

Section 2

KeyTREE - Advanced Features

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Creating your own Vegetation Symbol

KeyTREE provides you with the facility to quickly create and add new symbols to the system, allowing you to develop your own graphic style for your drawings. You can add graphics to the specific symbol types, e.g. trees, shrubs, etc, to expand the default palettes. Also, KeyTREE includes three blank Project Symbol libraries where you can add, and quickly retrieve, your own preferred graphics, such as standard drawings.

Drawing the Symbol

- From the **File** menu select **New** to start a new (Blank) drawing based on the ACADISO.dwt (*AutoCAD metric*) template or KSLTOSO.dwt (*KeySCAPE LT metric*) template.
- From the **Draw** pulldown menu, select **Circle>Centre, Radius**
- When requested at the command prompt to **Specify center point for circle**, enter **0,0**.

This will put the centre of the circle at the co-ordinate 0,0, the insertion reference point used when it is inserted in a KeyTREE drawing later.

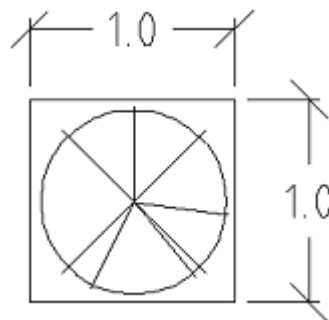
- When requested at the command prompt to **Specify radius of circle or [Diameter]**, enter (*a radius of*) **0.5**.

This will create a 1 unit diameter circle. This means that when it is inserted in to a drawing, you can define the spread of the vegetation drawing and the symbol will scale correctly.

- From **View>Zoom** menu select **Extents**. The circle will now fill the drawing editor.

*If the circle looks angular, from **View** menu select **Regen** to refresh the display and smooth the circle.*

- From **Format>Layer**, create a new layer called **T_plan_01** and assign the colour **64**, or other required, to the new layer.
- Make the layer T_plan_01 **Current**. Pick **[OK]**.



- Create, using AutoCAD's drawing tools, your own unique vegetation drawing using the construction circle as a guide, e.g.
- Once the symbol id defined, erase the construction circle used to define the drawing extents.
- From **View>Zoom** select **Extents**. The symbol will now fill the drawing editor.
- When you have created your symbol, select **File>Save** and navigate to the directory:

```

C:\KeySCAPE Systems Application Data\
  All Users\
    KeyCORE\
      Symbols\
        Project 1\
          Plan\
            Vegetation
  
```

- For the drawing name, enter **Mytree**, or other name as required, and select **Save**. Close the drawing
- The vegetation symbol will be added to the Tree Symbols Library.

Using your New Symbol

- Open the drawing into which you wish to insert the new symbol.
- From **Tree**, select **Project Libraries>Project 1**. The **Project 1** dialog appears.
- Select the **Plan** tab to display your plan symbol.
- **Double-click** the image icon. You are returned to the drawing editor.
- At the command line you are prompted:

Insertion Point:	<i>(Pick the insertion point of the tree)</i>
Spread:	<i>(Enter the spread of the tree)</i>
Height:	<i>(Enter the height of the tree)</i>
Rotation:	<i>(Enter the rotation for the tree)</i>

- The vegetation symbol you created will now appear in the drawing.

The symbol created will remain in the project library unless you choose to delete it using Windows Explorer.

KeySCAPE contains 3 project libraries. These allow you to create and add your own graphics to the system to build up your own palette of symbols for quick access to your preferred symbols. These can be accessed, as described above, or by using the shortcut keys:

P1 - Project 1

P2 - Project 2

P3 - Project 3

Creating your own Vegetation Edge Pattern

KeyTREE now provides you with the facility to quickly create and add new line patterns for use with the display of the tree canopy (when not using Use BS Category), allowing you to develop your own graphic style for your drawings.

Drawing the Pattern

- From the **File** menu select **New** to start a new (Blank) drawing based on the ACADISO.dwt (*AutoCAD metric*) template or KSLTISO.dwt (*KeySCAPE LT metric*) template.
- From the **Draw** pulldown menu, select **Line**.

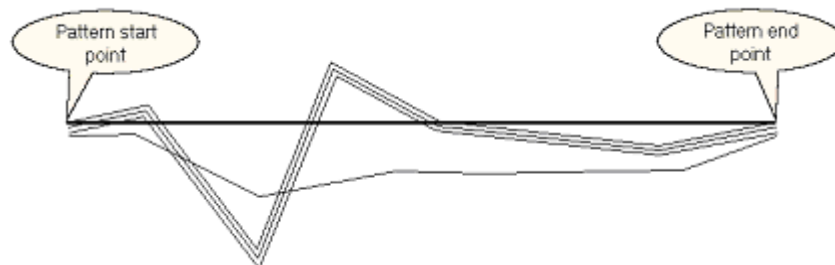
- When requested at the command prompt to **Specify first point**: pick a point on the screen where you wish to start drawing the line. *This point does not need to be 0,0.*
- When requested at the command prompt to **Specify next point or [Undo]**: enter **@1,0.** and press **Return**. This will draw a construction line 1 unit in the X and 0 in the Y.
- Press **Return** to complete the line command.
- From **View>Zoom**, select **Extents**. The line will now fill the drawing editor.
- This (*construction*) line will provide a template that ensures that the pattern scale and start point is set correctly.
- Create a new layer, e.g. **KST_PATTERN_01** and make the new layer **Current**.
- Pick **[OK]**.

IMPORTANT – Patterns *MUST* be drawn in metres, fit within 1 drawing unit, and must comprise of only **polylines or arc-segmented polylines** but *NOT* arcs, lines or circles.

- From the **Draw** toolbar, select **Polyline**.
- Using the construction line as a guide, draw the required pattern so that polyline fits between the start and endpoints of the line.

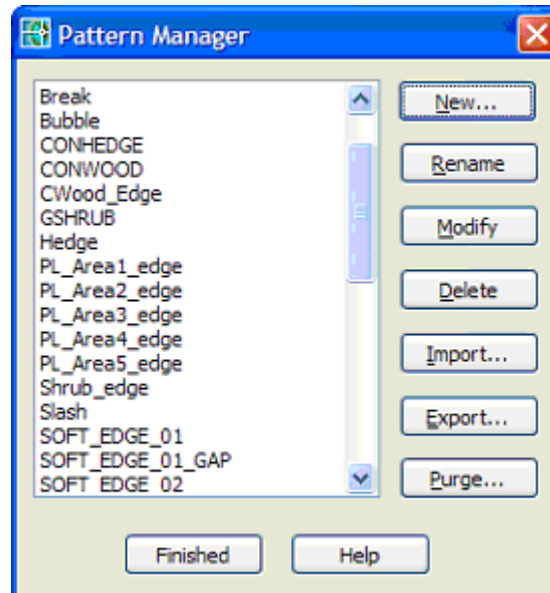
The pattern can be created from several polylines. These polylines do not need to start and end on the endpoints of the construction line but this will create gaps in the graphics when used later in the drawing.

- When the pattern is complete, you can convert it into a new pattern.



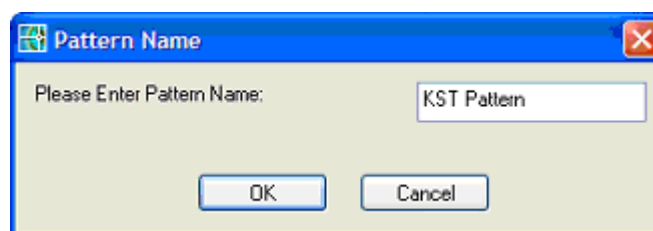
Converting the Drawing into a Pattern

- From the **Tree** pulldown menu, select **Pattern Manager**. The **Pattern Manager** dialog will appear.



- Pick **[New]**. You are returned to the drawing.
- At the command line prompt to **Select Objects**: pick the polylines that defines the pattern, excluding the contraction line, although this should be filtered out, as it is a line not a polyline.
- At the command line prompt to **Select Pattern Origin**., using the OSNAP Endpoint, pick the end of the line at the start of the pattern (*furthest left*). The **Pattern Name** dialog appears.

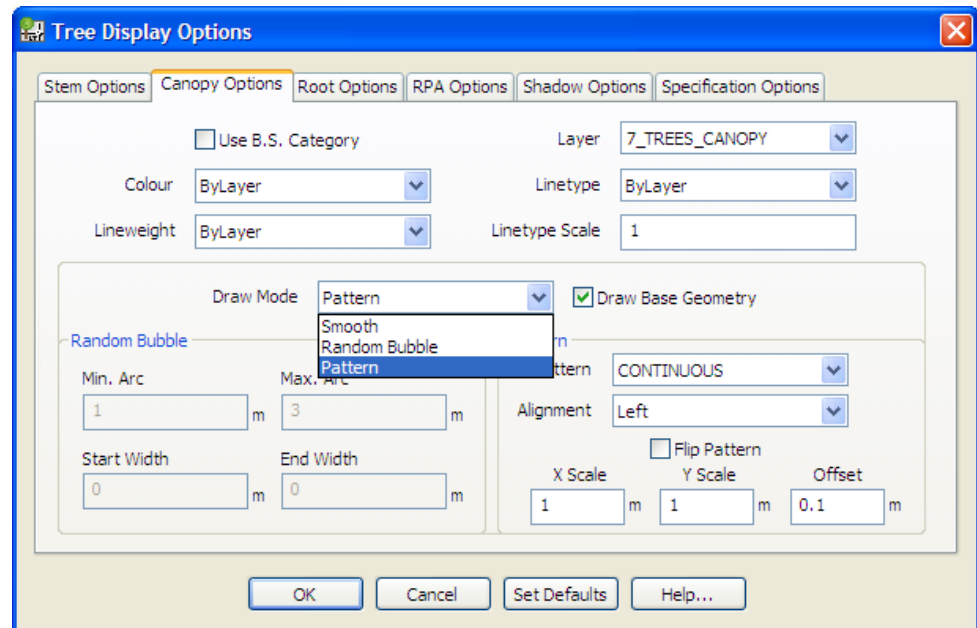
You do not need to define the other end of the pattern as KeySCAPE assumes the length of the pattern is 1 unit, hence the purpose of the original construction line.



- Enter a new name for the pattern, e.g. **KST Pattern**.
- Pick **[OK]**. The **Pattern Manager** dialog will reappear and the pattern will be displayed in the list.
- Pick **[Finished]** to complete the creation of the pattern.

Using your New Pattern

- Add a new tree using Quick Add and Add or edit an existing tree using Modify (see Section 1 for information on creating and modifying survey Trees). The relevant Add or Modify dialog appears
- Pick **[Display Options]** The Tree Display Options dialog appears.
- Select the Canopy Options tab. This offers options to control to control the display of the canopy



- Un-check Use B.S. Category. This opens several edit windows that are not available when using BS colour systems
- Under Draw Mode, pick Pattern from the dropdown list
- Under Pattern, pick the new or any predefined pattern from the dropdown list
- Define the display of the based on:

Draw Base Geometry – Sets whether or not the canopy base line draws

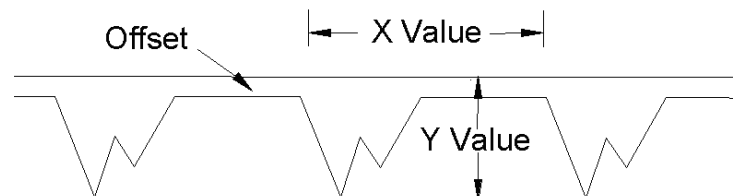
Alignment - The side of the base line where the pattern is drawn

Flip Pattern - Flip the orientation of the pattern

X Scale - The scale of the pattern in the X-axis

Y Scale - The scale of the pattern in the Y-axis

Offset – Sets the offset distance from the base line



To Preview your changes pick [OK] and then pick [Preview] in the main dialog. Return to the Display Options dialog to make further changes or to finalise your settings

- When your pattern is defined, either pick **[OK]** to set this display option for this tree alone or **[Set Defaults]** if you wish this to be the default for any new tree inserted into the current drawing.
- Pick **[OK]** to close the main Add or Modify dialog

Managing the *KeyTREE uses the following databases to store default data::*

KeyTREE Database *KSW_Database.mdb (Softworks) – Species Name, Common Name and Abbreviation*

KSS_Database.mdb (Site Survey) – Tree Survey and TPO data, such as BS Categories, Estimated Remaining Contribution, Age Class, Physiological Condition, etc.

Unless defined elsewhere during installation, ore redefined after installation, these databases are typically is typically installed and located in the folder:

*C:\KeySCAPE Systems Application Data 10.7\All Users\KeySOFTWARES\Database
and*

C:\KeySCAPE Systems Application Data 10.7\All Users\KeySITESURVEY\Database

Backing Up your Database

As the databases contains all your customised information, you are recommended to regularly back these up or move the default location to a network location where it should be backed up on a regular basis and can be shared by other KeyTREE (and KeySCAPE) users.

