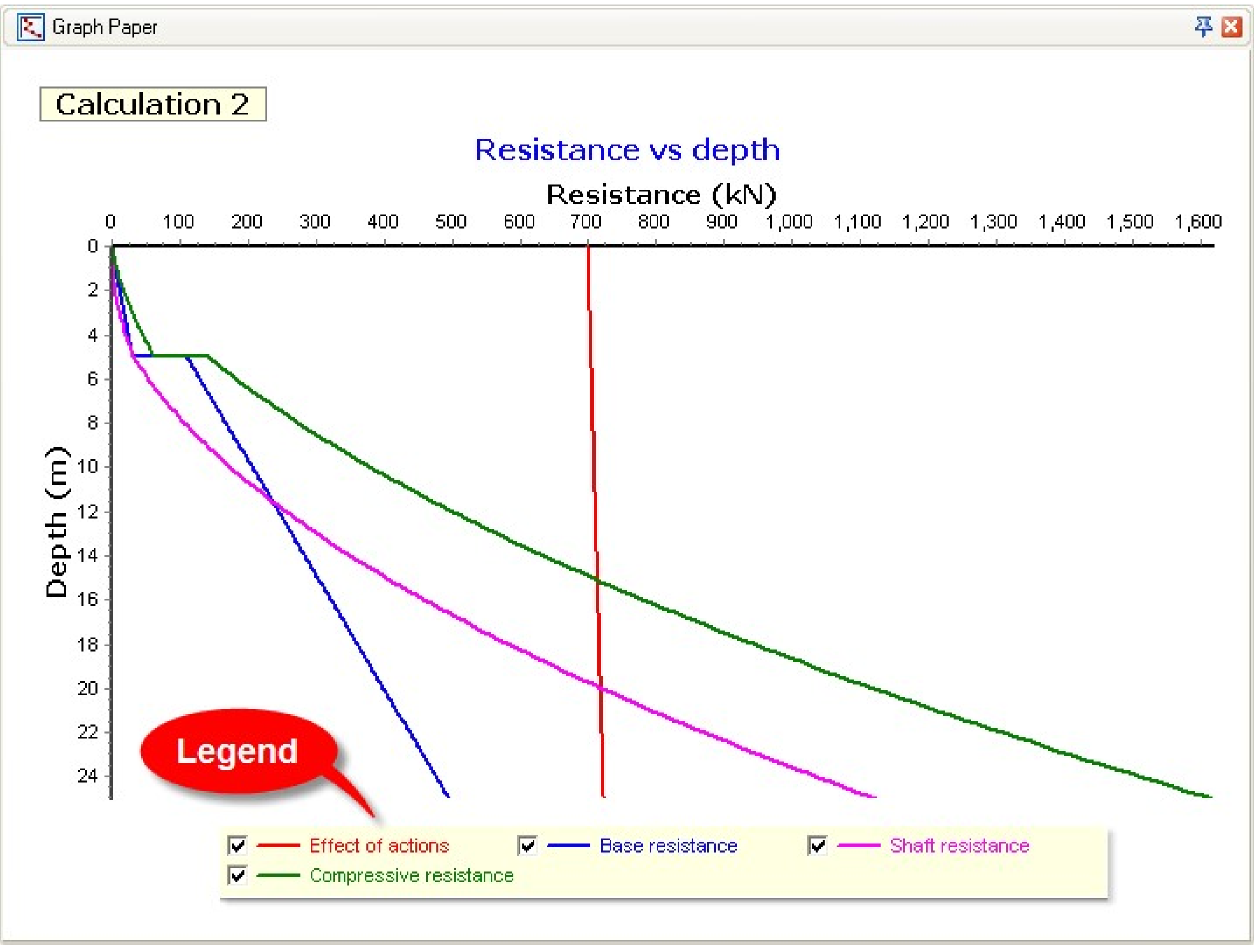
Right click elsewhere on the Workbook to reveal a second context menu allowing you to print or export the worksheet.

Workbook tab

When the Workbook is visible it has its own contextual tab, which indicates which worksheets have data to display and lets you switch between them. It also enables you to **Export Workbook** so that the results can be saved on an external program (e.g. Microsoft Excel) for future reference or printing.

Chapter 9
The Graph Paper

The Graph Paper shows the calculation's key results in graphical format.



Graph Paper tab

When the Graph Paper is visible it has its own contextual tab, which allows you to select the type of graph you would like to see and change the graph settings. When certain graph types aren't available the relevant buttons are greyed out on the Graph Paper tab.

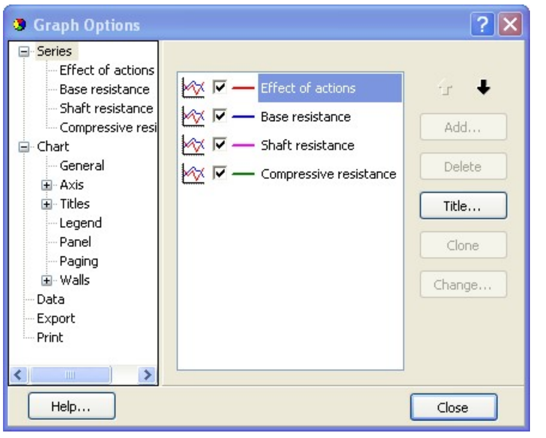
The **legend** at the bottom of the panel labels the lines on the graph.

- Left-click on the appropriate tick box to hide or show the lines on the graph
- Left-click on the **Show All** or **Show None** buttons on the Graph Paper tab to show or hide all the lines

By default all the available lines are displayed.

