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CEL SOUNDTRACK LIBRARY

# dB35 Software

# Users Manual

# HB3325-04


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# CONTENTS

# 1 BEFORE YOU START

Please take the time to read this section as it clarifies the terms and conventions used in this handbook.

## 1.1 Terminology

*dB*adge: The CEL-350 personal sound exposure meter used to monitor and record noise levels**.**

dB35: The Windows application produced by Casella CEL to interface with one or more *dB*adge instruments.

IR: Infra-Red, used for cable free communications.

## 1.2 Windows, dialog boxes, buttons and menus

Throughout this handbook the following conventions are used:

Names of buttons, menus and related items are written in *Italics* to distinguish them from the surrounding text, whereas window and dialog names are written with initial capital letters, for example:

Click the *OK* button to save the changes made in the Configuration dialog.

The vertical bar symbol (|) is used to denote the path for hierarchical menu items, For example:

From the Main Menu select *View* | *Properties*…

## 1.3 Keyboard and mouse

Throughout this handbook the following conventions are used:

Key names are spelled with an initial capital and are underlined. A plus sign denotes a key combination, for example:

Press Ctrl+A to select all the text in the window.

When a mouse click is indicated, the default is always a left-click unless otherwise specified, for example:

Right-click and select *Properties…*

# 2 INTRODUCTION

dB35 is Casella CEL's PC based software solution for the CEL-350 *dB*adge. It provides users with a powerful and versatile Windows based application for the accumulation, processing and presentation of noise data.

The software integrates the functions of data downloading, archiving and historical presentation into one easy to use package.

dB35 is built using the latest technologies from Microsoft. The application itself is designed to take advantage of the ".NET framework" and all database functions have been implemented using SQL.

The database backend will run with either the supplied "Microsoft MSDE 2000A" (SQL server) or an existing SQL server installation. dB35 offers the following features:

- Cumulative record display
- Time history profile data presentation and analysis
- Tree database structure
- Exporting of data in text and graphical formats

Data managed by this application are stored in an SQL database, thereby allowing the raw data to be easily migrated into other packages.

The following steps are recommended for getting your system started:

- Prepare the *dB*adge as detailed in handbook HB3323
- Install the dB35 software
- Configure it for your system
- Specify the data you want to display

# 3 MINIMUM PC SPECIFICATION

Hardware specification:

- Pentium III - 1 GHz.
- 256 MB memory.
- 20 GB hard drive.
- CD drive for program installation,
- Super VGA colour monitor (1024 x 768 16M colours recommended),

Operating system:

- Windows 2000 (service pack 4)
- Windows XP Home or Professional
- Windows NT 4 (service pack 6a)

# 4 INSTALLATION/UN-INSTALLATION

Before installation, it is recommended that a back-up copy be made of the program CD. Keep the original in a safe place and use the copy to install the software. It is also advisable to ensure that no other applications are running while installation takes place.

## 4.1 Installation

1. Start Windows.
2. Insert the dB35 CD into the CD drive of the PC.
3. Windows should automatically detect the CD and start the installation process. If this is the case go directly to step 6, otherwise continue with the next step.
4. Click the *Start* button on the task bar then select the *Run...* option.
5. Type x:\setup, where x denotes the CD drive identifier and press the Enter key.
6. Click on the flag representing the language you would like to have the software installed.
7. Click on the 'Software dB35' to launch the dB35 installer package.
8. Click *Next* to proceed through the install wizard. The dB35 installer will check the PC for any required components that are missing or out of date. It will then show a list of items that must be installed. See Figure 1.

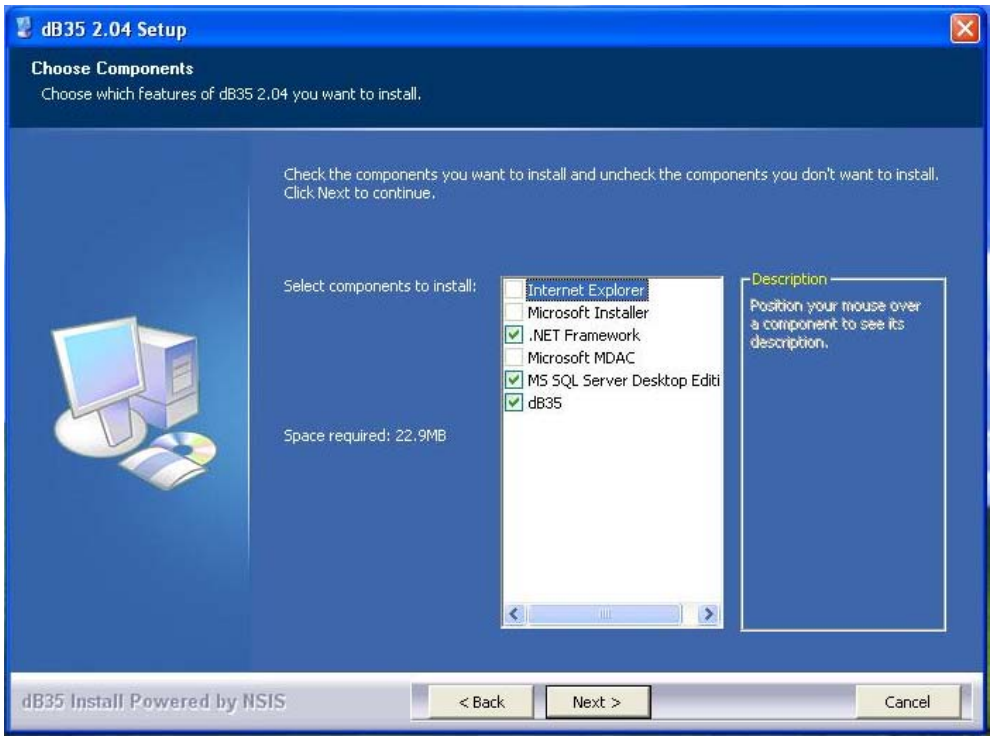



**Figure 1: Required components**

Unless otherwise instructed by your IT department do not change these selections, just click on *Next*.

A full installation of dB35 together with all required components may take some time. There may be periods of time during the installation when nothing appears to be happening, however looking at the hard-disk activity light should show that the installation is busy copying/updating the Windows installation.

If an error or warning message is displayed, make a note of it and continue with the installation.

DO NOT, if prompted restart the PC during the installation. Once everything has been installed the PC can be restarted.