Database Location and Sharing

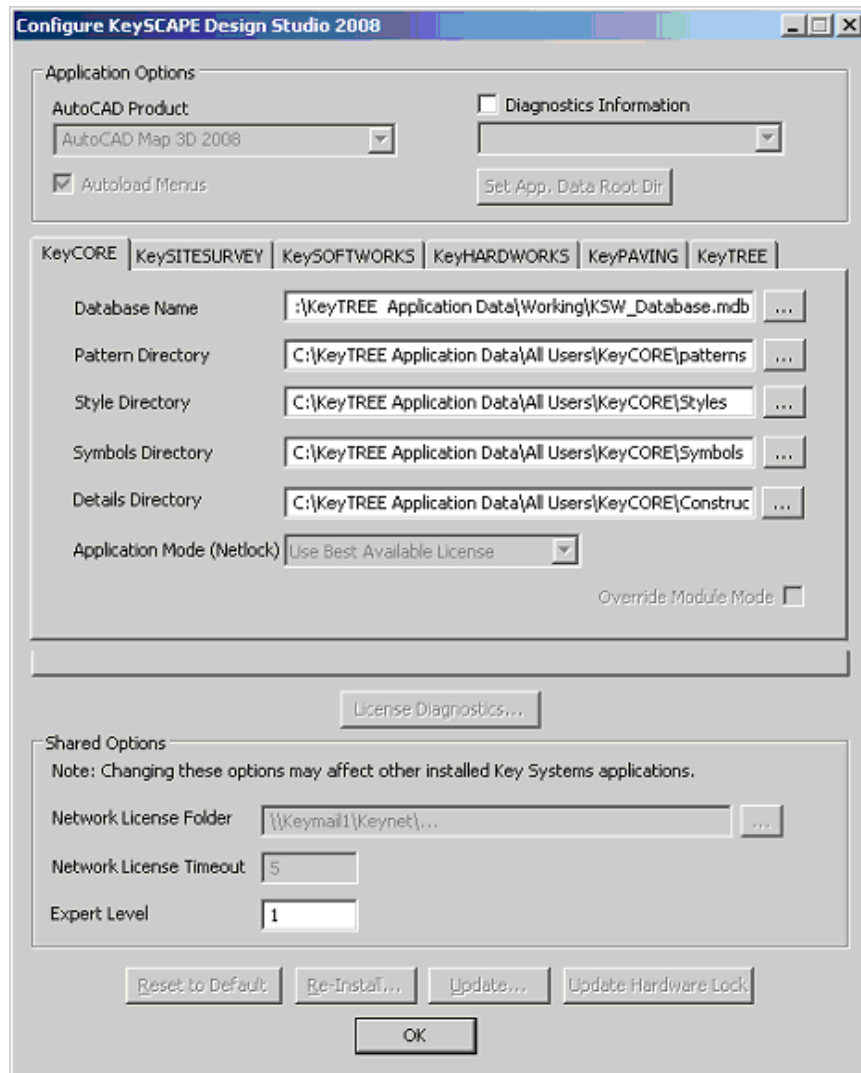
To share the KeyTREE databases between users they should be located on the network and each PC should then be configured look in this location.

Moving Your Databases to a Network Location

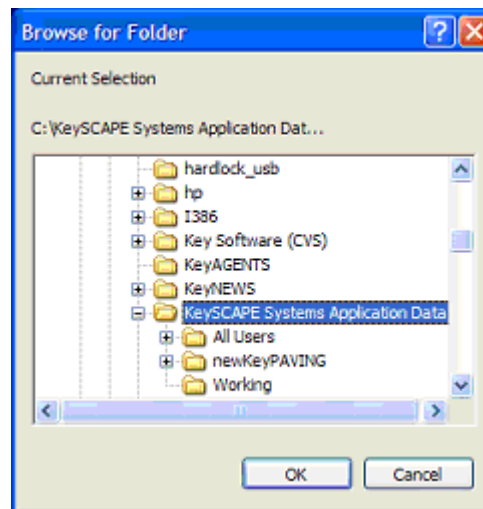
- Log in on to the current computer as a **local administrator** or a user with local administrator permissions, *this needs to be a local not domain administrator.*
- Open **Windows Explorer**.
- Copy the **KeySCAPE Systems Application Data** folder and all sub folders to a network location.

Pointing KeyTREE to Use the Network Databases

- From the **Start>Programs>KeySCAPE Systems**, run **Configure KeySCAPE** for your application. The **Configure KeySCAPE** dialog appears



- Under **Application Options**, pick [**Set App. Data Root Dir**]. The **Browse for Folder** dialog appears.



- Browse to and select the network location where you copied your KeySCAPE Systems Application Data folder.
- Pick **[OK]** to return to the Configure dialog.
- Pick **[OK]** to apply the change.
- Reopen KeyTREE/KeySCAPE

Setting Users to Use the Network Databases

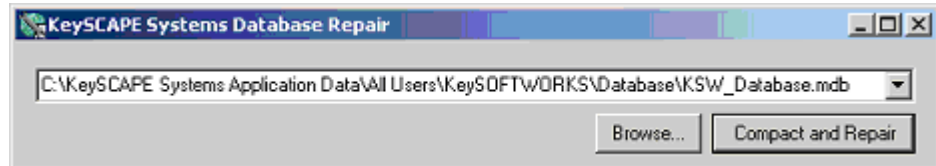
- If you set KeyTREE/KeySCAPE to use a network database **BEFORE** the software is run for the first time by each user, on first run the network paths to the databases will be automatically reading from the administrator settings.
- If you set KeyTREE/KeySCAPE to use a network database **AFTER** the software is run for the first time by each user it will default to the installed settings, typically *C:\KeySCAPE Systems Application Data 10.7\All Users*.
- To reset the user to use the network location, from Windows **Start**, select **All Programs > KeySCAPE Systems > KeySCAPE (version number) > Configure**. The **Configure** dialog appears
- Pick [Reset Defaults]. This will reset the current settings to the administrator settings, *i.e. the network location*. When this is completed successfully you will be notified.
- Pick **[OK]** to close the configure dialog. Run KeyTREE/KeySCAPE from the desktop icon and KeySCAPE should not run from the network databases. You can check this from Core>Configure
- Repeat this process for each user that has already run the software before you set the databases to to use the network locations

Whilst not recommended, you will note that flexibility exists to set different locations for individual folders contained within the KeySCAPE Systems Application Data folder.

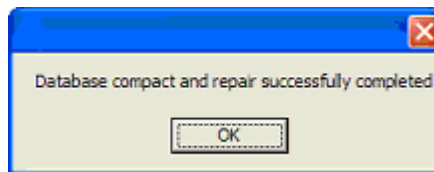
Repairing and Compacting the Database

To maintain the performance of your database and repair any errors that may arise, it is recommended to compact and repair your database on a regular basis.

- Close your copy of KeySCAPE / KeyTREE or, if sharing a network database, close all copies of KeySCAPE / KeyTREE.
- From the Windows Desktop, pick Start>All Programs>KeySCAPE Systems>Your installed application (e.g. KeySCAPE Design Studio 2007)>Database Repair. The **KeySCAPE Systems Database Repair** dialog appears.



- If the path and database does not appear in the edit window, or is incorrectly defined, pick **[Browse]**.
- Select the database from the list or pick **[Browse]** to navigate to and select your database file in the correct location. Pick **[OK]** to return to the KeySCAPE Systems Database Repair dialog
- Pick **[Compact and Repair]**. When complete you will be notified (*this may take a few seconds to complete*):



- Close the dialogs and reopen KeySCAPE

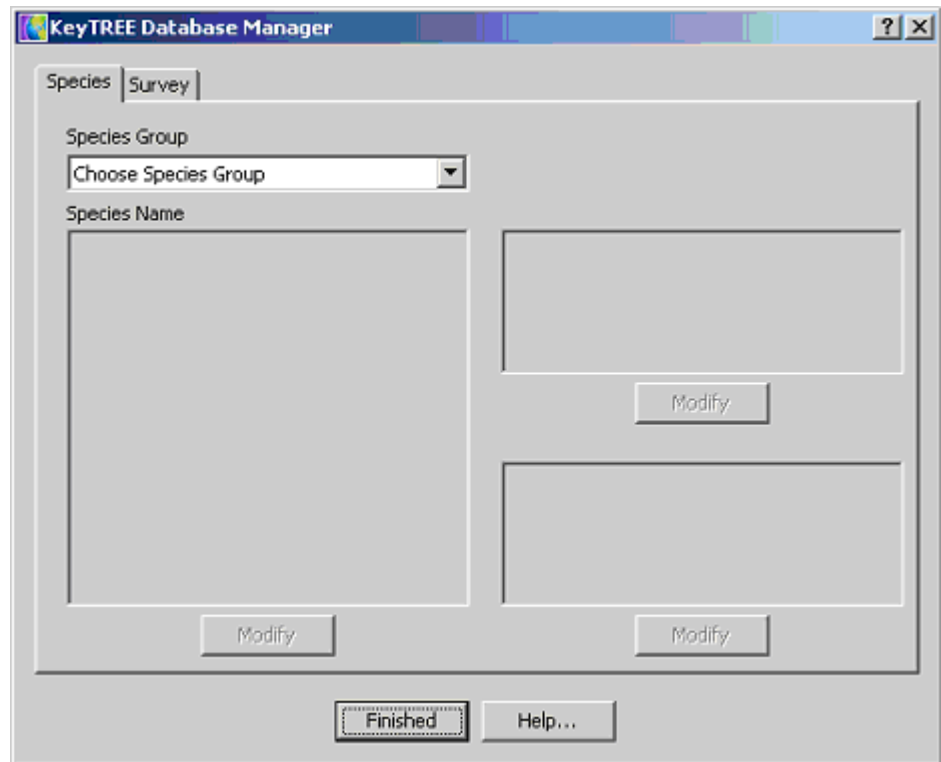
Modifying the Content of the Database

You can modify any data contained on the Softworks and Site Survey database at any time.

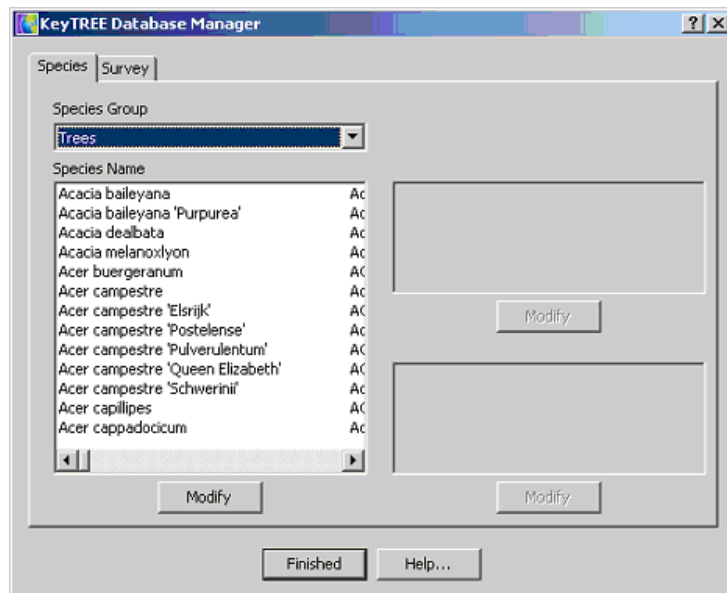
- From the **TREE** pulldown menu, select **Database Manager**. The **Database Manager** dialog appears.

Adding or Modifying Plants in the Database

- From the **Species** tab, pick the dropdown under **Choose Species Group**. The **Species** group list appears.

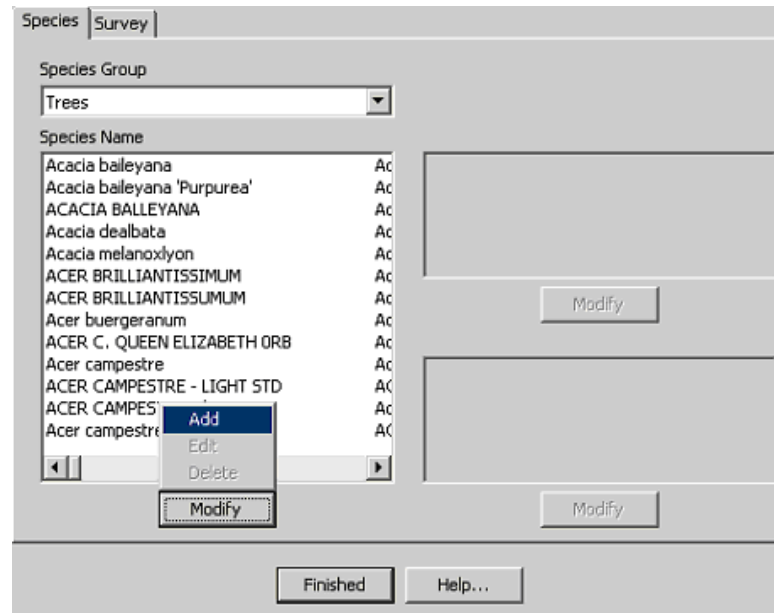


- From the list select the species group that contains the data you wish to modify, e.g. **Trees**. *The edit window below will un-grey.*

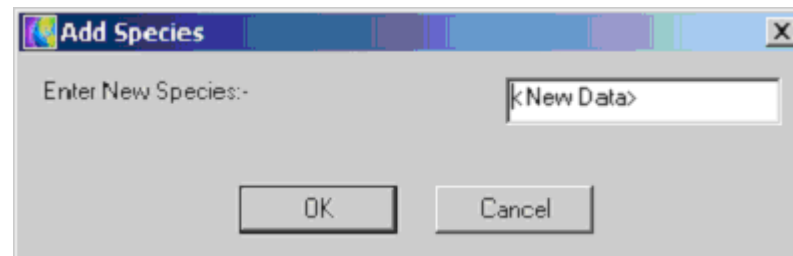


Adding a new species to the database

- Under the species list, pick **[Modify]**. A pop-up list will appear



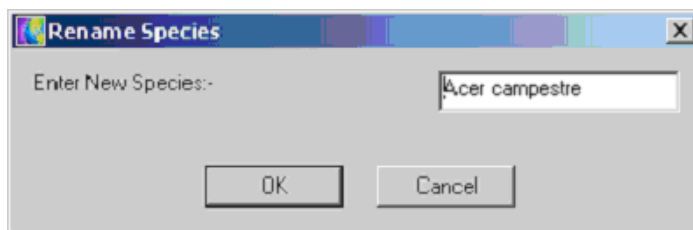
- Pick **Add**. The **New Data** dialog appears.