Graph Options

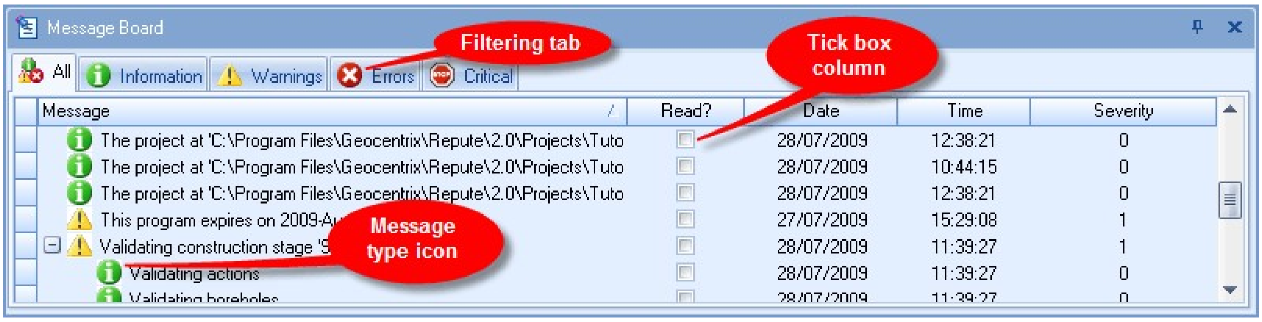
Left-click the **Options** button on the Graph Paper tab to open a dialog box which enables you to customize every aspect of the graph. It also allows you to export the graph to another program or to print it.



Chapter 10
The Message Board

The Message Board shows all the messages that the program generates.

Messages include information updates and warnings as well as errors and critical errors in your data or calculation.



The message board works in the background whilst minimized, and automatically appears when errors occur. To control the threshold for when the Message Board appears:

1. Click on the Application Button (program logo in the top left of the screen)
2. Click on the **Program Options** button
3. Select Message Board
4. Select the desired threshold (by default the Message Board will appear only when an Error or Critical message is produced)

Message Board tab

When the Message Board is visible it has its own contextual tab, which provides buttons to filter through different types of message.

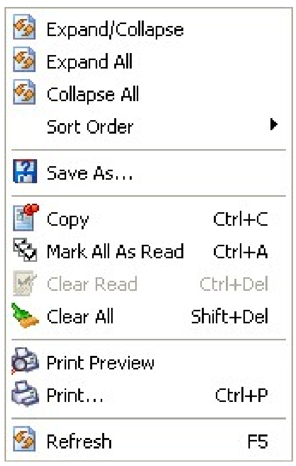
You can also filter through different types of messages by clicking on the relevant tabs at the top of the Message Board. By default the **All** tab is selected, showing every message produced. While all message types are being shown, the message type icon displayed before the message enables you to distinguish between them (e.g. ⚠ for Warning messages).

Related messages are automatically grouped together. Left-click on the + button (to the left of the message type icon) to expand the group and view individual messages in more detail.

Sorting messages

Repute automatically records the date and time that messages are produced as well as judging the severity of the message and displaying this in the relevant columns. To sort messages by time, date, or severity:

- Left-click on the column heading that you want the data to be sorted by (messages are ordered chronologically and from least to most severe)
- Left-click on the column heading again to reverse the order



Context menu

For more options to clear, copy and arrange messages, right-click inside the panel to reveal the context menu. This menu also allows you to print and save the Message

Board.

To reset the Message Board indicators in the status bar to grey, select **Mark All As Read** on the right-click menu.

Clearing Messages

To clear individual messages:

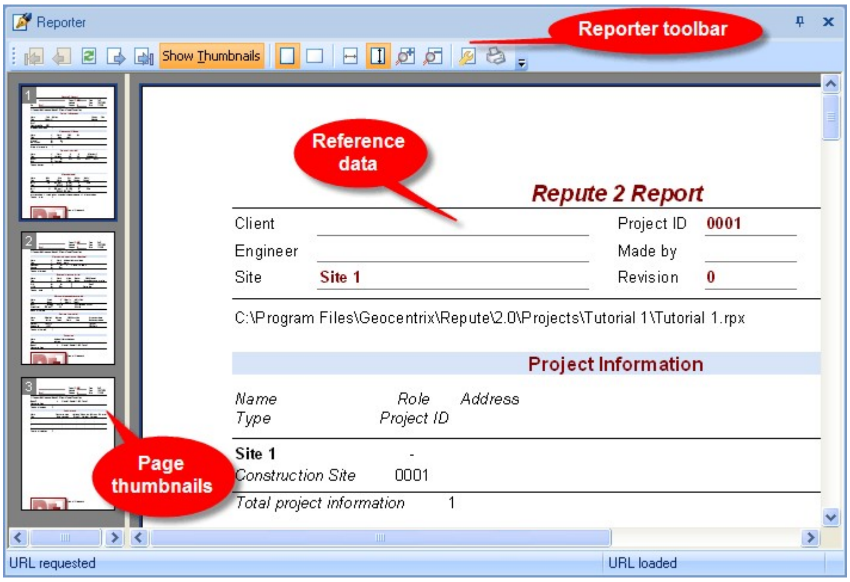
1. Left-click in the tick boxes under the column **'Read?'** to select the messages you have read and no longer need
2. Right-click anywhere in the panel
3. Left-click on **Clear Read** *or* press **Ctrl+Del**

To clear all messages:

1. Right-click anywhere in the panel
2. Left-click on **Clear All** *or* press **Shift+Del**

Chapter 11
The Reporter

The Reporter produces a page-based report of the input/output data of the scenario suitable for printing.



The Reporter panel is shown under the Review desktop arrangement (under the View tab).

Reporter tab

When the Reporter is visible it has its own contextual tab, which provides buttons to navigate through the report, customize its content, and also print it.