If the PC is restarted during the installation process then the user will need to start the installation process again. The Installation Requirements dialog will detect those components already installed and not attempt to install them again.

Once dB35 has installed, the PC must be restarted. Restarting now will cause the MS SQL Server Desktop Engine to load ready to interface with dB35. This will occur automatically every time the PC is started without further user intervention.

When the MS SQL Server Desktop Engine is installed an icon will appear in the System Tray of the Task Bar  . This indicates that the MS SQL Server Desktop Engine is loaded and running ready to service SQL requests from dB35.

## 4.2 Redistribution of Microsoft components

Casella CEL Ltd redistributes some or all of the following Microsoft products as part of the dB35 installation:

Microsoft Explorer
Microsoft Installer
Microsoft Data Access Components
Microsoft SQL Desktop Engine
Microsoft .NET Framework

Casella CEL Ltd redistributes these under the terms and conditions of the relative "End User Licence Agreements" (EULA) as stipulated by Microsoft. Copies of each EULA can be obtained from the Microsoft web site "www.microsoft.com".

No additional warranty is offered or implied by Casella CEL Ltd in relation to these Microsoft products.

Once installation is complete, you will find the dB35 icon 

on your Windows desktop.

## 4.3 Un-Installation

1. Click the *Start* button on the task bar.
2. Select *Settings...* and then *Control Panel*.
3. Double-click on *Add/Remove Programs* icon.

4. In the list of installed software, select dB35 and click the *Add/Remove* button.
5. Follow the on-screen instructions.

## 4.4 Starting dB35 for the first time

Start dB35 by double clicking on the desktop icon 

or by selecting the shortcut located in *Start* | *Programs* | *CEL Soundtrack*.

You will be prompted to select a directory where the database files are to be located. Unless otherwise instructed by your IT department, use the default directory offered by dB35. See Figure 2. NOTE: We recommend this directory is backed up on a regular basis to keep data secure.

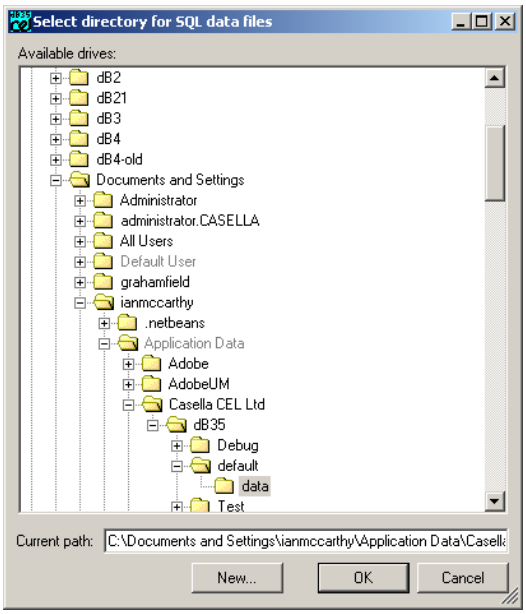



**Figure 2: Select directory**

Click *OK* to select the highlighted directory.

The dB35 application will now create an empty database then populate it with the minimum entries required for a usable installation. As messages appear click *OK* to continue.

At this point the dB35 main screen will appear. See Figure 3.

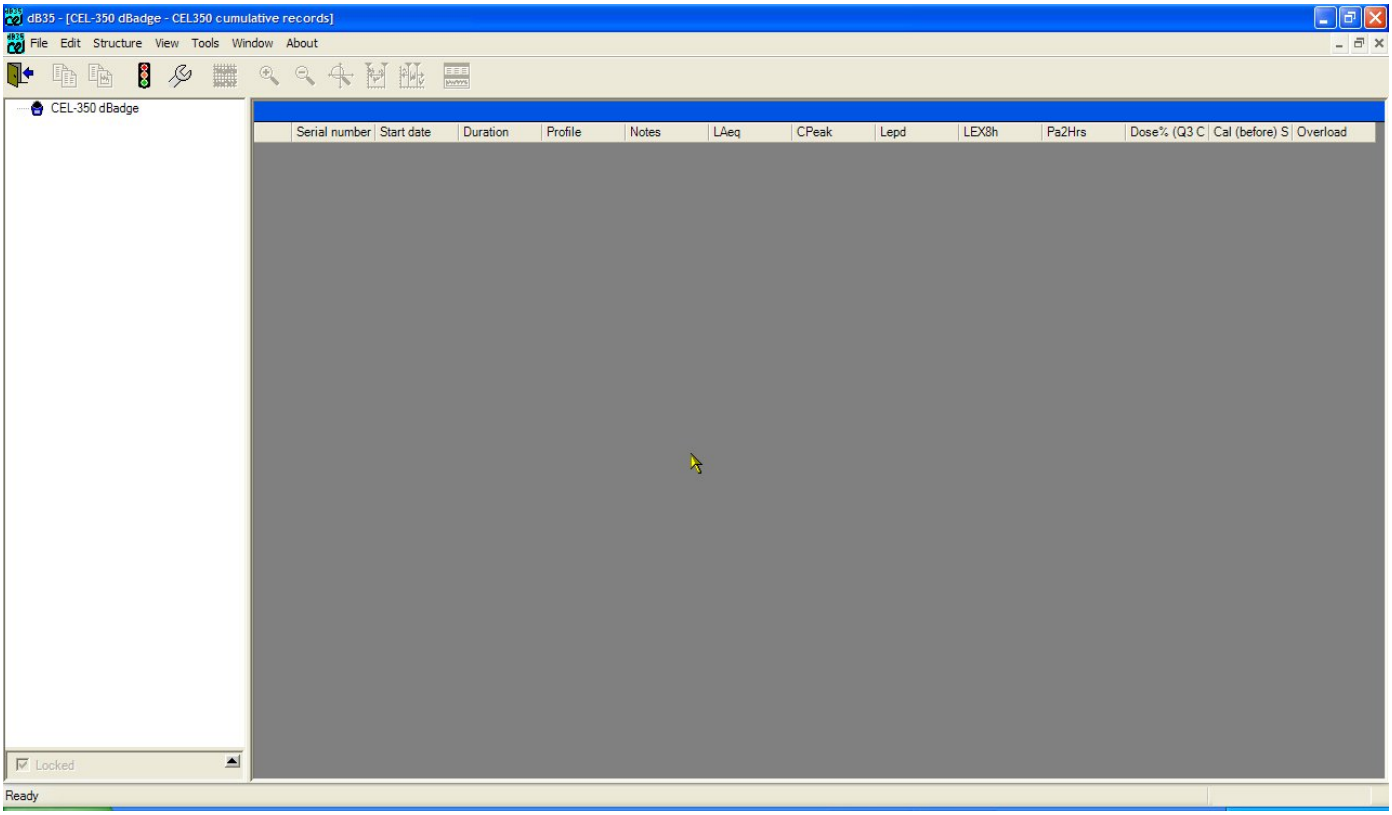



**Figure 3: Main screen**

The first step is to configure dB35 to match your installation as detailed in the next section.