- Enter the new species name.
- Pick **[OK]** to add the new species to the species list for the currently selected group, e.g. *Trees*

Modifying a species name in the database

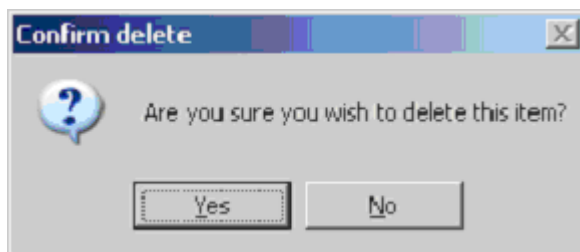
- Under the species list (*left-hand side window*) pick the plant you wish to modify and select **[Modify]**. From the pop-up list pick **Edit**. The **Rename Species** dialog appears.



- Enter the new name. Pick **[OK]** to apply the change

Removing a Species

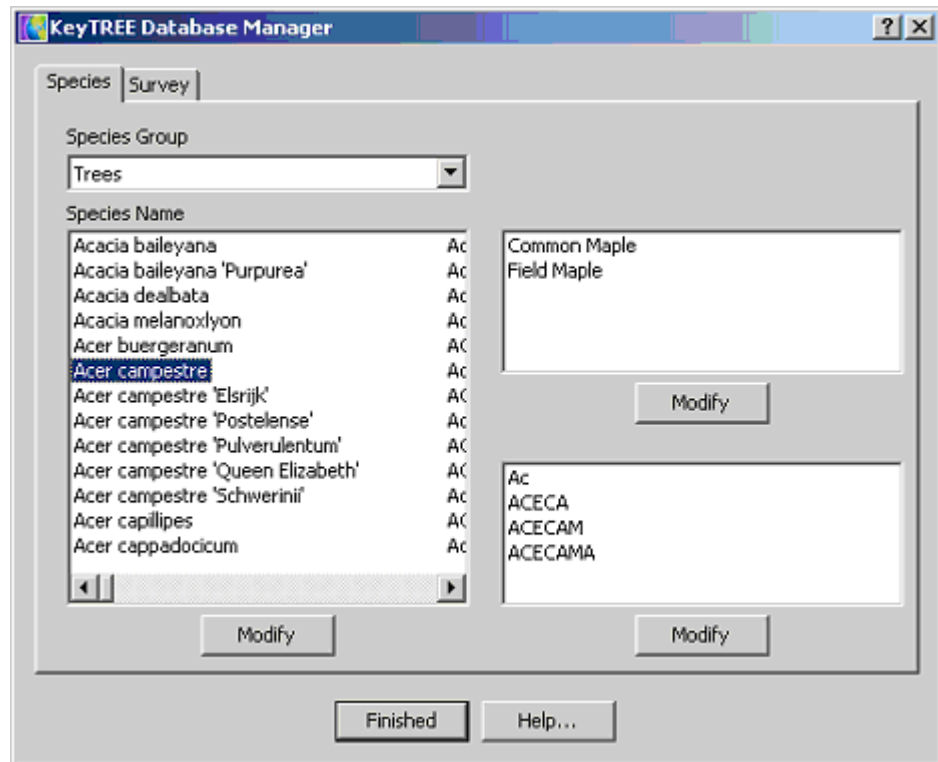
- Under the species list (*left-hand side window*) pick the plant you wish to remove and select **[Modify]**. From the pop-up list pick **Delete**. A warning dialog appears requiring you to confirm that you wish to delete the plant.



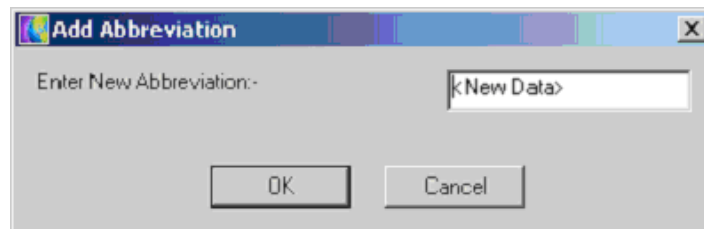
- Pick **[Yes]** or **[No]**, as appropriate.

Adding an Abbreviation and Common Name

- Under the species list (*left-hand side window*) pick the plant that you wish to add an abbreviation or common name. *The right-hand windows will un-grey.*



- Pick [**Modify**] under the appropriate window and the **Add Abbreviation** or **Add common name** will appear.



- Enter the new data. Pick [**OK**] to assign the changes to the selected species.

You can assign multiple abbreviations and common names to a species and these can be selected when specifying the tree.

Editing an Abbreviation or Common Name assigned to a Species

- Under the species list (*left-hand side window*) pick the plant you wish to modify. *The right-hand window will un-grey.*
- Enter the new abbreviation or common name. Pick [**OK**] to update the data for the selected species.

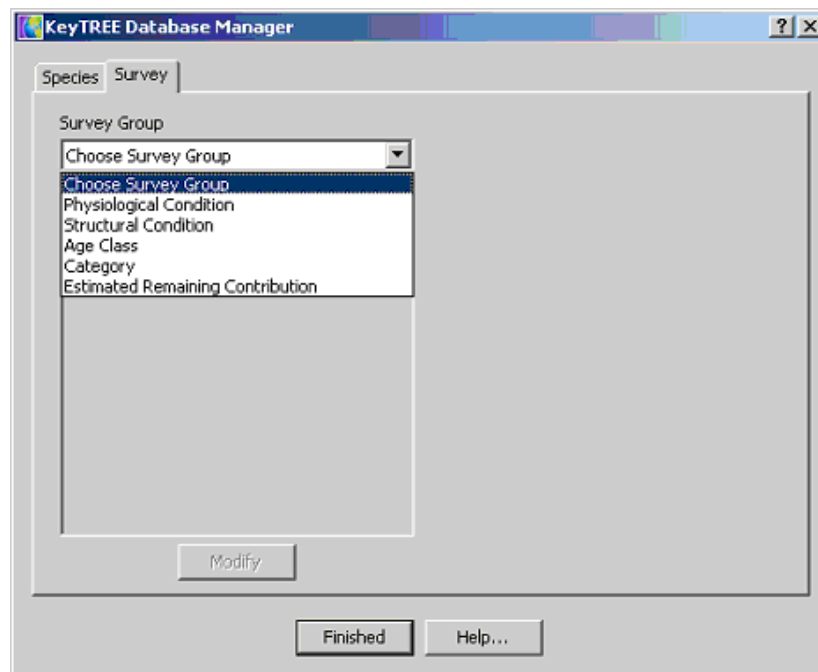
Removing an Abbreviation or Common Name assigned to a Species

- Under the species list (*left-hand side window*) pick the plant you wish to modify. *The right-hand window will un-grey.*

- Under the abbreviation or common name list (*right-hand side window*) pick **[Modify]**. From the pop-up list pick **Delete**.
- A warning dialog appears requiring you to confirm that you wish to delete the data.
- Pick **[Yes]** or **[No]**, as appropriate.

Modifying Survey Lists on the Database

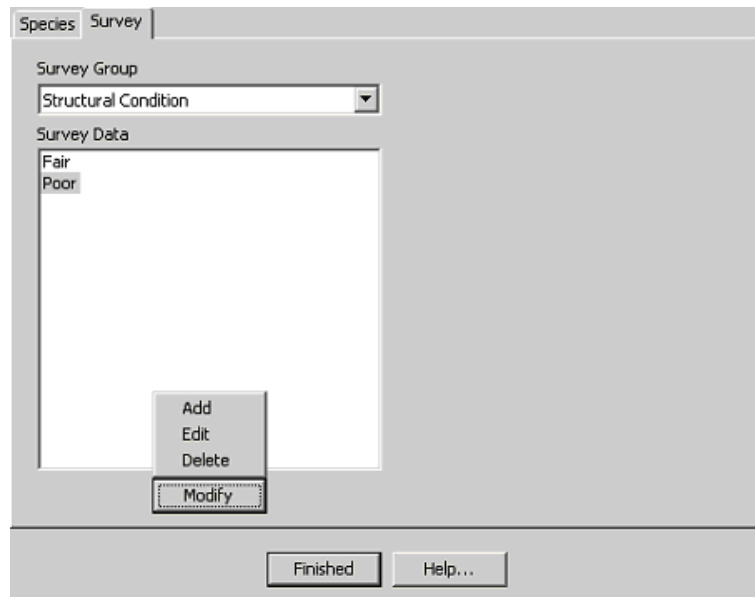
When specifying a tree you can select from common lists defined in KeyTREE. However, you can supplement these with your own specification items, if required.



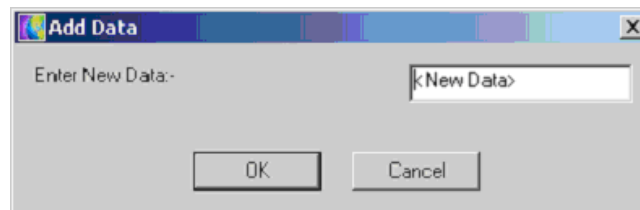
- From the **Survey** tab, pick the dropdown under **Choose Survey Group**. The **Survey** list appears.
- From the list select the group that contains the data you wish to modify, e.g. **Structural Condition**. *The edit window below will un-grey.*
- The data list will appear to show data that is available for editing within the selected group.

Adding a new Survey Group Item to the database

- Under the window, pick **[Modify]**. A pop-up list will appear



- Pick **Add**. The **New Data** Dialog appears.



- Enter the name for the new data, e.g. **Very Poor**. Pick **[OK]** to add the new data to the list.

Editing a survey data Item

- Under the Survey Group list (*top pop-down list*) pick the category containing the item you wish to edit. *The item will appear in the box below*
- Pick the item you wish to modify from the list and pick **[Modify]**. From the pop-up list pick **Edit**. The **Rename** dialog appears.
- Enter the new specification item. Pick **[OK]** to update the item for the selected category.

Removing a Survey data Item

- Under the Survey Group list (*top pop-down list*) pick the category containing the item you wish to delete. *The item will appear in the box below*
- Pick the item you wish to delete from the list and pick **[Modify]**. From the pop-up list pick **Delete**.
- A warning dialog appears requiring you to confirm that you wish to delete the

item.

- Pick **[Yes]** or **[No]**, as appropriate

Specification Styles

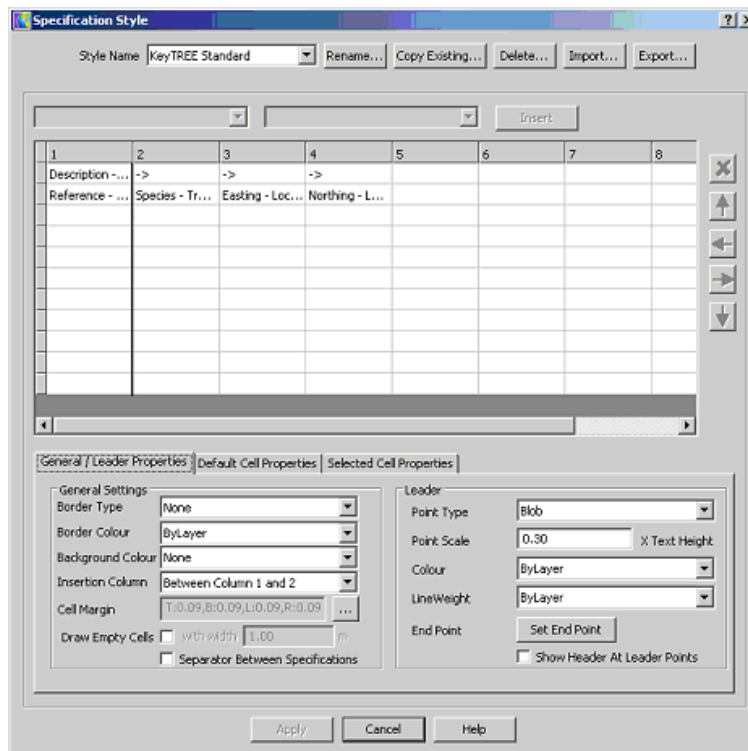
Styles allow you to define or redefine the display of specification information in the drawing. Styles are a common means of displaying and modifying the appearance of an AutoCAD object in the drawing. You will be familiar with some of these using general AutoCAD, e.g. Text Styles, Dimension Styles, Plot Styles.


AutoDesk has extended this functionality to control the display of objects in their own applications, such as Architectural Desktop, Map 3D and Civil Design. Styles allow you to quickly modify aspects of the object (or its display) and see the immediate affect of the change, not only to the main object but also to all "linked" objects, thus speeding up modifications to the drawing and the consideration of design options. KeyTREE uses Styles to control how information in a specification label or schedule is displayed. Drawing Setup (Core) allows you to create and define the default styles before you start drawing but you have the flexibility to create more styles and modify existing ones as you start designing.

Modify the Appearance of Tree Specification Text

Also refer to **Section 1: "Modifying a Tree Specification"** for information regarding changing the Specification text font, height, angle (rotation) and redefining the specification leader.

- From the **Tree** drop-down, select **Specification Display>Styles**. The **Specification Style** dialog appears.