To produce a report left-click on the **Refresh** button. All reports start with reference data including the Client name, Project ID, and date of the project. This is followed by specific elements of the project.

Customizing the report's content

The Reporter tab shows a list of report elements. To change the content of the report:

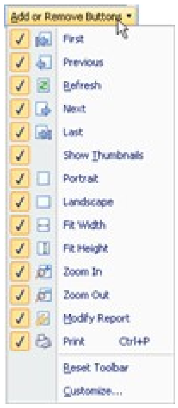
1. Left-click to select desired elements of the report and deselect undesired ones
2. You can select **All** or **None** of the elements by clicking the appropriate button
3. Left-click on the **Refresh** button

Reporter toolbar

The Reporter toolbar appears at the top of the panel window and repeats many of the commands available on the panel's contextual tab. This allows you to access these buttons when the Reporter tab isn't showing.

It also includes the **Show Thumbnails** button (see below) and a drop-down box on the right hand side which allows you to customize the buttons on the toolbar.

Customizing buttons on the toolbar



1. Left-click on the drop-down arrow on the right-hand side of the Reporter toolbar
2. Select **Add or Remove Buttons**
3. Left-click to select/deselect desired buttons to add or remove them from the toolbar

- Select **Reset Toolbar** to restore the display to its default (all buttons are displayed)
- Select **Customize...** for options to further modify the toolbar

Navigating through the report

The Reporter tab gives options to fit the height and width and zoom in and out of the report. It also has **Next Page** and **Last Page** buttons to skip through the pages in the report. Many of these buttons are also available when the Reporter tab isn't in view via the **toolbar** in the Reporter.

Left-click and drag the mouse cursor to move through the report slowly.

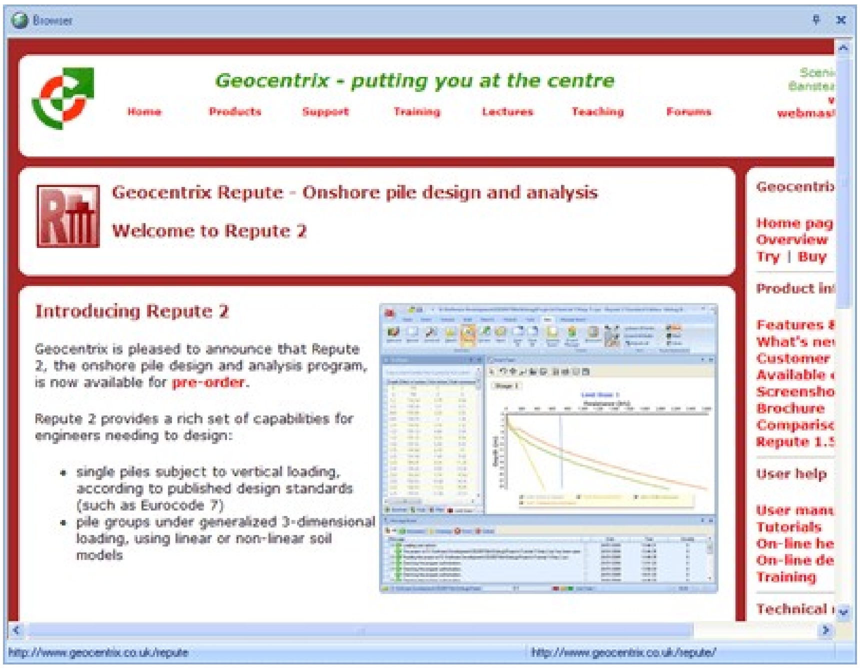
In the left-hand margin of the Reporter there are thumbnails showing the reports pages so they can be quickly skipped between. Left-click on the **Show Thumbnails** button (on the Reporter toolbar) to show or hide this margin.

Modifying the report (Enterprise edition only)

To modify the report left-click on the **Modify** button on the Reporter tab. This will open another window allowing you to customize the report. Further information on how to use this feature is given on the Repute hands-on training course.

Chapter 12
The Browser

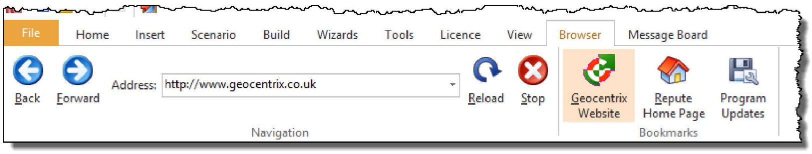
The Browser allows you to view web pages within Repute instead of having to open up an external program. It uses the same browsing engine as Microsoft Internet Explorer.



The Browser panel is shown under the News desktop arrangement (under the View tab).

Browser tab

When the Browser is visible it has its own contextual tab, which provides buttons to navigate through the Internet similar to those provided by Internet Explorer (e.g. Back, Forward, Refresh). There are also buttons providing direct links to the Geocentrix web site and the Repute home page.



Commands on the Browser tab are organized into two groups: Navigation and Bookmarks.

Navigation

The **Address** bars allows you to specify the web address (URL) that you would like the browser to display. Press enter to navigate to your chosen address.

The **Back** button allows you to navigate to the previous page in the browser's history list.

The **Forward** button allows you to navigate to the next page in the browser's history list.

The **Reload** button requests the browser to reload the web page specifiedin the Address box.

The **Stop** button tells the browser to stop loading the specified web page This command is useful when the page takes a long time to load, for example when you have a poor connection to the Internet.

The **Connect To Licence Server** command attempts to establish a connection between Repute and a Geocentrix-supplied licence key attached to a computer on your local or wide area network Repute looks for the key at the IP address specified in the Licence Registration box. This button is disabled if Repute is already connected to a licence key.