# 5 INITIAL SET-UP

## 5.1 Communications

Connect the supplied USB to IR download lead (193200B) to your PC. In dB35, select:

*Tools* | *Options* | *CEL-350*

As shown in Figure 4, dB35 will automatically allocate a communication port to the USB device and no further action is required. The 193200B download lead will always need to be connected to the PC prior to starting dB35, otherwise the *dB*adge will not communicate with dB35 software.

If you are using the previous version of the download lead (-CMC39) which was an RS232 to IR device, you will need to untick the box 'Use USB interface' and manually select which communications port the RS232 lead has been connected to. This will normally be Com1.

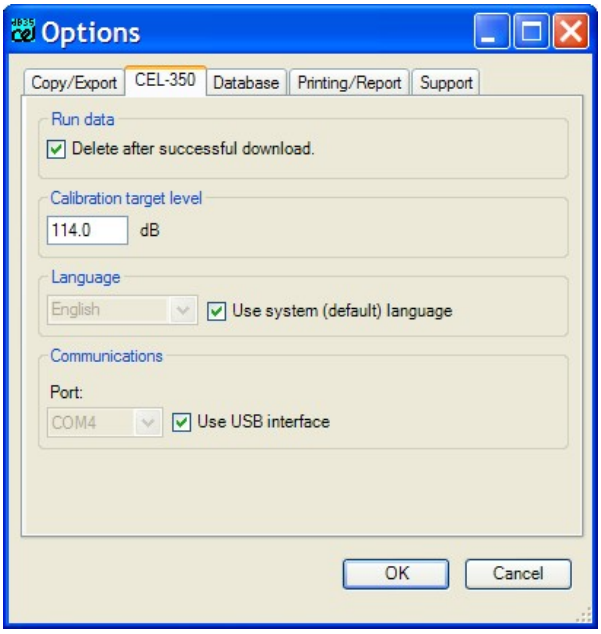



**Figure 4: Setting serial port**

## 5.2 Configuring the *dB*adge

New *dB*adge units are supplied with a default factory configuration (including time, date and display mode). The configuration may need to be changed for your local time and noise legislation. Right click on the *dB*adge icon and select properties as shown in Figure 5. A window will appear as shown in Figure 6. The *View* tab allows naming of the *dB*adge icon and a description can be added.

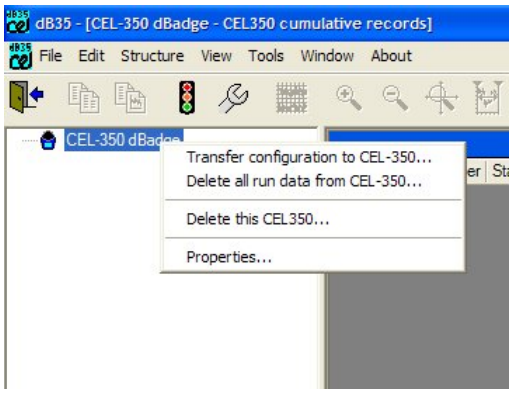



**Figure 5: Selecting *dB*adge properties**

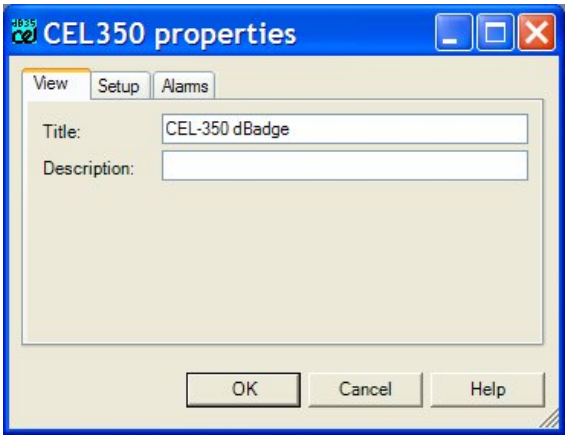



**Figure 6: Change title**

The *Setup* tab as shown in Figure 7, allows the display mode to be changed. See the *dB*adge manual for further information. It is also possible to specify 2 lines of text, these will appear on the *dB*adge screen when the unit powers up.

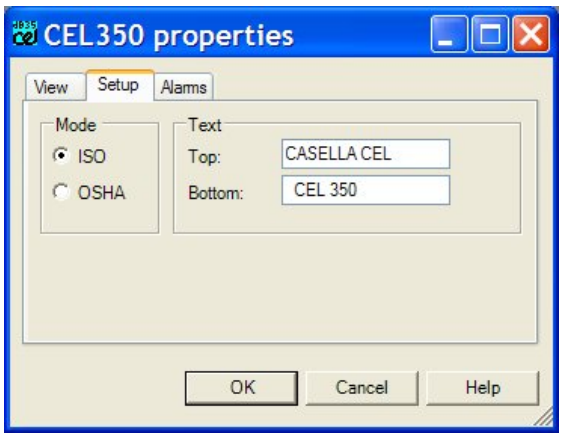



**Figure 7: Change display mode and text**

The *Alarms* tab allows the visual exposure alarms on the *dB*adge to be enabled or disabled and the alarm levels set accordingly as shown in Figure 8.

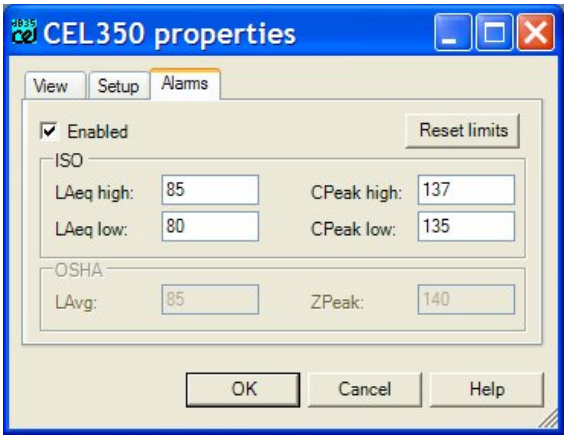



**Figure 8: Set alarm levels**

Once the required changes have been made, press the OK button to save the changes. To send this configuration to the *dB*adge, right-click on the *dB*adge icon as shown in Figure 5 and select *Transfer configuration to CEL-350*… as shown in Figure 9. The configuration will then be uploaded to the next *dB*adge that is detected via the IR port.