You can also access the specification styles from **Core>Drawing Setup>Tree Styles (tab)>Specification Style>** 

You can modify the current style as follows:

- **Style Name** – drop down list showing the Specification Styles available in the current drawing. The default style, KeyTREE Standard will be created with every new drawing opened with KeyTREE
- **[Rename...]** - allows you to rename the currently selected Style
- **[Copy Existing...]** - allows you to make a copy of the currently selected Style and edit the display specification information so the original style remains unedited.
- **[Delete...]** - allows you to delete the currently selected Style from the drawing. You will not be able to delete a style if it is being used in the drawing.
- **[Import...] & [Export...]** - Specification Styles can be exported and imported as *.kis files. This provides the facility to export styles defined in one KeyTREE drawing to import in another KeyTREE drawing. If these files are held on a network, or shared drive, they can be used by several users, as required.

The default KeyTREE Standard style will be created with every drawing opened with KeyTREE. If you wish to define your own default template, modify and export your preferred style overwriting the KeyTREE Standard.kis file. It is recommended that you make a copy of the original file before overwriting it in case you need to restore the default installed style in the future.

General / Leader General Settings Properties

Cell Border Type - select from underline or box

Cell Background Colour – select from the full range of AutoCAD colours

Cell Border Colour – select from the full range of AutoCAD colours

Insertion Column – moves insertion point for text

Cell Margin – adjusts cell margins

Draw Empty Cells and **Separator between Specifications** can be set

Leader Properties

Point Type – select from blob, arrowhead etc.

Point Scale – adjust size of point

Colour - allows you to define the colour of the leader, as by default, the leader will take on the colour of the layer on which the object is inserted

Line-weight – select from line-weight

Endpoint – the end point of the leader can be set in relation to the text

Show Header At Leader Points – allows you to replace leader points with header text defined within the specification of the plant.

The **Header at Leader Properties** tab only appears if you have **Show Header At Leader Points** ticked on the **General / Leader Properties** tab.

Default Cell Properties

Text Style - pick from the list of current (AutoCAD) Text Styles defined in the drawing

Text Colour - select the preferred colour for the text as, by default, the text will take on the colour of the layer on which the object is inserted

Text Height - specify the height of the text relative to the current drawing units (M, MM or Inches)

Text Justification - defines whether the specification text is justified left, right or centred about the picked insertion point

Cell Border Type - select from underline or box

Cell Background Colour – select from the full range of AutoCAD colours

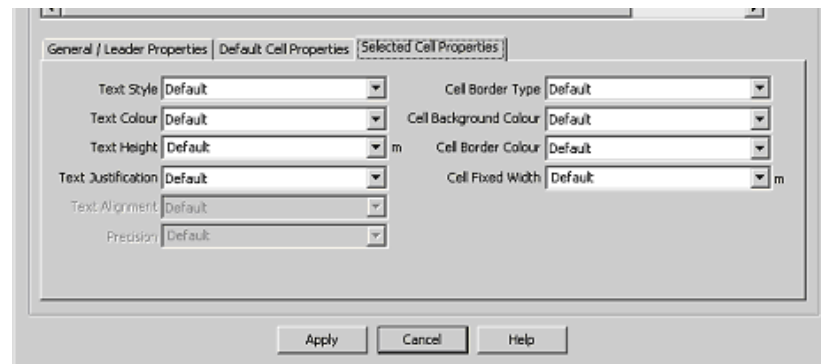
Cell Border Colour – select from the full range of AutoCAD colours

Cell Fixed Width – a fixed cell width can be entered

Text Alignment – pick from the options: Top, Middle and bottom

Precision – Setting the precision here overrides the AutoCAD text precision setting

Selected Cell Properties



Text Style - pick from the list of current (AutoCAD) Text Styles defined in the drawing

Text Colour - select the preferred colour for the text as, by default, the text will take on the colour of the layer on which the object is inserted

Text Height - specify the height of the text relative to the current drawing units (M, MM or Inches)

Text Justification - defines whether the specification text is justified left, right or centred about the picked insertion point

Cell Border Type - select from underline or box

Cell Background Colour – select from the full range of AutoCAD colours

Cell Border Colour – select from the full range of AutoCAD colours

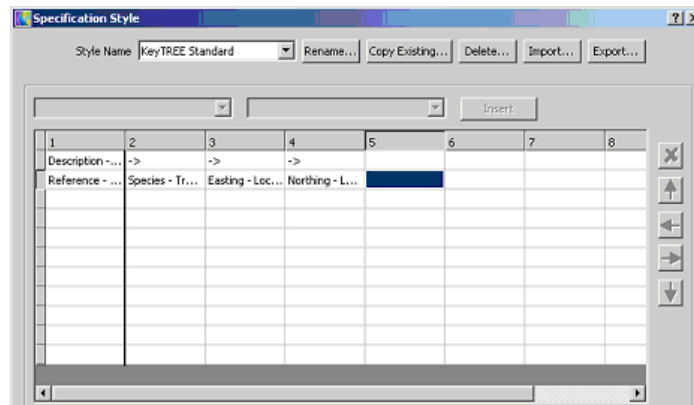
Cell Fixed Width – a fixed cell width can be entered

Style Grid *The grid displays the information that will be displayed in the drawing specification text.*


You can modify the grid in the following ways:


[Insert] - Use the insert button to add new cells into the grid. First select the group and type of information to insert from the drop-downs.

An item can only be inserted into the grid once. If the item is already in the grid it will no longer appear in the drop-down. If an item is removed from the grid it will re-appear in the drop-down.

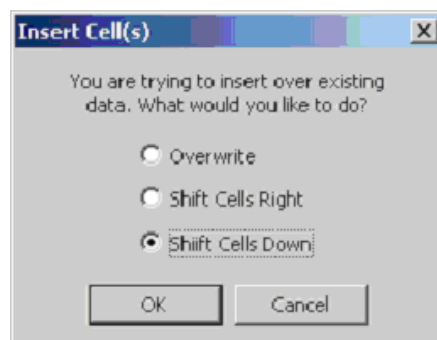


You can only add a specification item to a blank cell. If no cell is selected, the item will appear, by default, at the bottom of the list. If the selected cell already contains a specification item, you will be asked whether you wish to add it to the bottom of the list or not. If you select [No] the operation is cancelled.

 **Remove Data** - select the specification item you wish to remove and pick the delete button from the navigation bar-

 **Navigation Buttons** - use the appropriate buttons to define/redefine the position of a selected specification item within the grid, and thus its eventual display location in the drawing

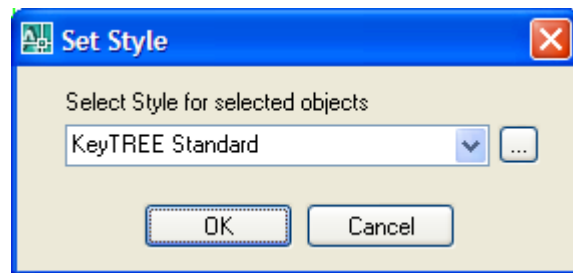
You can select a currently occupied cell when inserting new data into the grid. If you do this you will be asked if you wish to overwrite the current cell or shift the current cell to the right or down.



Assigning Specification Styles

When inserting a specification in the drawing the information will display according to the current style. However, you can have any number of styles available in a drawing and assign different styles to selected specifications, as required. You can assign a style to a specification, as follows:

- From the **TREE** drop-down, select **Specification Display>Set Style**. You are returned to the drawing and prompted, at the command line, to **select objects**:
- Select the specifications you wish to assign a different style.
- When all required specifications are selected, press **Return**. The **Set Style** dialog will appear.



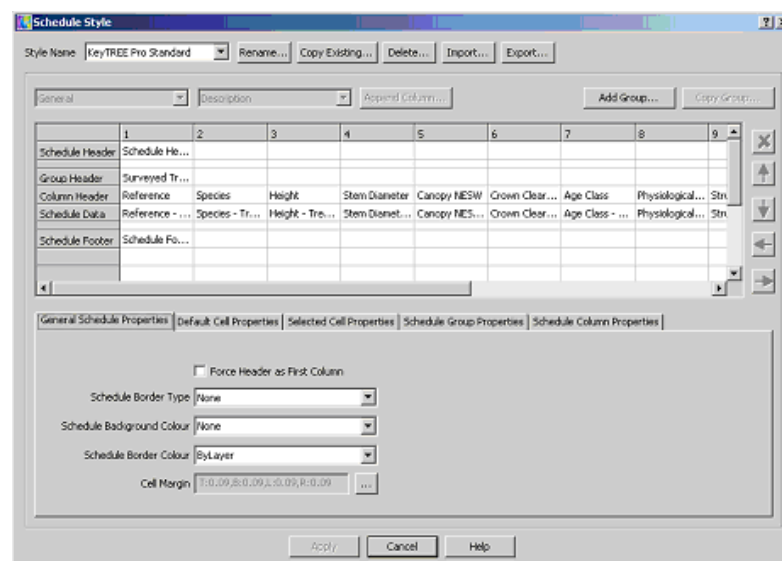
- From the dropdown list, pick the specifications style you wish to apply to the selected specifications.
- Pick **[OK]** to assign the style.

Schedules Styles

The display of the Schedule is now defined using Styles. You can create and define the default style(s) used to display a schedule before you start drawing but you have the flexibility to create more styles and modify existing ones as you start designing.

To Modify the Appearance of a Schedule

- From the **Tree** drop-down, select **Schedule Display>Styles**. The **Specification Style** dialog appears.



- You can also access schedule styles from **Core>Drawing Setup>Softworks Styles (tab)>Schedule Style>**

You can modify the current style as follows:

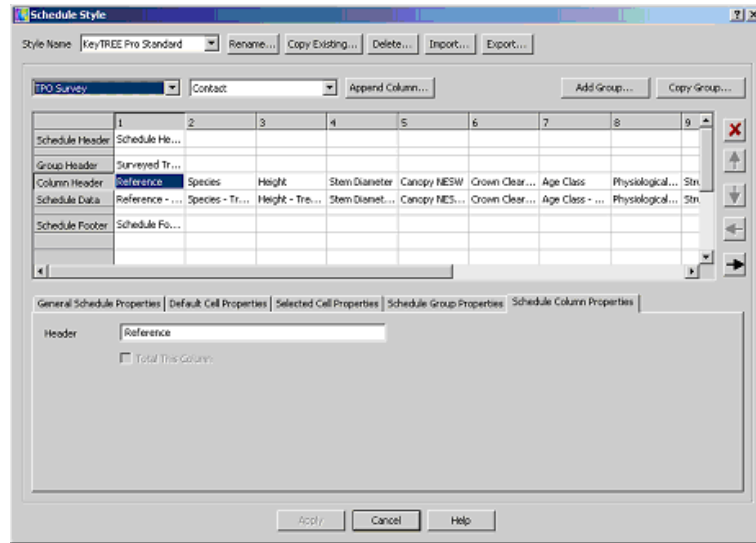
- **Style Name** – drop down list showing the Schedule Styles available in the current drawing. The default style, KeyTREE Standard will be created with every new drawing opened with KeySCAPE.
- **[Rename...]** - allows you to rename the currently selected Style.
- **[Copy Existing...]** - allows you to make a copy of the currently selected Style and edit the display specification information so the original style remains unedited.
- **[Delete...]** - allows you to delete the currently selected Style from the drawing. You will not be able to delete a style if it is being used in the drawing.
- **[Import...] & [Export...]** - Schedule Styles can be exported and imported as *.kss files. This provides the facility to export styles defined in one KeyTREE drawing to import in another KeyTREE drawing. If these files are held on a network, or shared drive, several users can use them, as required.

The default KeyTREE Standard style will be created with every drawing opened with KeyTREE. To assist with the creation of schedule styles, KeyTREE includes plot schedules style that can be imported and modified, as required.

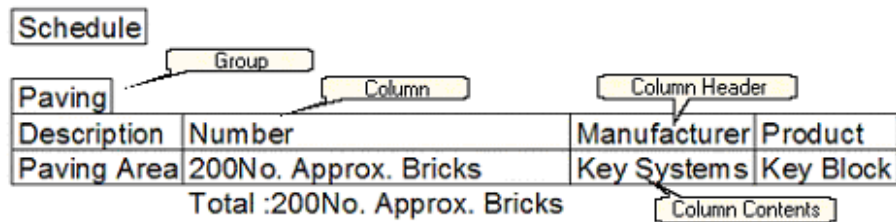
If you wish to define your own default template, modify and export your preferred style overwriting the KeyTREE Standard.kss file. It is recommended that you make a copy of the original file before overwriting it in case you need to restore the default installed style in the future.