Bookmarks

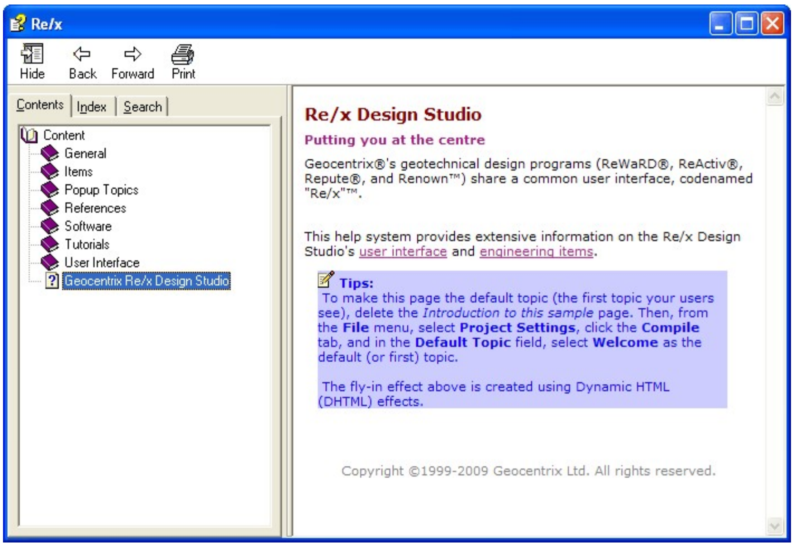
The **Geocentrix Website** command instructs the browser to load the home page of Geocentrix's web site (www.geocenterix.co.uk/index.html).

The **Repute Home Page** command instructs the browser to load Repute's home page on Geocentrix's web site (www.geocenterix.co.uk/repute/index.html).

The **Program Updates** command instructs the browser to load the page on Geocentrix's web site where the latest release of Repute can be found (www.geocenterix.co.uk/repute/update/index.html).

Online help

Repute has a comprehensive online help system that includes all the information given in the program's *Quick Start Guide, User Manual, and Reference Manual.*



Opening Repute's online help

- Click the Help button on Repute's Ribbon
- *Or...* Click the Help button in a dialog box
- *Or...* Press `F1`

Navigating Repute's online help

- If the navigation panel is not showing, click on the **Show** button on the help window's toolbar
- Click on the **Contents** tab to see the help file's table-of-contents, double-click a book to see more of the contents, and then click on the topic you want to display
- Click on the **Index** tab and then double-click on a keyword to display a matching topic
- Click on the **Search** tab, enter the keyword to find, click the **List Topics** button, and then select

the topic you want to display

- Throughout the help system there are a number of words or phrases that are underlined and shown in red. These are hyperlinks which navigate you to related topics

Chapter 13
Wizards

Repute's Wizards take you through a series of steps to help you perform various tasks.

Wizards tab

The Wizards tab can be accessed from Repute's ribbon and provides buttons to run each of the wizards. Greyed-out buttons indicate when a particular wizard can't be run.

The Project wizard is used to start a new project. This is only available if there is no existing project open. If an existing project is open, the Project Wizard button is disabled on the Wizards tab.

The next four wizards are used to create items within a project. This is only possible if an existing project is already open, otherwise their buttons are disabled on the Wizards tab. Once created, all of the items can be edited, but the wizard is a convenient way of performing several steps at once.

The two Import wizards allow you to create a pile group (and the piles in it) or specify multiple forces and moments from data contained ina spreadsheet. This is also only possible if an existing project is already open.

To run a wizard simply click on the relevant button in the Wizards tab. A box opens giving instructions on how to perform the desired task.

Project Wizard

The Project Wizard helps you create a new project, via the following steps:

1. Enter the administrative details for your project
2. Select the design standards you want to use in this project
3. Define the scenarios to create in this project

Administrative details

Project name: must be a valid Windows file name (excluding the characters + and ,). The Wizard creates a .rpx file with whatever project name you enter, e.g. Example1⇒ Example1.rpx

Path: by default the Wizard places the file in the folder where Repute was installed, under Projects.

Description: this text appears on the project report.

Project ID: any alphanumeric text. This also appears on the project report.

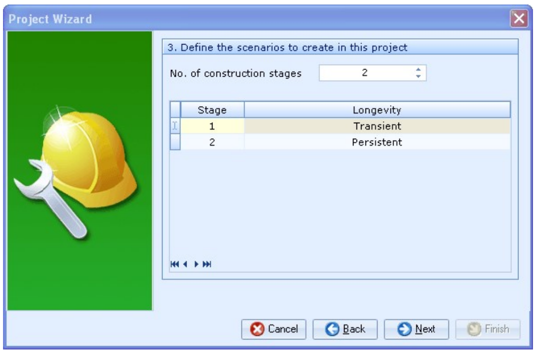
Design standards

The number of design standards available depend on which edition of the program is running. For access to all the design standards you need the Enterprise edition of Repute.

Tick the relevant boxes to select the desired design standards. Click on the **All** or **None** buttons to select or deselect all the tick boxes respectively.

Defining scenarios

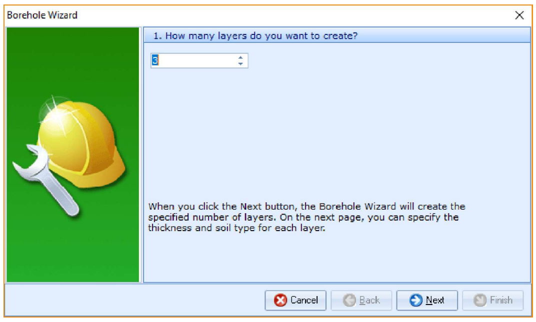
No. of construction stages: enter the desired number of construction stages. The number of stages must be between 1 and 10.