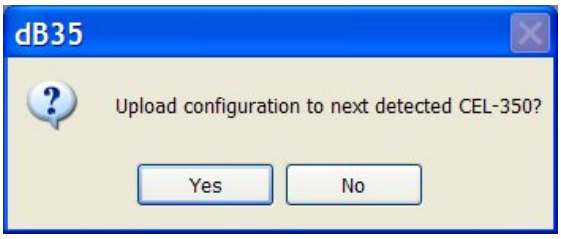



**Figure 9: Upload confirmation**

## 5.3 Connecting to the *dB*adge via IR

Position the *dB*adge IR window approximately 5cm away from the IR cable as shown in Figure 10. If the steps in section 5.2 Configuring the *dB*adge' have been followed then the configuration will automatically be uploaded to the *dB*adge. The *dB*adge time and date is automatically set every time the *dB*adge connects to your PC.

**Figure 10: Position the *dB*adge for connection**

# 6 CREATING A TREE VIEW FOR DATA STORAGE

The tree view is designed to provide an easy and convenient way to store and manage data according to a relevant place, person or process etc. Data can be stored in different folders, as represented by a specific icon, as shown below:

- Folder
- Site
- Location
- Process
- Person

## 6.1 Starting the tree

Firstly, right click in any of the blank space below the *dB*adge icon as shown in Figure 11 and click 'Add new folder'.

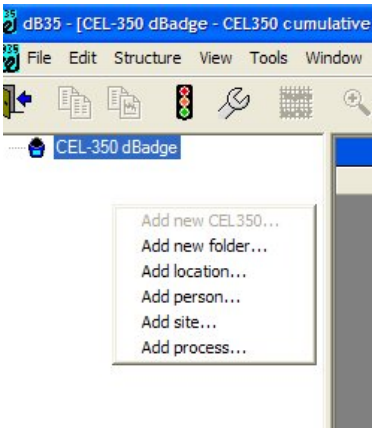



**Figure 11: Adding structure**

A box will appear which allows you to name the folder and give it a description. Then, right click on the folder created and you will be able to add other items under that folder. For example, by clicking 'Add site' a confirmation box (Figure 12) will appear to confirm if you wish to create a new site.

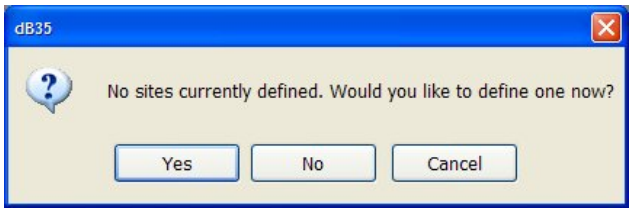



**Figure 12: Confirmation of adding a new site**

Then give a description of 'name' and 'notes' for the site in question and press *New* as shown in Figure 13.

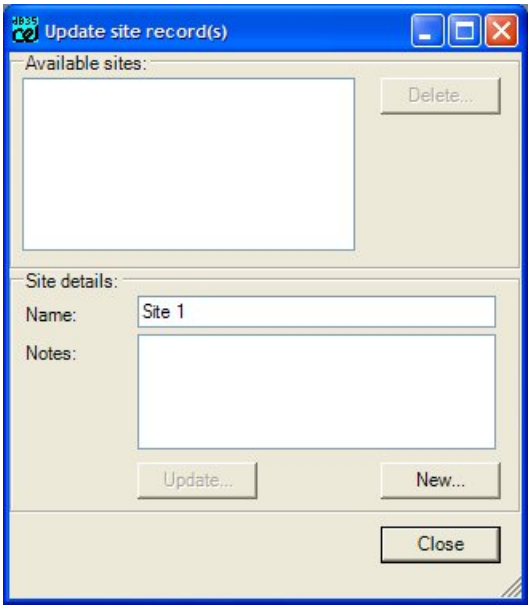



**Figure 13: Adding a new site**

This will create a new site as shown in Figure 14. Additional sites can be added as required.

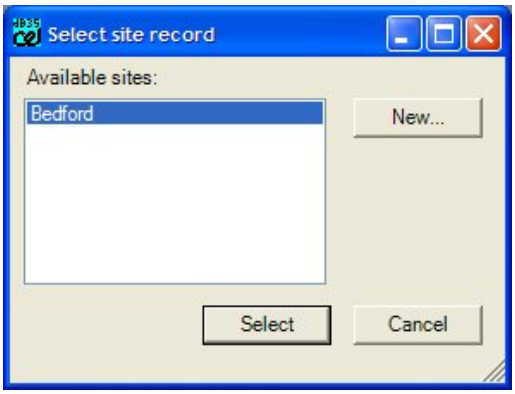



**Figure 14: Selecting Sites**

The same process can also be used to add locations, processes and people so a tree structure can be developed, an example of which is shown in Figure 15.

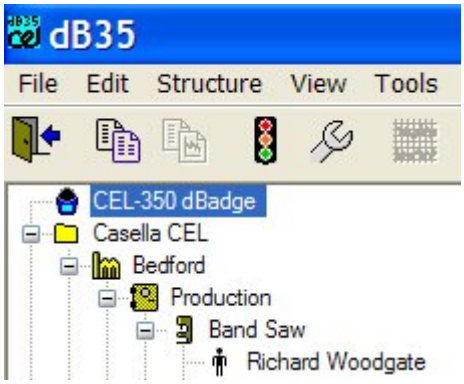



**Figure 15: Tree view**

When making personnel references, additional information can be included as shown in Figure 16.