Schedule Contents - allows you to specify the information to be displayed in the currently selected Style. This is controlled by the creation and modification of **Groups (headings)**, which include **Columns** that define the information required to describe the object. In this way you can create different schedules that only show specific information, e.g. *schedule only TPO information*

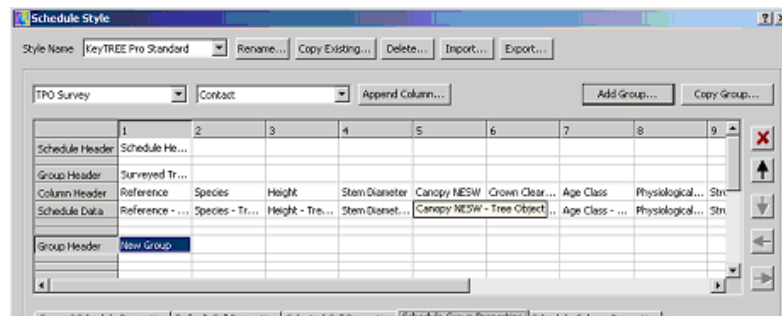
Defining Schedule Groups and Columns



Construction of a Schedule

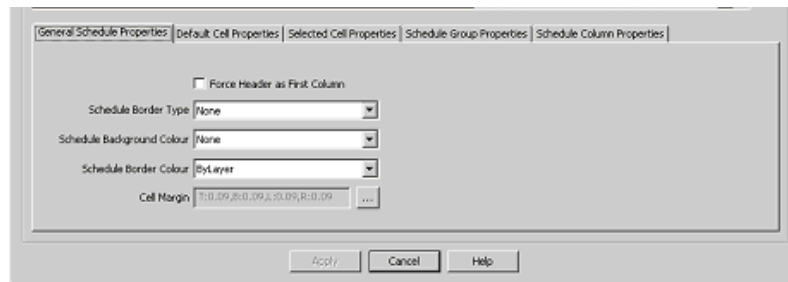


- **[Add Group...]** - creates a new group for the existing Style. This can be defined, as follows:



- **Header** - The name of the group. This is what will appear in the “header” of the group when it appears in the schedule, e.g. Trees
- **Remove Data** - select the specification item you wish to remove and pick the delete button from the navigation bar.
- **Navigation Buttons** - use the appropriate buttons to define/redefine the position of a selected specification item within the grid, and thus its eventual display location in the drawing
- **Header - Text** - The header text is entered when the Tree Schedule is added to the drawing:

- **Schedule Properties [Tabs]** - allows you to specify the text and other settings for each part of the schedule, including:



Style - pick from the list of current (AutoCAD) Text Styles defined in the drawing

Height - specify the height of the text relative to the current drawing units (m, mm or inches) **Colour** - select the preferred colour for the text as, by default, the text will use the colour of the layer on which the schedule is inserted

Border - specify whether the text is either: Boxed (has a frame), Not boxed (has no frame), or Underlined

Border Colour - select the preferred colour for the border, as by default, the border will use the colour of the layer on which the schedule is inserted

Background Colours – select the preferred colour for the background, as by default, the background will be blank

Justification - functionality not currently supported

Alignment - functionality not currently supported

Precision – Sets the precision of numerical text

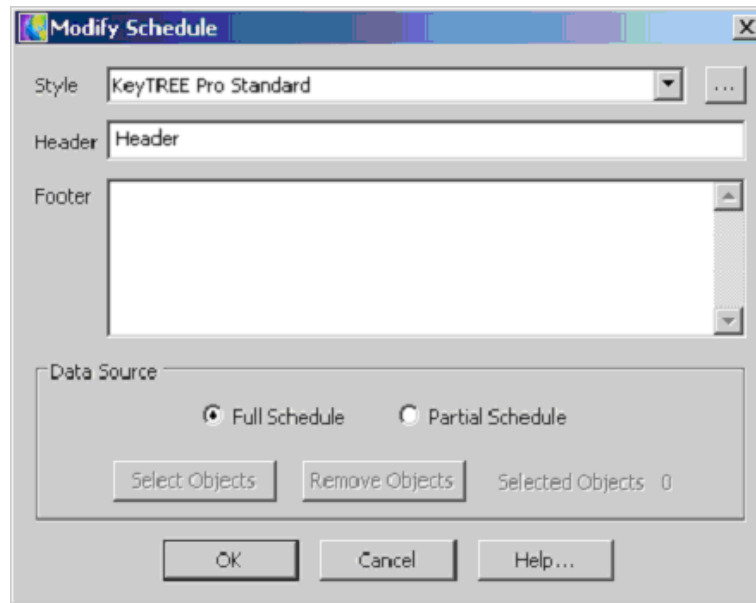
Cell Fixed Width – cells can be variable or fixed width


Schedule Group Properties – schedules can be sorted by column and by data.

Standard Schedule Styles *To help with the creation of schedule styles, KeyTREE includes several predefined styles. These can be imported in to the drawing from the styles folder and can be modified or used as a template for the creation new styles.*

Assigning Specification Styles *When inserting a schedule in the drawing the information will display according to the current style. However, you can have any number of styles available in a drawing and assign different styles to different schedules, as required. You can assign a style to a schedule, as follows:*

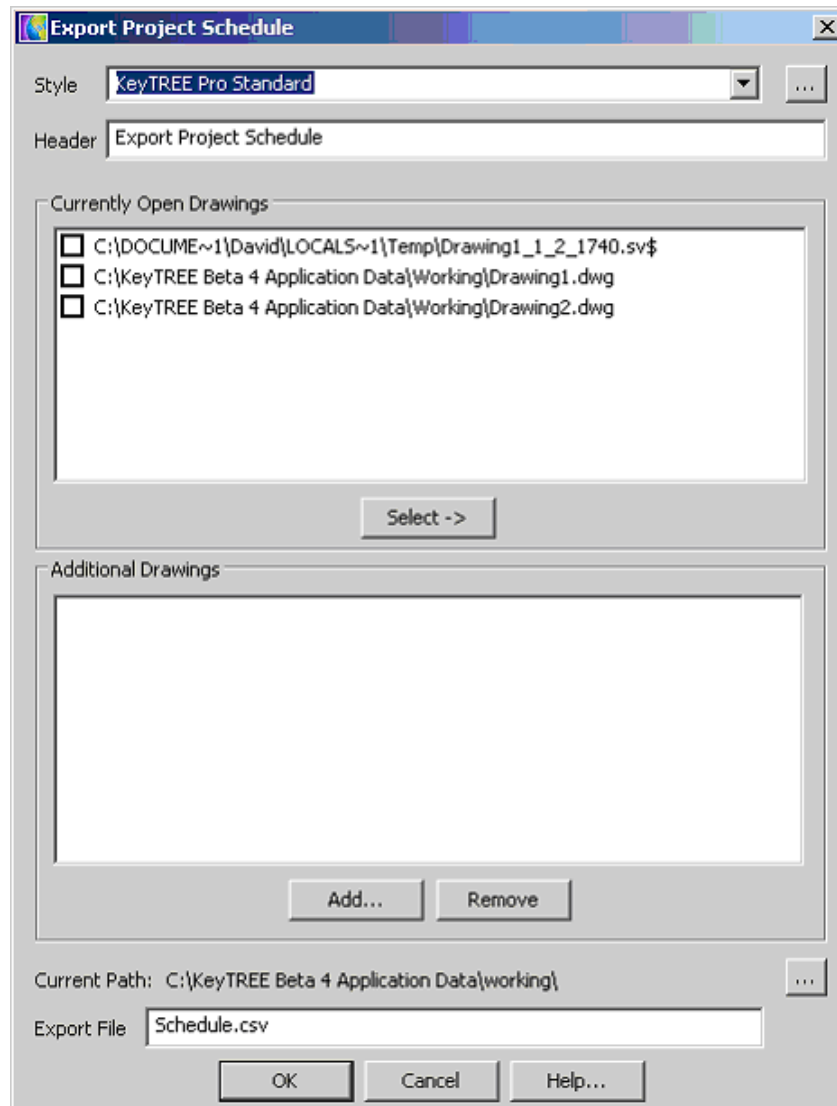
- From the **Tree** drop-down, select **Schedule Display>Modify/Set Style**. You are returned to the drawing and prompted at the command line to **Select Schedule to modify:**
- Select the schedule(s) you wish to assign a different style and press **Return**. The **Modify Schedule** dialog will appear.




- Select the schedule style you wish to use from the dropdown list or pick  to create new and/or modify an existing Style.
- Pick **[OK]** to assign the style to the selected schedule(s).

Exporting Project Schedules *Project Schedule* allows you to select a number of open or selected drawings to export as a combined file (project schedule) in a .CSV (comma separated value *.csv) text file. This file can be opened in a range of software, including MS Excel, MS Word, or MS Access.

- From the **Tree** drop-down, select **Schedule>Project Schedule**. The **Project Schedule** dialog appears.



Style - allows you to select a schedule style currently referenced in the active drawing to define the information and format of the data to be exported. Pick  to select an alternative style file.

Header - allows you to add text that will appear as a header to the exported schedule-

Currently Open Drawings - allows you to select any number of currently open drawing to include with the project export.

The drawings listed will include the current drawing and any other drawing opened in the background. It will always list the latest version of any drawing file so if an autosave has been performed on a drawing since it was last active, the drawing list will include the autosave version. These files will have a .SV\$ file extension.

- Use **[Select ->]** to either select or clear all selection-
- **Additional Drawings** - allows you to add or remove additional drawings to include with the project export-

- **[Add]** - allows to browse to an select additional drawing files to include within the project export.
- **[Remove]** - allows you to remove the currently selected drawing from the list of additional drawings.
- **Export File** - allows you to define the file name for the export file.
- Pick to define the folder where you wish the export file to be saved.
- Pick **OK** to complete the export of the entire selected drawing file(s).

*Project schedules are exported as a .CSV (comma separated value *.csv) text file. This text file can be opened in a range of software but usually requires you to set the Files of Type within the Open dialog to Text Files (*.txt, *.csv).*

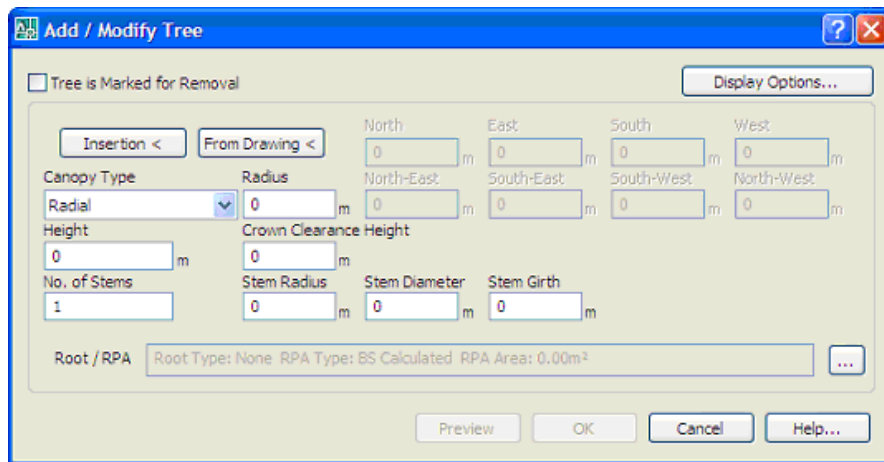
Importing Survey Tree Data from External Databases

KeyTREE allows you to import site survey tree data directly into your AutoCAD drawing from a range of external file formats, including MS Access (.mdb), MS Excel (.xls), DBase File (.dbf) or Comma Separated Values (.csv). This allows you to capture site information from survey files and quickly populate your AutoCAD drawing.

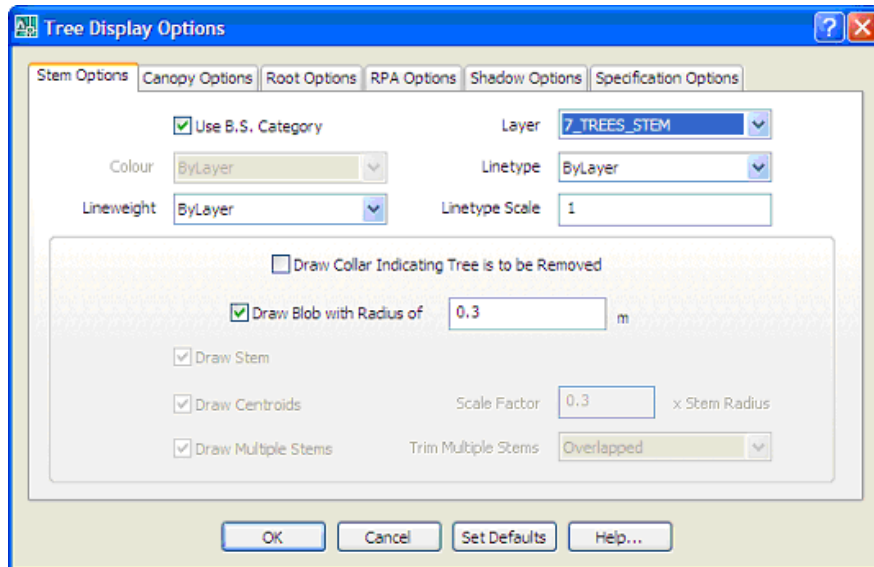
Preparing Your Drawing Before You Import Tree Data

Before importing your tree data it is recommended that you set the default settings for drawing the trees to prevent modifying each one individually once they are imported.

- Open the read-only drawing **KSTTree10.dwg** from the KeyTREE Tutorials folder or use your own tree survey drawing. The drawing shows the locations for nine trees with their respective reference numbers.
- From the **TREE** pulldown menu, select **Tree>Quick Add**. The **Add/Modify Tree** dialog appears.

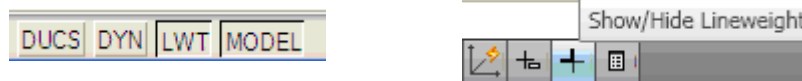


- Pick **[Display Options...]**. The **Tree Display Options** dialog appears.



- Make the display settings required. For example,
 - Stem Options tab – Set Blob Radius to 1m*
 - Canopy Options tab – Set the Lineweight to 0.50mm (from the list)*
- Make any additional changes required. Once defined, pick **[Set Defaults]**. This sets the default display options for the drawing, i.e. how the imported trees will display
- Pick **[OK]** to return to the Tree Display Options dialog.
- Pick **[Cancel]**. This will allow you to set the default display options for the trees to be imported but will not insert a new tree into the drawing.