Longevity: left-click in the cells in the right-hand column to access a drop down list allowing you to change the longevity of the stages. The longevity can either be Persistent, Transient, Accidental, or Seismic.

You can navigate between the different stages you have created using the first, previous, next, and last buttons (⏮ ◀ ▶ ⏭) located at the bottom left of the table's window.

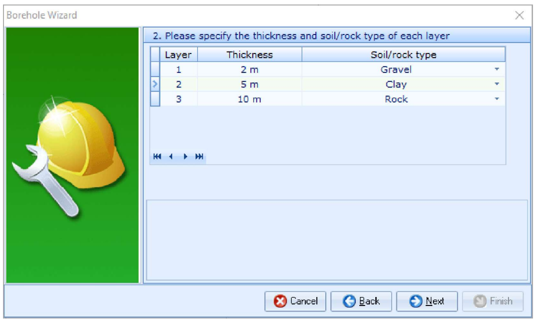
Borehole Wizard



The Borehole Wizard helps you create a borehole. This allows you to define all of the ground conditions for your site in one simple procedure.

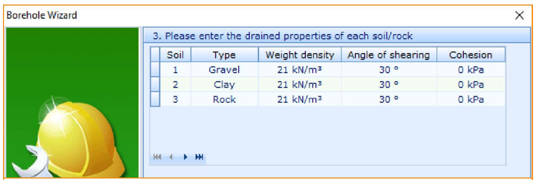
The Borehole Wizard takes you through the following steps:

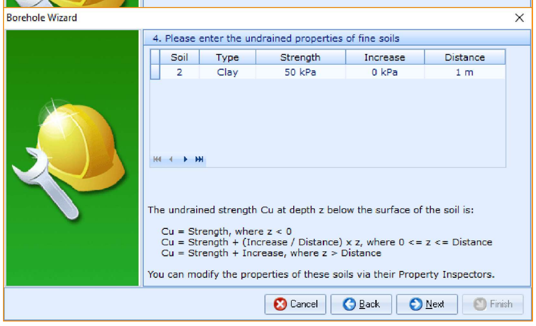
1. How many layers do you want to create?
2. Please specify the thickness and soil/rock type of each layer
3. Please enter the drained properties of each soil/rock
4. Please enter the undrained properties of each fine soil
5. Please enter additional properties for rocks
6. Select the scenarios in which you want to use the borehole



Borehole layers

Enter the desired number of layers. The number of layers must be between 1 and 50.





Soil type and thickness

Thickness: Left-click on cells in the thickness column to access the built-in calculator via the drop down arrow and enter the correct value.

Soil type: Select the soil type from the drop down list.

Drained soil/rock properties

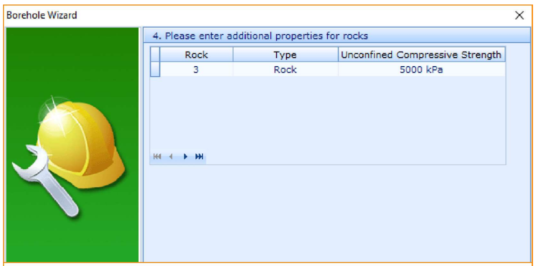
Left-click on relevant cells and enter the correct properties. You can use the built-in calculators via the drop down arrows.

Undrained soil properties

If the borehole includes a fine soil then enter properties as before. If there is no fine soil present then click Next.

Rock properties

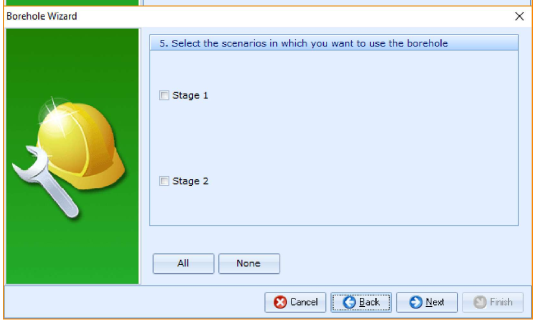
If the borehole includes any rocks, then enter their unconfined compressive strengths and then click Next.



Selecting scenarios

Tick the relevant boxes to select the scenarios in which you want to use the borehole.

Click on the **All** or **None** buttons to select or deselect all the tick boxes respectively.



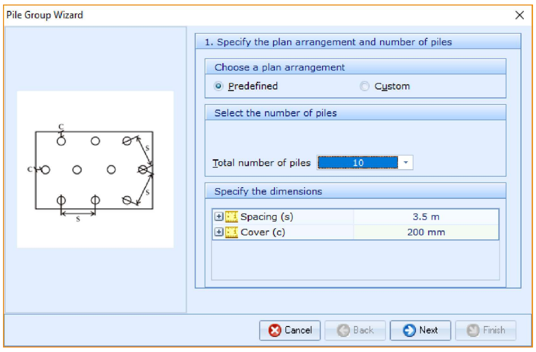
Pile Group Wizard

The Pile Group Wizard generates piles on a grid layout that you specify, via the following steps:

1. Specify the plan arrangement and number of piles
2. Select the pile type
3. Select the pile material and section
4. Enter the pile length and rake
5. Enter the location and rotation of the group centroid
6. Select the scenarios in which to place this pile group

Plan arrangement

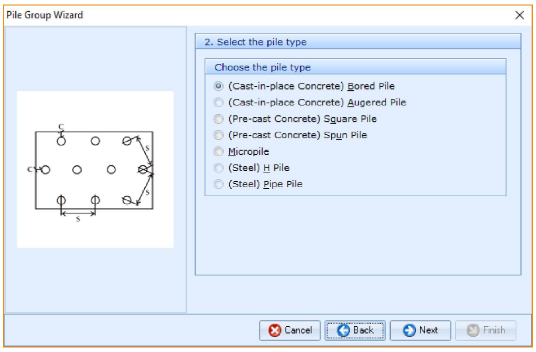
Choose either a Predefined or Custom plan arrangement.