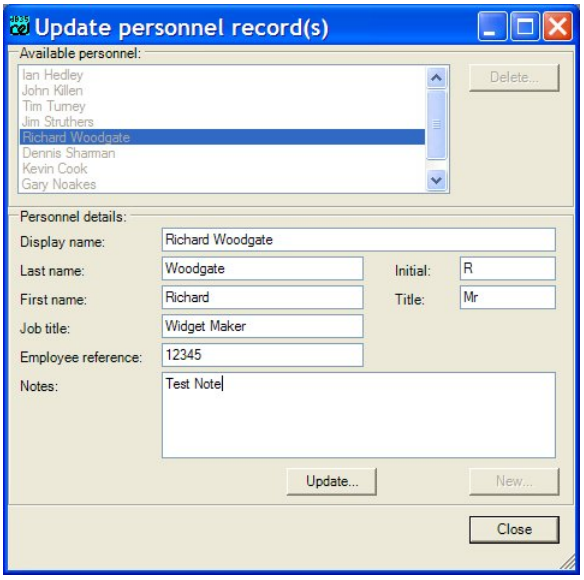



**Figure 16: Employee details**

When data is downloaded it is located in the *dB*adge icon, but can then be dragged to the relevant section of the tree view. Multiple entries can be selected with the mouse in conjunction with the Shift or Ctrl keys and then dragged to the relevant folder.

## 6.2 Developing the tree view

Additional folders, sites, locations etc can be added as needed to develop a full database of the workforce and work areas by repeating the above process, such that a tree can be built up as shown in Figure 17.

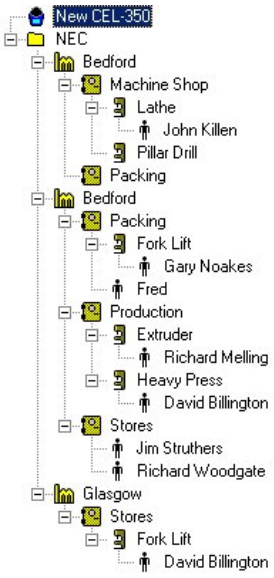



**Figure 17: Tree view**

# 7 DOWNLOADING FROM THE CEL-350 *dB*ADGE

Position the CEL-350 *dB*adge in front of the IR cable as shown in Section 5.3, the *dB*adge is automatically detected and downloaded by dB35. A dialog box will appear as shown in Figure 18 to display the progress of the download.

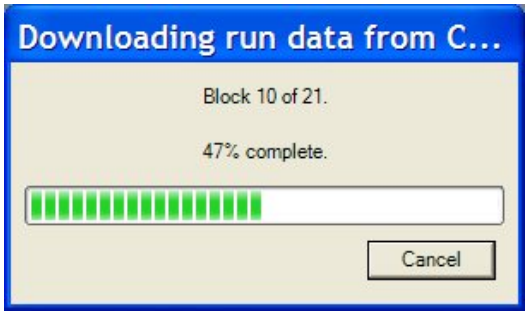



**Figure 18: Downloading data**

Once downloaded, measurement run(s) data will be displayed under the *dB*adge icon within the tree view, as shown below in Figure 19 (showing one downloaded measurement). Note that at this stage the measurement run data is unallocated to any person or place etc, which may have been created in the tree view.

## 7.1 Allocating data to the tree view

To allocate the measured run data to a folder within the tree view, simply click on the run in the cumulative table and drag it to the relevant part of the tree view.

Downloaded data is uniquely identified by the *dB*adge serial number and the run start date and time. When using the *dB*adge it is important to make a note of this information, together with any additional information (wearer name, location etc) that may be useful.

Additional notes can be added to the measurement run to include further information such as shift times, job roles, breaks etc. To add a note, simply right click on the measurement run in the table and select 'Add note'.

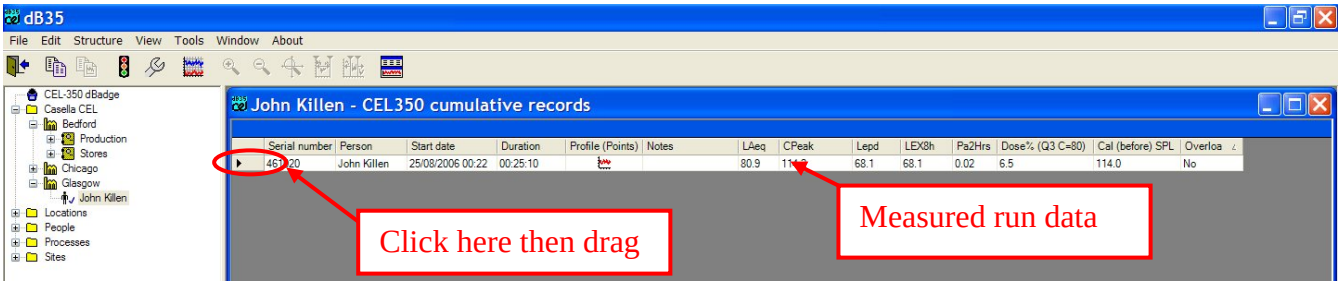



**Figure 19: Downloaded data**

In the example above, if the measured run data was dragged to 'Gary Noakes', the data will also appear under the 'Pillar Drill', 'Pipe Production', 'Bedford' and 'MJ Widgets' folders. Alternatively, if the data was dragged to the 'Bedford' section, it will only appear under the 'Bedford' and 'MJ Widgets' folders. This allows data to be grouped appropriately, to suit the individual requirements of the user.

# 8 VIEWING MEASURED DATA

There are two distinct types of data downloaded from the *dB*adge. Firstly, cumulative data, which corresponds to the measured values over the entire measurement duration (this includes, times, dates, noise dose etc).

The second type of downloaded data is the profile data (or time history). This consists of average and peak noise levels for each individual minute of the run.

## 8.1 Cumulative data

The *dB*adge unit simultaneously measures parameters for different measurement protocols, making it suitable for use worldwide. After downloading, data can be presented in three separate views:

- ISO View (for measurements based on EU Directive 2003/10/EC)
- OSHA View (for USA based measurement protocols)
- Custom View (for bespoke measurement protocols)

Changing the view determines which parameters are available to the user. Default view is ISO, the other views are selectable from the 'View' menu as shown in Figure 20. The active view is indicated with a 'tick'.

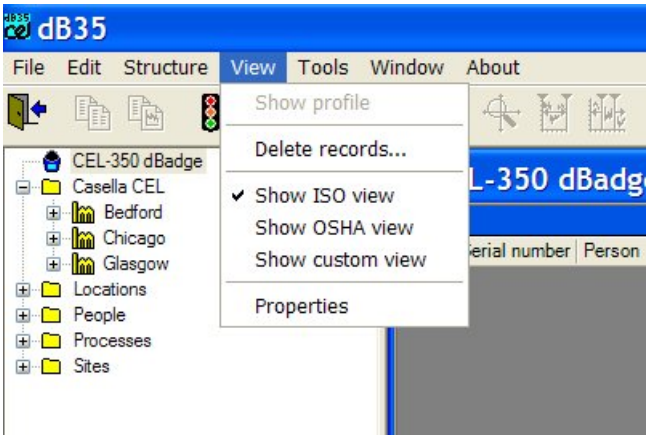



**Figure 20: Selecting cumulative view**

## 8.2 Customising cumulative data view

By default, only the main relevant parameters for each view are displayed. Other parameters are available if required. For example, when in ISO view, the main ISO parameters are initially displayed (Leq, Lcpeak etc), but other parameters such as calibration times, Lmax etc can be included at any time. To change the viewed data, select *View* | *Properties* as shown in Figure 20, then the window shown in Figure 21 will appear.