If you have set lineweights, to show them you will need to turn on the display Lineweights toggle on the status bar



- *Save the drawing for use in the next section*

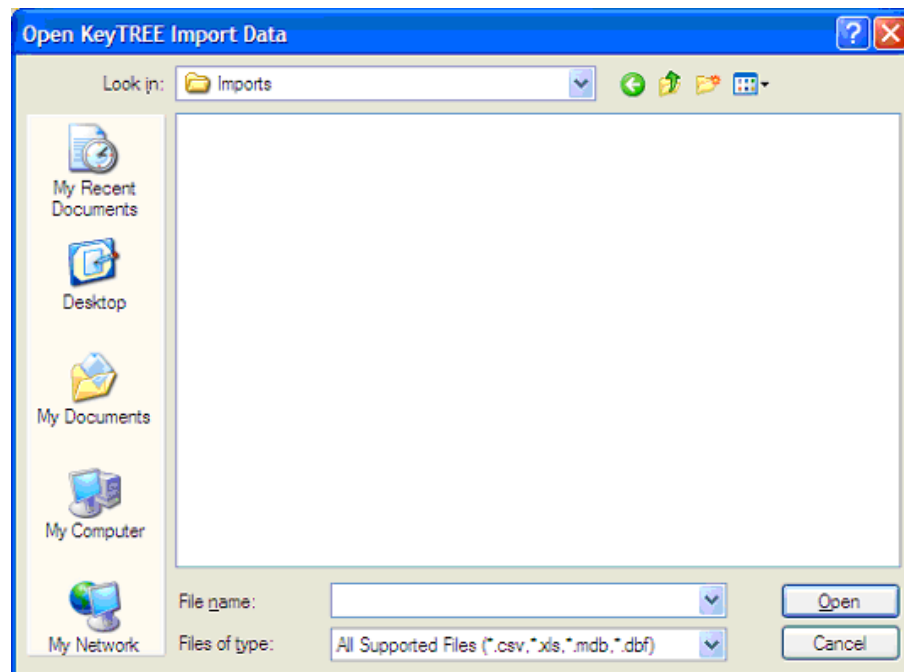
Importing Tree Data – Easting and Northing's NOT Defined

In some cases you will receive a survey drawing from a surveyor that has the location of the trees with approximate tree canopy shapes. You may then annotate the trees and take the plot of the drawing to site to record the tree information. This tree data may be collected manually or electronically and then input or exported into a database, such as MS Access, or a spreadsheet, such as MS Excel. In this instance, the tree data will have reference numbers but no Easting and Northing locations defined although these locations are available in the surveyors AutoCAD drawing. You want to import the tree data and locate the trees using the survey drawing.

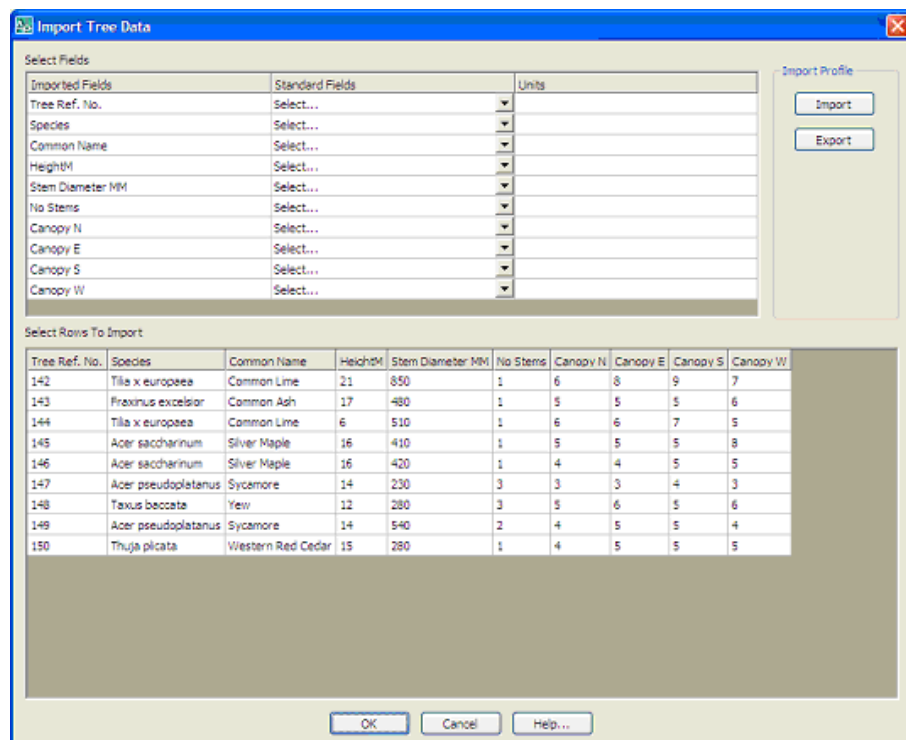
- Continue from the previous section or open the read-only drawing **KSTTree11.dwg** from the Tutorials, KeyTREE folder. This drawing shows the locations for nine trees with their respective reference numbers and has the display settings defined.



- From the **TREE** pulldown menu, select **Tree>Import**. The **Open KeyTREE Import Data** dialog appears.



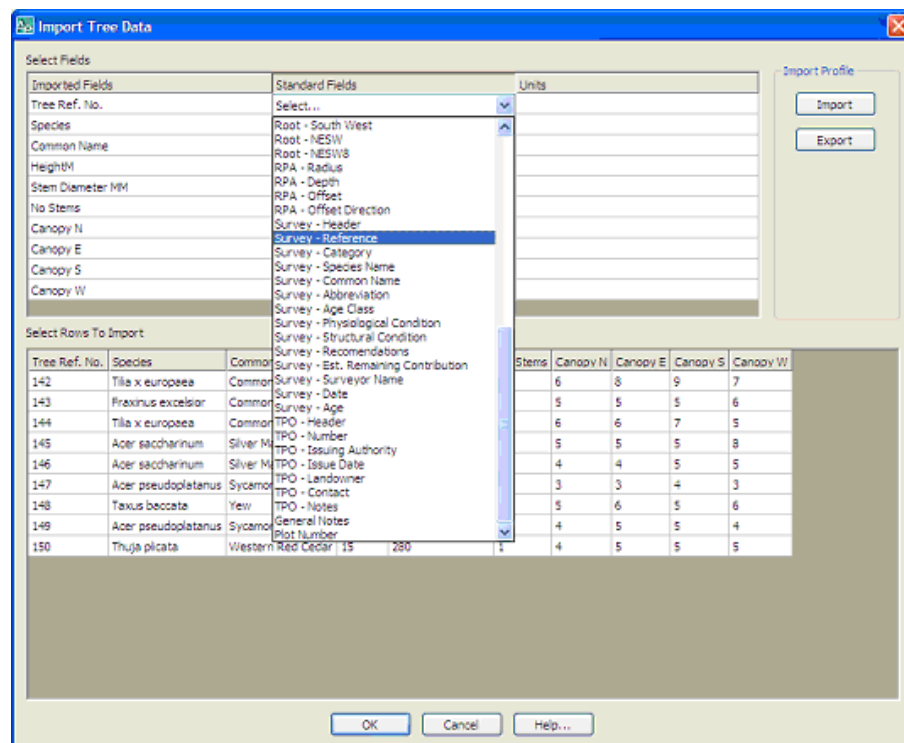
- Navigate to the KeyTREE Tutorials folder and to the **Import Files** sub-folder. Open the tree import file **KST_Tree_Import.csv**. The **Import Tree Data** dialog appears.



The top half of the dialog lists the headings contained in the import file (Imported fields) and the Standard Fields defined in KeyTREE database. The bottom half of the dialog shows a preview of the data contained in the import file.

IMPORTANT: For an import file to be imported correctly, it is important that you preview the file first and “clean” the data, as necessary, i.e. you **MUST** ensure that the first row of the import file or table is the column headers with the site recorded data listed on rows beneath this. If this is not the case, it can be very difficult to assign the columns correctly and may result in some errors on import or inappropriate data being imported. Also, **every tree record to be imported MUST have a tree reference number** for the import routine to work.

- At the top of the dialog, you assign the data contained in the Imported Fields to the Standard Fields defined in KeyTREE database.
- Under **Imported Field**, pick the first record, e.g. **Tree Ref. No.**, under **Standard Fields**, double-click the **Select...** cell or pick on the down arrow. A list of data fields defined on the KeyTREE database appear.



- Select the relevant data field on the database that matches your import data, e.g. **Tree Ref. No.** matches to **Survey – Reference**.
- Repeat for each record you wish to import.
- When the import field includes a measurement, you will be required to define the measurement type (*m*, *cm*, or *mm*) as it is quite frequent that the survey data has some data defined in one unit (e.g. tree canopy and height details in metres) but other data to be defined in another unit (e.g. stem diameter in millimetres).

Imported Fields	Standard Fields	Units
Tree Ref. No.	Survey - Reference	
Species	Survey - Species Name	
Common Name	Survey - Common Name	
HeightM	Tree Height	m
Stem Diameter MM	Stem - Diameter	Select...
No Stems	No. of Stems	m
Canopy N	Canopy - North	cm
		mm

If this is a standard form of import that you will use again, once all the required import fields have been assigned to the KeyTREE standard fields, you can save this as a template file. Use the Export function to save the file to your required location and Import to use the template file again. All import template files are saved with a .ktp file extension.

When all the necessary **Import Fields** are assigned to the KeyTREE database **Standard Fields**, under **Select Rows to Import**, pick the records you wish to import using standard Windows selection keyboard key options, e.g.

Ctrl+A (or drag down the list) - selects all records

Ctrl+pick - selects only the selected record(s)

Shift+Pick - selects all records between first and second pick.

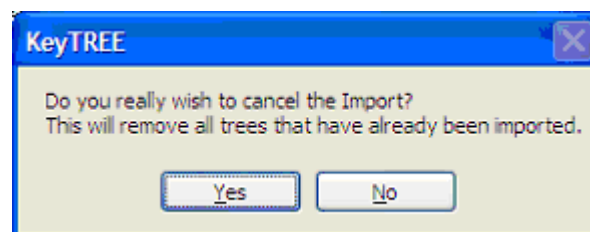
The above selection methods allow you to be selective in the records you import, if this is required, e.g. where you have amended the tree data and only wish to re-import the updated information.

- In this example select all the rows to import.
- Once selected, pick **[OK]**.
- At the command line you will be prompted:

Select Insertion Point for Tree Ref: 143

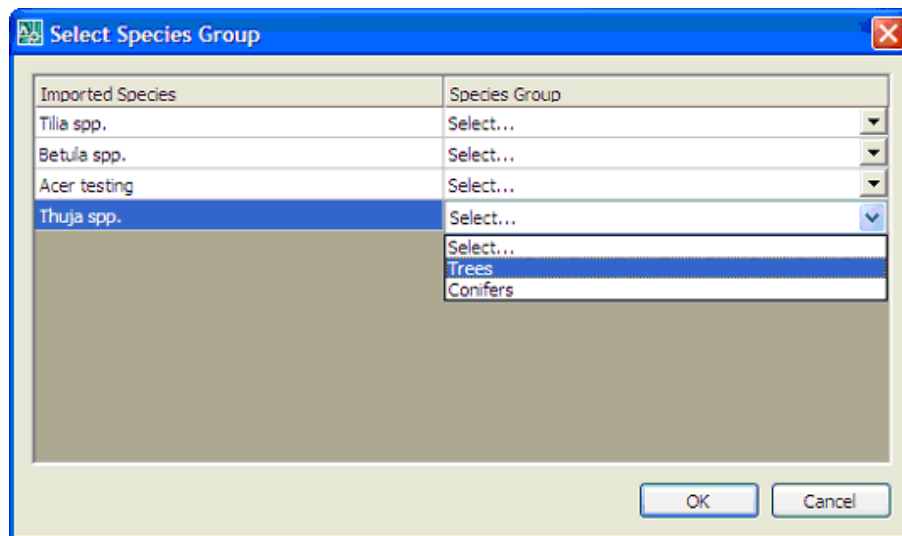
- In the AutoCAD drawing pick the centre point of the circle (*using object snaps*) that represents tree 143.
- You are then prompted for the next tree (*144*).
- Repeat for each tree.

You can stop the import at any time by pressing **[Esc]**. If you cancel the import it will cancel all trees already located in the drawing so you are prompted.



Pick **[Yes]** to cancel the import so that tree locations already defined are lost or **[No]** to continue to add the selected trees to import.

- If the import file contains tree species that are not defined on the KeyTREE database, the **Select Species Group** dialog appears.



- For each tree species you must assign the species to either the **Trees** or **Conifers** Species Group.

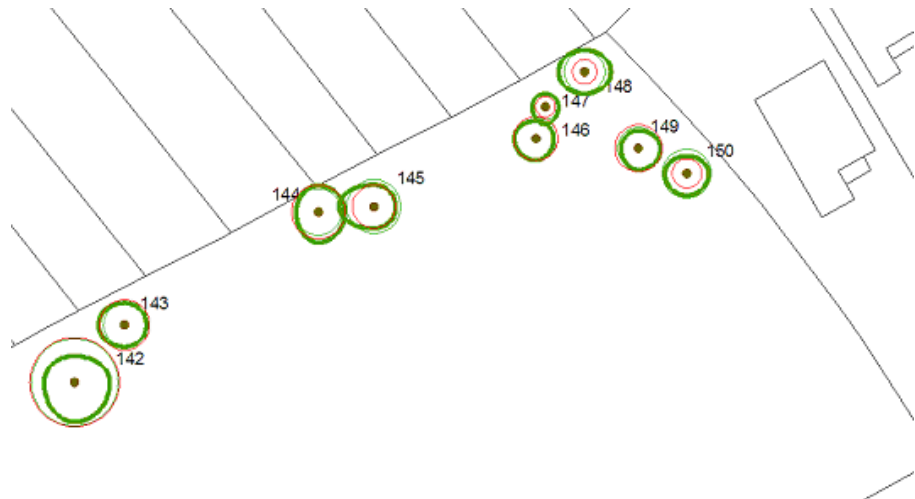
IMPORTANT: If you pick Cancel at this stage it will cancel the entire import.