Total number of piles: Select the desired number of piles. For a predefined arrangement, this can be between 1 and 11. The image on the left of the box illustrates the pile arrangement.

For a custom arrangement, the Wizard creates a quadrilateral group with sides of length m x n piles. Values m and n can be between 1 and 100. The total no. of piles is a product of these values and is displayed in the Wizard.

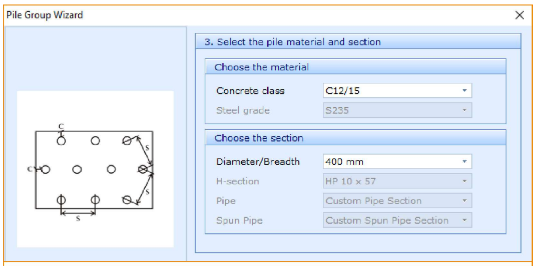
Specify the dimensions: Enter the dimensions for Spacing and Cover. You can use the built-in calculators via the drop down arrows. Click the + buttons to expand to reveal the units and select the desired Imperial/SI units from the drop down list.



Pile type

Choose the pile type: The Wizard supports cast-in-place concrete bored and augered piles; pre-cast concrete square and spun piles; micropiles; and steel H and pipe piles.

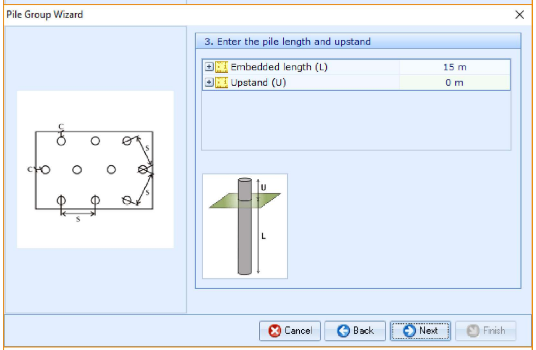
Pile material and section



Choose the material: select the class of concrete or grade of steel.

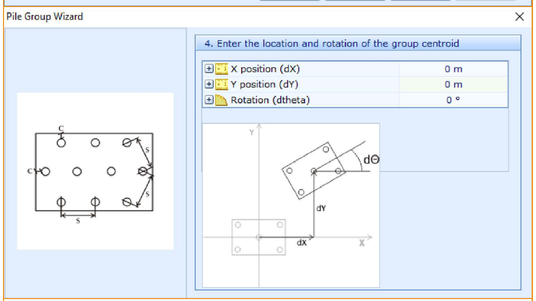
Choose the section: select the Diameter/Breadth, H-section, Pipe, or Spun Pipe(as appropriate) from the drop down lists.

Pile length and rake



Enter the dimensions for Embedded length and Upstand. You can use the built-in calculators via the drop down arrows. Click the + buttons to expand to reveal the units and select the desired Imperial/SI units from the drop down list.

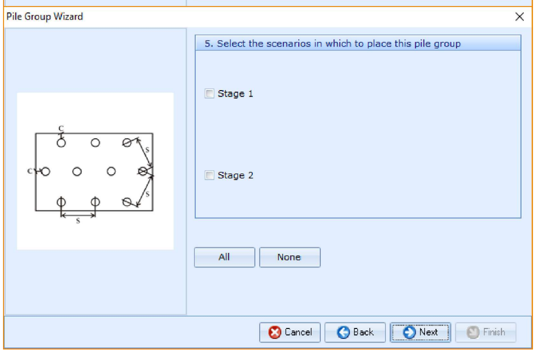
Group centroid



Enter the X and Y co-ordinates for the group centroid's location and its angle of rotation. As before you can use built-in calculators and change the units.

The diagram within the Wizard illustrates what these values relate to.

Selecting scenarios



Tick the relevant boxes to select the scenarios in which you want to place the pile group.

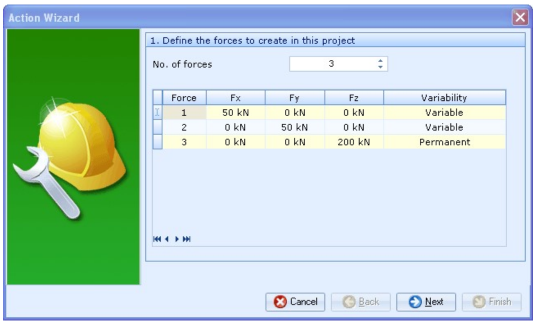
Click on the **All** or **None** buttons to select or deselect all the tick boxes respectively.

Action Wizard

The Action Wizard creates forces and moments for your project and brings them together in combinations, via the following steps:

1. Define the forces to create in this project
2. Define the moments to create in this project
3. Define the combinations of actions to create in this project

Forces

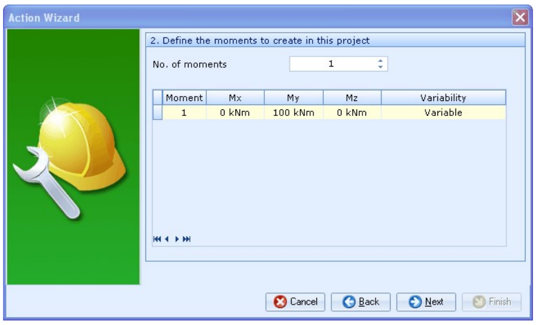


No. of forces: Enter the desired number of forces. The number of forces can be between 0 and 10. You can only have 0 forces if there is at least one moment created.