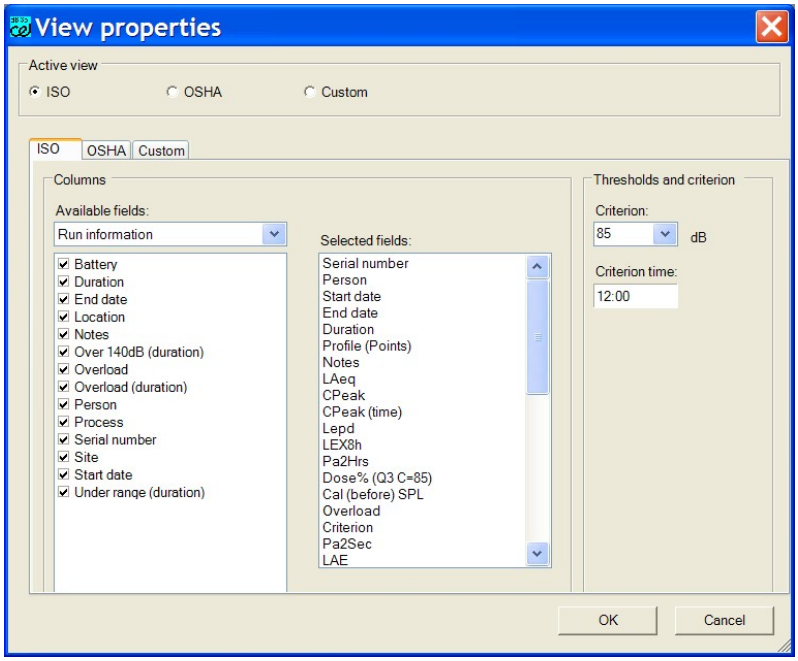



**Figure 21: Customising cumulative data**

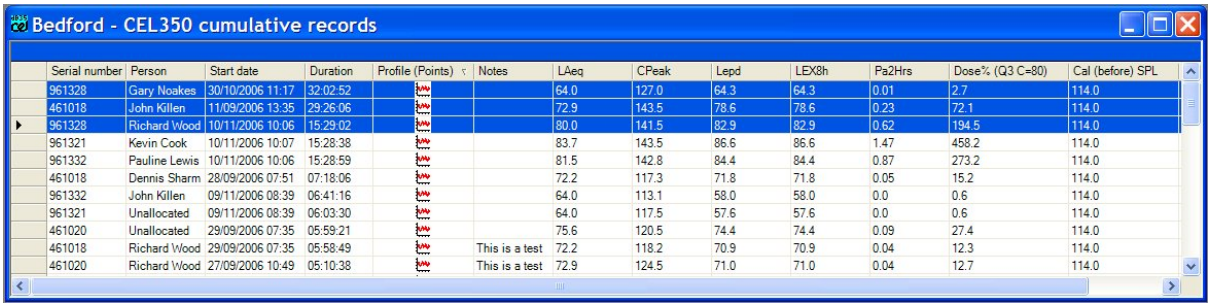
By selecting the relevant tab (ISO, OSHA, Custom) the displayed data for that view can be modified. Use the left hand window (Available Fields) to select/deselect individual parameters. Only ticked parameters will be shown. Use the Selected Fields window to specify the column order of the selected parameters. Click and drag individual fields up and down as required. The top field will be displayed in the left hand column of the cumulative data view.

## 8.3 Thresholds and criterions

Threshold and criterion levels are used in the calculation of some dose values (Lavg, TWA, % dose). The threshold and criterion levels applied to dose values can be changed as required. Depending on the selected view, one or two thresholds can be modified. Once changed, the relevant dose data subsequently viewed will have these threshold and criterion levels applied automatically. Projected % dose will also be calculated based on the criterion time entered as shown in Figure 21. The criterion time is the overall time during a working day an individual is exposed to the measured noise. It is therefore used to project the % dose forward if only a partial measurement of a working day was taken. The projected % dose value is then standardised to an 8 hour value as per the relevant standard.

## 8.4 Copying cumulative data

If data is required in other applications it may be copied to the clipboard for pasting elsewhere. Highlight the rows to be copied as shown in Figure 22.




| Serial number | Person | Start date | Duration | Profile (Points) | Notes | LAeq | CPeak | Lepd | LEX8h | Pa2Hrs | Dose% (Q3 C=80) | Cal (before) SPL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 961328 | Gary Noakes | 30/10/2006 11:17 | 32:02:52 | | | 64.0 | 127.0 | 64.3 | 64.3 | 0.01 | 2.7 | 114.0 |
| 461018 | John Killen | 11/09/2006 13:35 | 29:26:06 | | | 72.9 | 143.5 | 78.6 | 78.6 | 0.23 | 72.1 | 114.0 |
| 961328 | Richard Wood | 10/11/2006 10:06 | 15:29:02 | | | 80.0 | 141.5 | 82.9 | 82.9 | 0.62 | 194.5 | 114.0 |
| 961321 | Kevin Cook | 10/11/2006 10:07 | 15:28:38 | | | 83.7 | 143.5 | 86.6 | 86.6 | 1.47 | 458.2 | 114.0 |
| 961332 | Pauline Lewis | 10/11/2006 10:06 | 15:28:59 | | | 81.5 | 142.8 | 84.4 | 84.4 | 0.87 | 273.2 | 114.0 |
| 461018 | Dennis Sharm | 28/09/2006 07:51 | 07:18:06 | | | 72.2 | 117.3 | 71.8 | 71.8 | 0.05 | 15.2 | 114.0 |
| 961332 | John Killen | 09/11/2006 08:39 | 06:41:16 | | | 64.0 | 113.1 | 58.0 | 58.0 | 0.0 | 0.6 | 114.0 |
| 961321 | Unallocated | 09/11/2006 08:39 | 06:03:30 | | | 64.0 | 117.5 | 57.6 | 57.6 | 0.0 | 0.6 | 114.0 |
| 461020 | Unallocated | 29/09/2006 07:35 | 05:59:21 | | | 75.6 | 120.5 | 74.4 | 74.4 | 0.09 | 27.4 | 114.0 |
| 461018 | Richard Wood | 29/09/2006 07:35 | 05:58:49 | | This is a test | 72.2 | 118.2 | 70.9 | 70.9 | 0.04 | 12.3 | 114.0 |
| 461020 | Richard Wood | 27/09/2006 10:49 | 05:10:38 | | This is a test | 72.9 | 124.5 | 71.0 | 71.0 | 0.04 | 12.7 | 114.0 |