- When all the trees selected for import are inserted in the drawing, the **Tree Import** dialog will appear and notify of the number of records that have been successfully imported.



- Pick **[OK]**.

The imported tree data will now appear as new trees in the drawing and will display based on the default display options set before the trees were imported.



Importing Tree Data – Easting and Northing's Defined

In some cases you may collate a tree survey that includes the tree data and the tree locations, defined as either Easting's and Northing's or X and Y co-ordinates.

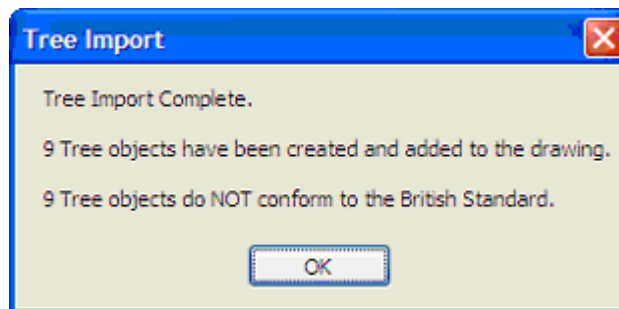
Open the read-only drawing **KSTTree13.dwg** from the Tutorials, KeyTREE folder. This is an extract from site drawing that already has the tree display options defaults defined.



- From the **TREE** pulldown menu, select **Tree>Import**. The **Open KeyTREE Import Data** dialog appears.
- Navigate to the KeyTREE Tutorials folder and to the **Import Files** sub-folder. Open the tree import file **KST_Tree_Import (Easting&Northing).csv**.
- The **Import Tree Data** dialog appears.
- Assign all the **Imported Field** fields to the relevant database fields under **Standard Fields**.

To assist you, a predefined template for the import is available. Pick **[Import]**, navigate to the KeyTREE Tutorials folder and **Files** sub-folder. Open the file **KST_Tree_Import_(N&E).ktip** file. This will complete top half of the dialog and assign the Imported Field fields to the relevant database fields under Standard Fields.

- Once assigned, under **Select Rows to Import**, pick the records you wish to import. In this case all tree records can be selected.
- Pick **[OK]**.
- After a short while you will be notified that the trees have been successfully imported in to the drawing.



- Pick **[OK]**. You are returned to the drawing and, as the Easting and Northing (X and Y) values are defined, the trees automatically appear in the drawing.



Importing Tree Data – BS Categories Defined

In some cases you will include the BS categories in the tree survey file to be imported. KeyTREE will automatically assign the trees to their respective layers and colour them according to the BS on import.

Using display options (see “Preparing Your Drawing Before You Import Tree Data” earlier in this section), define which elements of the tree are to be coloured in accordance with the BS colours, e.g. stem, canopy, RPA, etc.

- Open the read-only drawing **KSTTree13.dwg** from the Tutorials, KeyTREE folder. *This drawing shows the locations for nine trees with their respective reference numbers and has the display settings defined.*
- From the **TREE** pulldown menu, select **Tree>Import**. The **Open KeyTREE Import Data** dialog appears.
- Navigate to the KeyTREE Tutorials folder and to the **Import Files** sub-folder. Open the tree import file **KST_Tree_Import (Categories).csv**.
- The **Import Tree Data** dialog appears.
- Assign all the **Imported Field** fields to the relevant database fields under **Standard Fields**.

*To assist you, a predefined template for the import is available. Pick **[Import]**, navigate to the KeyTREE Tutorials folder and **Files** sub-folder. Open the file **KST_Tree_Import_(Categories).ktip** file. This will complete top half of the dialog and assign the Imported Field fields to the relevant database fields under Standard Fields.*

- Once assigned, under **Select Rows to Import**, pick the records you wish to import. In this case all tree records can be selected
- Once selected, pick **[OK]**.
- At the command line you will be prompted:

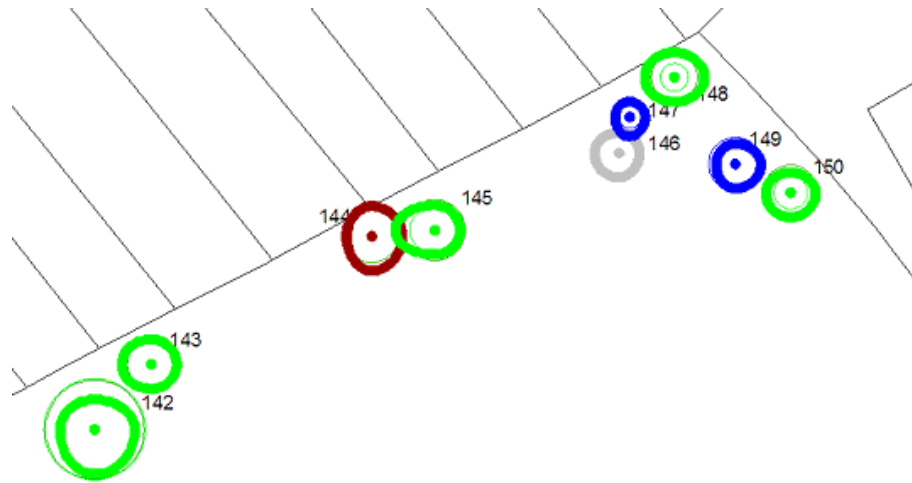
Select Insertion Point for Tree Ref: 143

- In the AutoCAD drawing pick the centre point of the circle (*using object snaps*) that represents tree 143.
- You are then prompted for the next tree (*144*).
- Repeat for each tree.
- When all the trees selected for import are inserted in the drawing, the **Tree Import** dialog will appear and notify of the number of records that have been successfully imported.



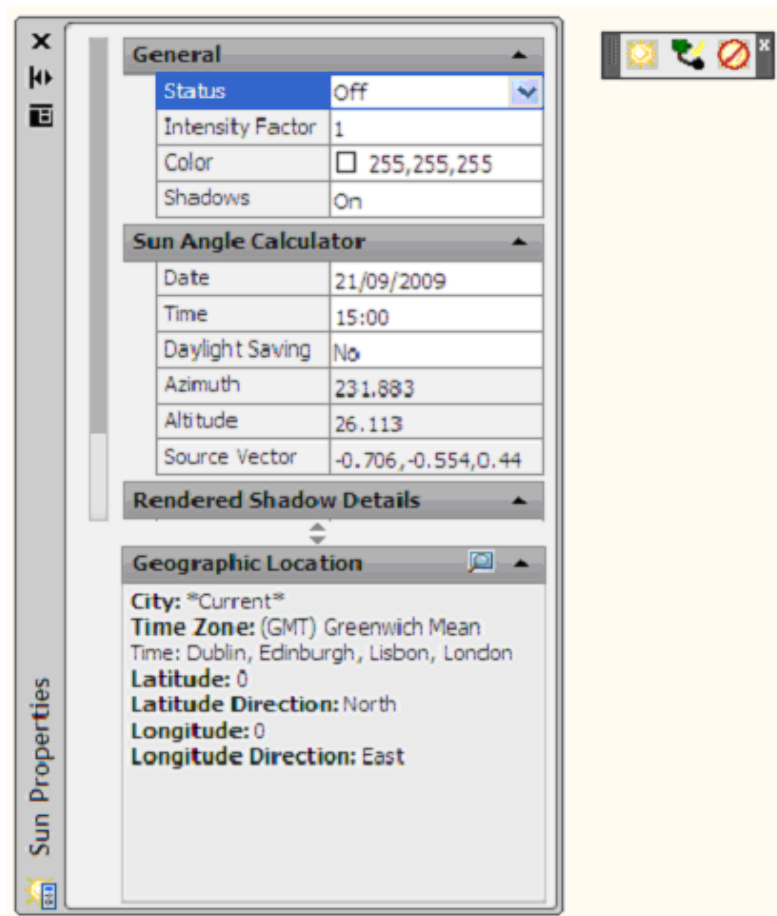
- Pick **[OK]**.

The imported tree data will now appear as new trees in the drawing and will display based on the BS category colours and default display options set before the trees were imported.

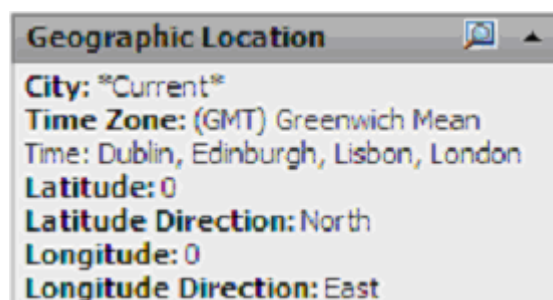


Sun, Shadows and Location *KeyTREE calculates an approximation of shadows cast by a tree based on the canopy spread, its overall height and the stem clearance height. If any of this data is not defined, shadows may not show as expect or may not show at all if the tree height is not specified.*

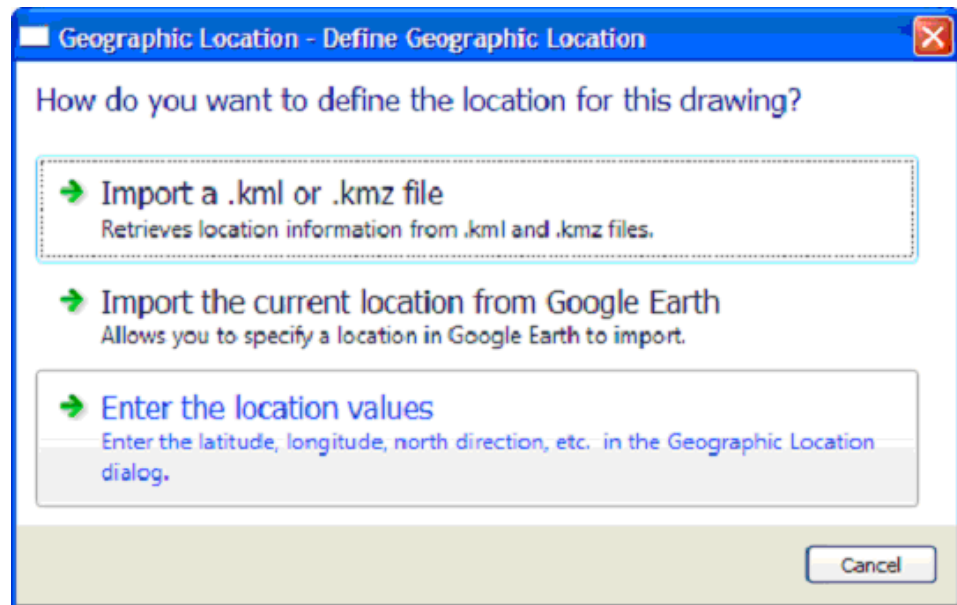
- Continue from the previous section or open a drawing that contains trees inserted using KeyTREE
- From the Tree menu, select **Sun, Shadows and Location**. The **Sun, Shadows and Location** toolbar appears along with the **Sun Properties** tool palette.



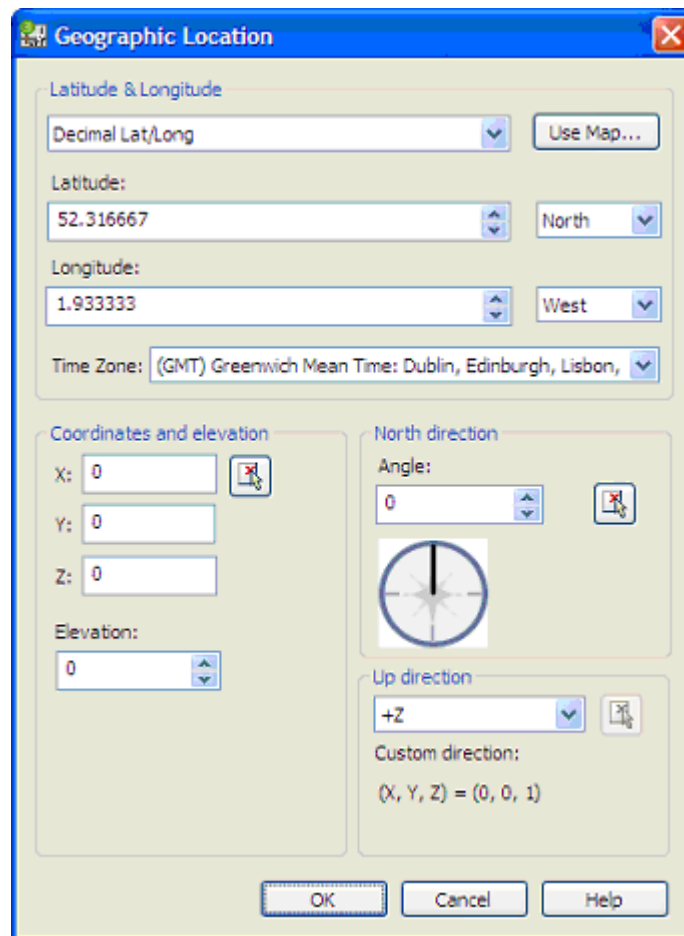
- To Set your Site Location**
- Within the Sun Properties tool palette, next to **Geographic Location**, pick the **launch Geographic Location** icon.