Left-click on relevant cells and enter the correct properties. You can use the built-in calculators via the drop down arrows.

Variability: left-click in the cells in the right-hand column to access a drop down list allowing you to change the variability of the forces. The variability can either be Permanent, Variable, Accidental, or Seismic.

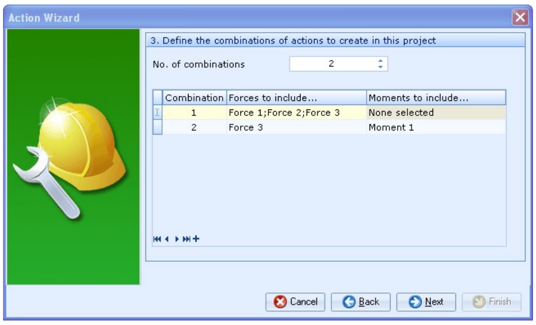
Moments



No. of moments: Enter the desired number of moments. This number can be between 0 and 10. You can only have 0 moments if there is at least one force created.

Enter the properties of the moments and change their variability as before.

Combinations

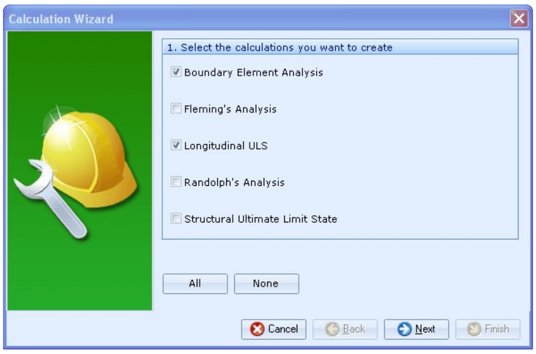


No. of combinations: Enter the desired number of combinations. This number can be between 0 and 10.

Forces and Moments to include: Left-click in the cells to access drop down arrows allowing you to select the forces and moments to include in a combination.

Combinations can have any number of forces and/or moments (restricted by the number of forces and moments created).

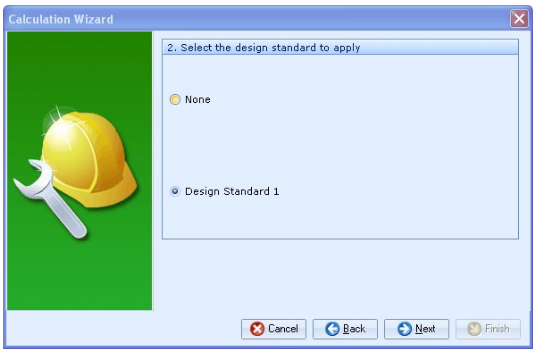
Calculation Wizard



To set up calculations in Repute, make use of the Calculation wizard, which allows you to easily choose a specific calculation and link it to design standards and scenarios in your project. The Calculation Wizard takes you through the following steps:

1. Select the calculations you want to create
2. Select the design standard to apply
3. Select the scenarios to use in the calculations

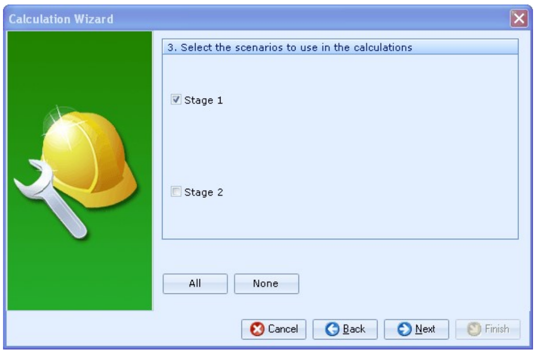
Calculations



Tick the relevant boxes to select the calculations you want to create.

Click on the **All** or **None** buttons to select or deselect all the tick boxes respectively.

You must have at least one calculation selected to continue.



Design standards

Select the design standard to apply. The design standards displayed are those that have been previously created in this project.

You can apply a maximum of one design standard. To continue with no design standard applied, select **None**.

Selecting scenarios

Tick the relevant boxes to select the scenarios you want to use in the calculation.

Click on the **All** or **None** buttons to select or deselect all the tick boxes respectively.

The best way to learn how to use the wizards is to follow Tutorials 1–6, which make extensive use of them to create projects and items in Repute.

Import Wizards

The Import Pile Group Wizard and Import Loads Wizard allow you to use data stored in a spreadsheet to specify key properties of your piles, pile group, and any loads applied to them.

The following folder contains spreadsheets that show how you should arrange your data so that Repute can import it successfully:

C:\Program Files (x86)\Geocentrix\Repute\2.5\Templates

The relevant templates are called:

'`Import pile foundations.xlsx`'

and:

'`Import actions.xlsx`'

You can open a copy of these templates by clicking on the appropriate button on the Wizards tab.

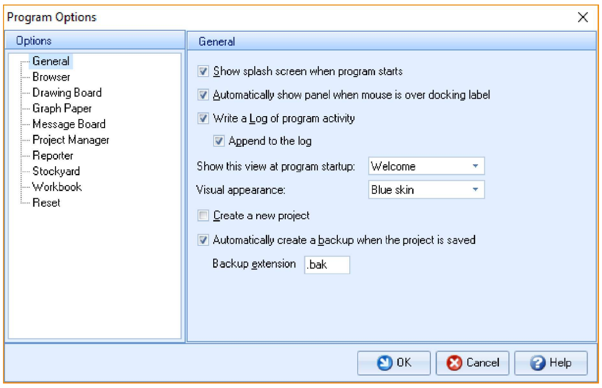
Chapter 14
Program options

You can change the default settings for Repute's user interface, projects, and reports using the **Program Options box**. This allows you to customize everything from the visual appearance of the program to the file extension of the backup files that it produces.