**Figure 22: Copying data**

Once the relevant cells are highlighted, the data can be copied to the clipboard by pressing the  (copy) icon, or go to:

*Edit* | *Copy to clipboard*

The data in the current view will be copied to the clipboard together with the relevant column headings.

# 8.5 Profile (time history) data

The *dB*adge stores 4 different profile parameters every minute. The parameters displayed will be dependent on the view selected:

- ISO; $L_{Aeq}$, $L_{Cpeak}$
- OSHA; $L_{Aavg}$, $L_{Zpeak}$
- Custom; $L_{Aeq}$, $L_{Cpeak,}$ $L_{Aavg}$, $L_{Zpeak}$

The profile data can be viewed either by clicking on the profile icon  or go to:

*View* | *Show Profile*.

The graph of profile data will be shown (Figure 23). To the left of the chart is the table of the profile data.

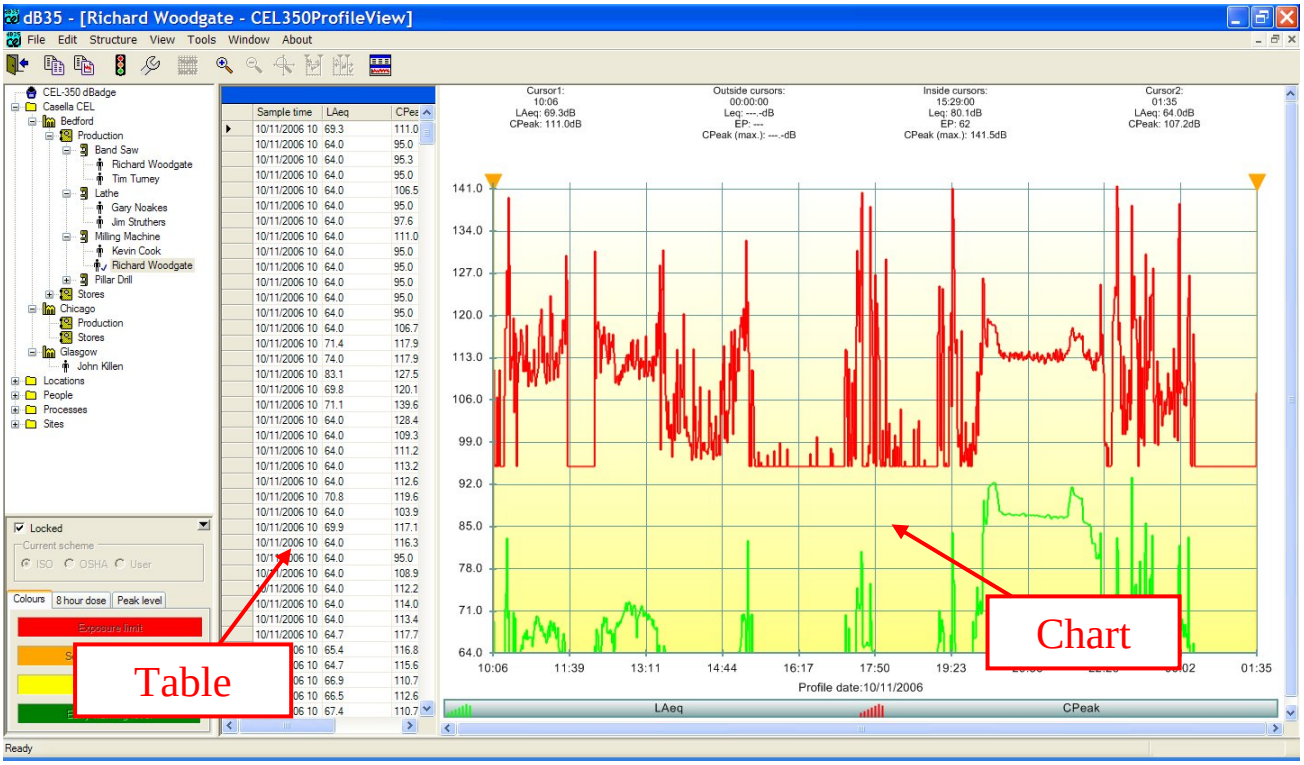



**Figure 23: Profile data**

A number of features are available when viewing the profile graph. These are accessible from the toolbar:

Zoom in: When pressed, zooms in by 50%.

Zoom out: When pressed, zooms out by 50%.

Resets zoom: Zooms out to the full extent of graph.

Zoom to cursors: Zooms to the area between the cursors.

Reset cursors to extremes: Moves cursors back to the start and end of the measurement respectively.

Tile window: Horizontally tiles the cumulative and time history data windows.

## 8.6 Analysing profile data

Using the cursors on the graph, it is possible to analyse portions of the profile data in order to perform 'what if' scenarios regarding noise exposure. The cursors on the graph can be dragged by using the inverted orange triangles,  as shown in Figure 24.

When the cursors are moved, the average and peak levels inside and outside the cursors are recalculated and displayed. The Exposure Points (EP) are also shown for use with the Exposure Point calculator (UK Noise Regulations).