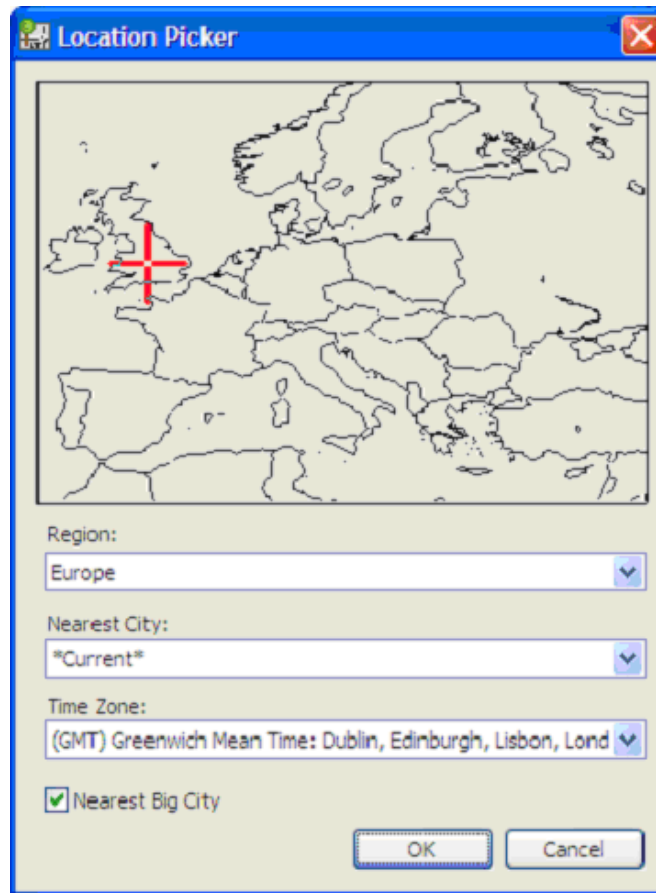
- The **Geographic Location – Define Geographic Location** dialog box appears.



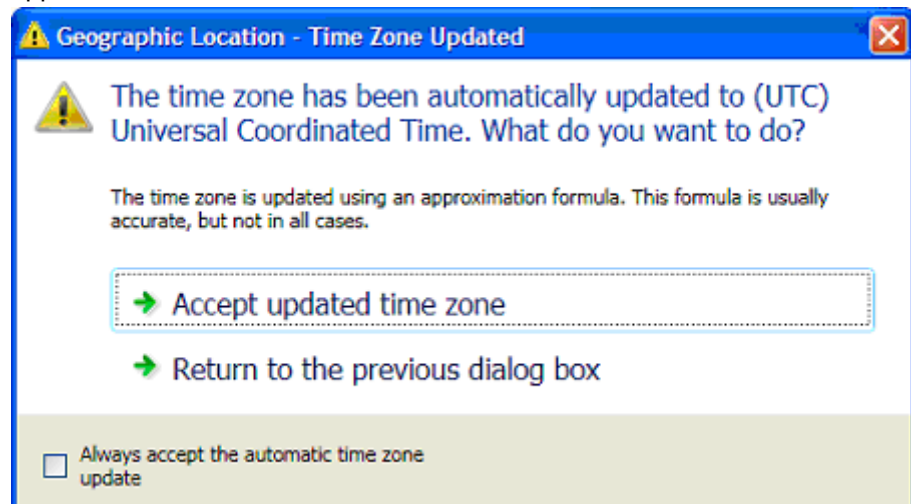
- If you have a .kml or .kmz file exported from Google Earth or you have your current site location defined in Google Earth, pick the option that applies. If you wish to approximate the current location of your site to assess the shadows pick Enter the location values. The Geographic Location dialog appears.



- If you know the Latitude and Longitude of the site or the XY(Z) location of the site, please enter these as appropriate. If you wish to approximate the current location of your site to assess the shadows pick **[Use Map...]**. The Location Picker Dialog appears.



- You can pick the nearest location on the map at the top of the dialog and/or select this from the **Nearest City** the drop down. Please note that there are a limited number of UK options.
- Once set, pick [OK]. The **Geographic Location – Time Zone Updated** dialog appears.



- Pick **Accept undated time zone** to accept the time zone. You are returned to the Geographic Location dialog. Pick [OK] to accept the location.

To Show and Update Shadows in the Drawing

- To show the shadows, pick the **Update Shadows** icon from **Sun, Shadows and Location** toolbar.



- The shadows will now appear in the drawing.
- Change the time of day or date as required, using the Sun Angle Calculator section of the Sun Properties tool palette. After any change you **MUST** update the shadows, by picking the **Update Shadows** icon on the **Sun, Shadows and Location** toolbar.

To Turn Off or Change the Shadow Colour

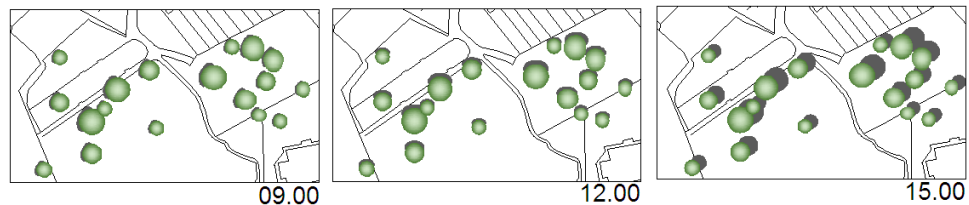
- The shadows will be created on their own layer, typically **7_TREES_SHADOW**. As you change a tree BS category it will move the tree to the appropriately named layer along with the shadow so an A1 category tree will put its shadow on the layer **7_TREES_A1_SHADOW**.
- Using the AutoCAD Layer Manager, you can turn off or change the colour of the shadow layer(s) as required. To update the layer changes, go to **View** and pick **Regen** to regenerate the view and apply the changes.

Shadow Analysis Per Layout / Viewport

Each Layout viewport can support its own sun system that can be different to the one defined in the Model. This allows you to consider different times of the day or days of the year on an individual viewport by viewport basis.

- To set the sun system for a viewport, activate the Layout and viewport (e.g. double-click inside the viewport frame) in which you wish to define a different shadow analysis.
- As outlined above, turn on the Sun (*Status*) and set the time of day and date for the viewport. *You will only need to set the geographic location if this has not already been defined.*
- Make the necessary time of day or date changes, as appropriate. To show the change you **MUST** update the shadows, by picking the **Update Shadows** icon on the **Sun, Shadows and Location** toolbar. Repeat this process to consider different times or dates for the viewport.

Each viewport supports its own sun system so the above process can be repeated for each viewport as appropriate, see example below,



Distributing KeyTREE Drawings

KeyTREE uses the latest AutoCAD-based, object-orientated design. Like Autodesk's own applications for Architecture, Mechanical and Civil design, KeyTREE creates intelligent AutoCAD objects that are visible, but not be editable, in general AutoCAD. AutoCAD will usually show these objects using simplified proxy (image) graphics that will not be editable in AutoCAD unless you install the KeyTREE object enablers for your version of AutoCAD. Depending on your AutoCAD settings, the proxy entities may display as bounding boxes or may not show them at all. See sections below for more information.

Sending KeyTREE Drawings to AutoCAD Users

Please follow the following procedures to ensure you save a drawing correctly **BEFORE** sending it to AutoCAD:

- Open the drawing to be sent to the AutoCAD user
- At the command line enter PROXYGRAPHICS and press Return. The default value of the AutoCAD system variable should be 1. If it is set to 0, enter 1 and press Return.

The AutoCAD PROXYGRAPHICS system variable specifies whether images of proxy objects are saved in the drawing or not. If set to 1 the drawing saves the proxy graphic images so that they are available to display in AutoCAD. If set to 0, the proxy graphics images are NOT saved with the drawing and so, when opened in AutoCAD, KeyTREE objects may not display or appear as bounding boxes.

- At the command line enter ISAVEPERCENT and press Return. The default value of the AutoCAD system variable should be 50, although not necessarily.

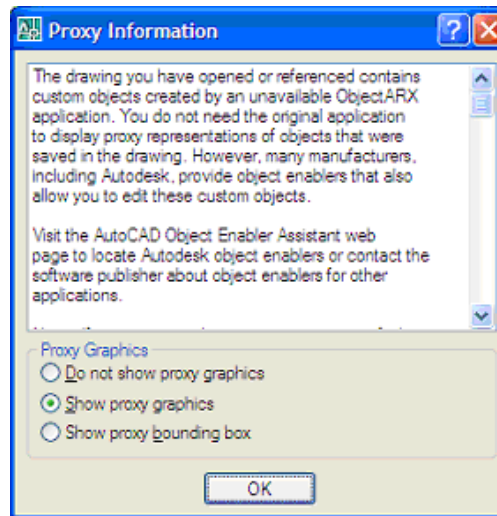
The AutoCAD ISAVEPERCENT (Incremental Save Percentage) system variable is a global setting (i.e. affects all drawings) that sets the percentage of potentially wasted space in a drawing file. If the Incremental Save Percentage is set to 0, every save is a full save. Full saves eliminate wasted space and can reduce drawing size but the performance of the SAVE and SAVEAS commands will slow significantly. Incremental saves are faster but they increase the size of your drawing as it includes wasted space. For optimum performance AutoCAD sets the default value to 50. That is, if less than half the drawing is modified between saves the change only information is appended to the drawing database. Conversely, if more than half the drawing is altered between saves, a full save is invoked.

- At the prompt: **Enter new value for ISAVEPERCENT**, enter **0** and press **Return**
- Save the drawing. This will invoke a full save of the drawing.
- At the command line enter **ISAVEPERCENT** and press **Return**.
- Enter **50** (or your previous value setting) and press **Return**
- Close the drawing
- Send your drawing to your client or design partner

Opening KeyTREE Drawings in AutoCAD

Please advise your clients or design partner of the following procedures **BEFORE** they attempt to open a KeySCAPE drawing in AutoCAD

- When the AutoCAD user open the drawing in AutoCAD the Proxy Information dialog should appear



- Select the option **Show proxy graphics** and pick **[OK]** to open the drawing and display the KeySCAPE objects

What to do if the Proxy Information dialog does not appear AND the KeyTREE graphics do not show

In this instance it is likely that the AutoCAD settings that control these options have been set to not display the Proxy Information dialog or, more importantly, to not show the proxy graphics. In this instance:

- With the drawing closed, at the command line enter **PROXYSHOW** and press **Return**. The current value of the AutoCAD system variable is displayed and is most likely to be set to 0, *i.e. to not show proxy objects*
- At the prompt: **Enter new value for PROXYSHOW**, enter **1** (*to show proxy objects*) and press **Return**

The AutoCAD PROXYSHOW system variable is a global setting (i.e. affects all drawings) that controls the display of proxy objects in an AutoCAD drawing where the application that created the objects is not available. The following options exist:

0 Proxy objects are not displayed

1 Graphic images are displayed for all proxy objects

2 Only the bounding box is displayed for all proxy objects

- **Open** the KeyTREE drawing in AutoCAD and all the graphics will show as image entities only, *i.e. not editable as AutoCAD objects*

Object Enablers *If a drawing is opened with proxy graphics showing you will only have access to limited editing features on the object, e.g. delete. However, should you wish to undertake more detailed editing, you can request and install the KeyTREE Object Enablers for your version of AutoCAD. Once installed, this will give limited access to the objects and allow you to use most of the AutoCAD editing commands on KeyTREE objects, e.g. copy, move, rotate, grips etc. However, it **does not** allow any access to the KeyTREE user interface to edit settings, specifications or planting/hedge graphics. This information can only be edited in KeyTREE. Any changes made in a KeyTREE (object) enabled AutoCAD will be updated next time the drawing is opened in KeyTREE.*

SaveAs to earlier version of AutoCAD *Due to limitations imposed by Autodesk on objects, any KeyTREE drawing that is created or opened and saved in a newer version of AutoCAD, **will not** be editable in versions of KeyTREE running on earlier versions of AutoCAD, even though the KeyTREE functionality may be identical, i.e. there is NO backward compatibility between AutoCAD/KeyTREE objects This also applies to the use of KeyTREE enabled versions of AutoCAD. **There is no work round to this!***

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Exploding KeyTREE Objects *Limitations, imposed by Autodesk on custom objects prevent the use of **DXFOUT** and **DXFIN** unless the objects are exploded to simple drawing entities. These simplified versions of the objects have no intelligence but allow them to be edited in AutoCAD or other applications, such as SketchUp, Adobe Illustrator or CorelDRAW*

*You can explode KeyTREE objects using the AutoCAD Explode Command. However, you will need to **explode the objects twice** to get back to single AutoCAD entities. Please note that the following default results:*

First use of the AutoCAD Explode Command on KeyTREE objects –
explodes each object into individual AutoCAD blocks, i.e. one new block is created for each object.

Second use of the AutoCAD Explode Command on KeyTREE objects –
explodes each individual AutoCAD block, derived from the objects, in to single editable AutoCAD entities.

IMPORTANT: *Exploding the KeyTREE objects WILL destroy all object functionality and associated intelligence, e.g. automatic update of plant number calculations and schedules. Once the drawing has been closed, the links can **NOT** be recreated automatically. Therefore, it is strongly recommended that you make a backup of the drawing (SaveAs) **BEFORE** exploding the objects. After exploding the drawing, your drawing size may increase considerably.*