The Program Options box

To open the Program Options box:

1. Left-click on the **File menu**
2. Left-click on the **Program Options button** at the bottom of the menu



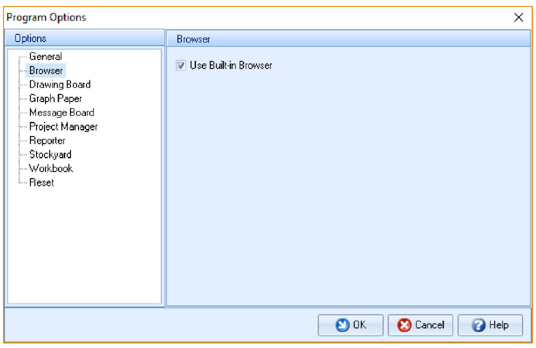
The tree control on the left-hand side allows you to select pages to be displayed on the right.

- Click the **OK** button to apply the changes made to Repute's default settings
- Click the **Cancel** button to close the box and cancel any changes made
- Click the **Help** button in the bottom right of the box to access the help file and view more details on how to use this box

The following paragraphs explain the pages available in the Program Options box and each of the settings they allow you to modify.

General

Show splash screen when program starts
This selects whether or not the splash screen is displayed during the program start-up. This window shows the program name and version number as well as containing a progress bar at the bottom indicating when the program has finished loading.



Automatically show panel when the mouse is over docking label
When a panel is minimized it is displayed on the edge of the main window as a docking label. This selects whether the panel is automatically maximized when the mouse cursor moves over this label.

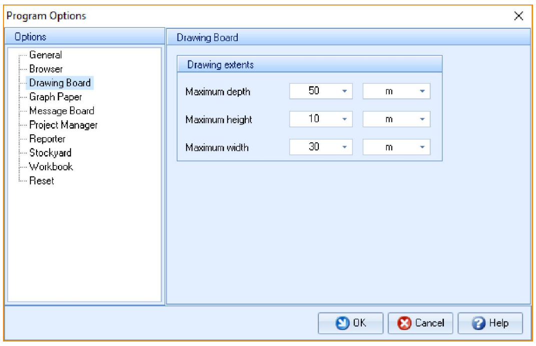
Write a log of program activity
This tells Repute to keep a record of the program activity which can be accessed from the folder C:\DocumentsandSettings\All Users\ApplicationData\Geocentrix\Repute.
This may be useful if you have to contact Geocentrix technical support.

Show this view at program startup

This lets you select from a drop down list which desktop arrangement is displayed at the program start-up. By default this is the Welcome desktop.

Visual appearance
This lets you select from a drop down list which colour scheme to apply to the program. By default this is the Blue skin style.

Automatically create a backup
This instructs Repute to create a backup of your project file whenever you save it, with the extension you specify. By default the extension is '.bak'.



Browser

Use built in browser

This instructs Repute to use its built-in brower to display web pages, rather than your external (default) Windows browser.

Drawing Board

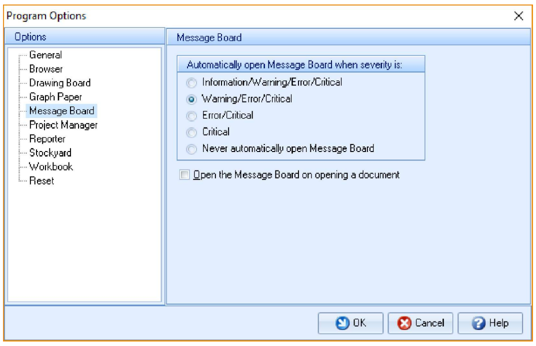
Drawing extents

These options let you select the maximum dimensions of the drawing within the Drawing Board panel.

Graph Paper

The Graph Paper page currently has no options that can be set.

Message Board



These options lets you control the threshold for when the Message Board panel opens. Select the box applying to the desired level of severity for when you want the Message Board to open.

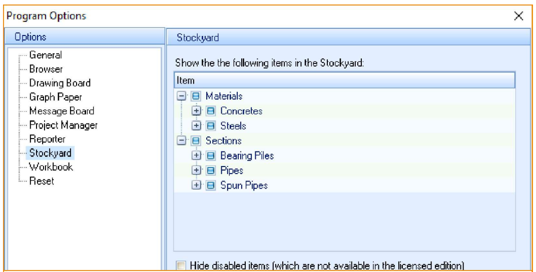
Project Manager

The Project Manager page currently has no options that can be set.

Reporter

The Reporter page currently has no options that can be set.

Stockyard

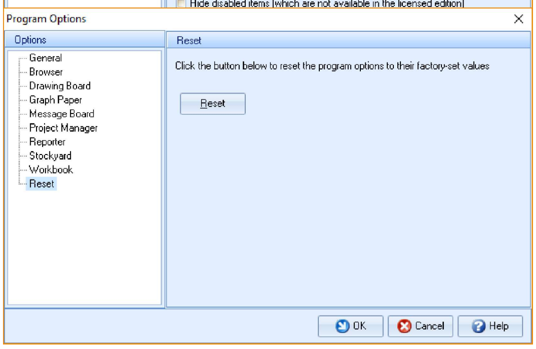


These options allow you to specify which items appear in the Stockyard when you next start the program. Tick the items that you want to appear and untick those you don't want to appear.

Workbook

The Workbook page currently has no options that can be set.

Reset



The reset button allows you to restore the program's settings back to their factory values.