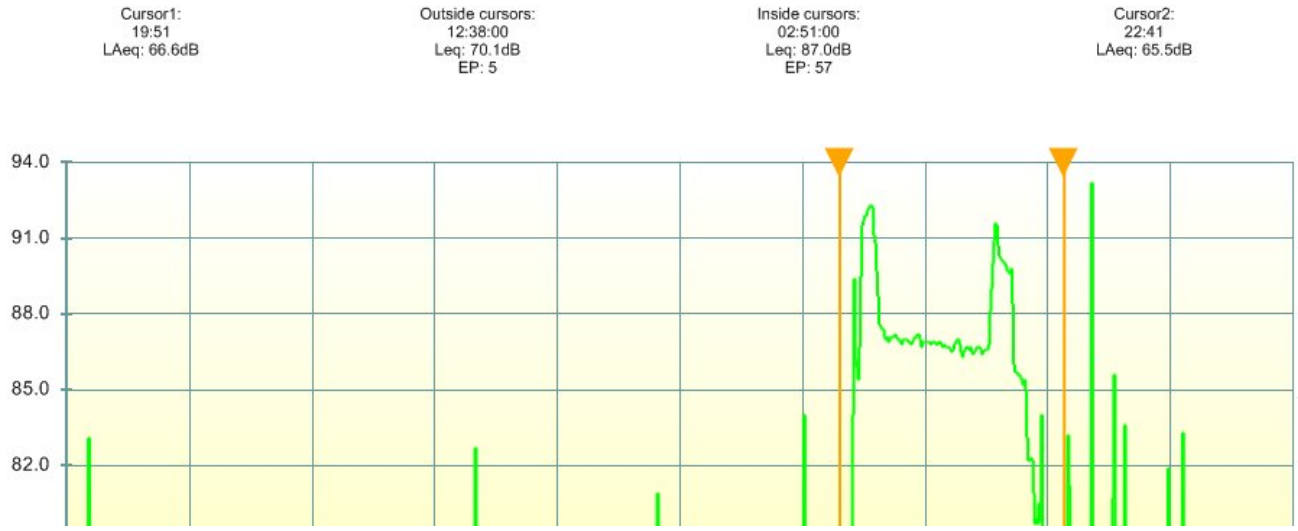



**Figure 24: Analysis of profile data**

By analysing different portions of the graph it can be determined when the majority of noise exposure occurred. This can be correlated to a workers daily activity.

## 8.7 Customising profile data

The view of the profile data can be customised in several different ways. Firstly, the view can be changed to show just the table, the graph, or the table and graph together. To do this, select the relevant option from the *View* menu.

As with the cumulative view, the profile view allows data to be displayed according to ISO, OSHA or Custom settings. These can be selected using the *View* menu.

Each of these views can be altered by going to *View* | *Properties.* The dialog box shown in Figure 25 will appear. The individual views can be selected using the tabs and then customised as required, altering data displayed on the graph and table.

Use the left hand window (Available Fields) to select/deselect individual parameters. Only ticked parameters will be shown. Use the Selected Fields window to specify the column order of the selected parameters. Click and drag individual fields up and down as required. The top field will be displayed in the left hand column of the profile table.

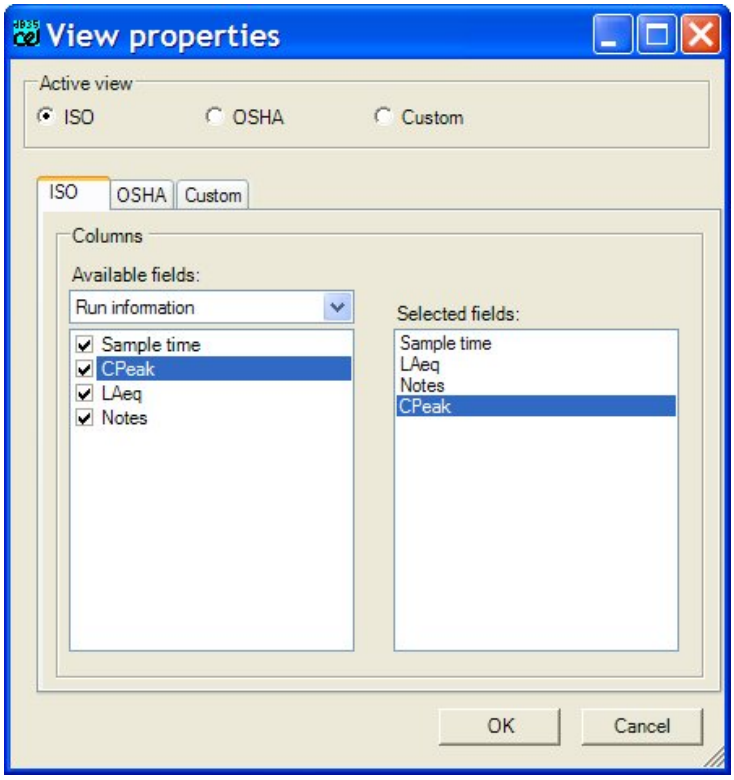



**Figure 25: Customising profile data**

## 8.8 Copying profile data

The table or graph of the profile data can be copied. This can then be pasted directly into other applications.

The table can be highlighted ready to copy the appropriate rows. To highlight all rows, click the top left cell of the table as shown in Figure 26.

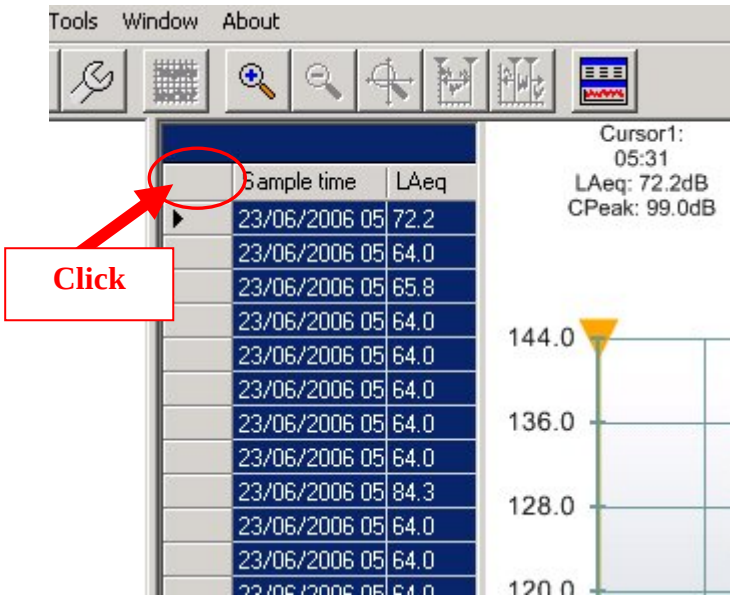



**Figure 26: Highlighting all profile data for copying**

To copy the data, right click on the highlighted rows and select *Copy to Clipboard.*

To copy the graph, go to:

*Edit* | *Copy chart to clipboard*

The resolution in dots per inch (DPI) of the copied chart image can be altered, see section 10.1.

## 8.9 Profile graph options

The profile graph (Figure 23) has different options to change the view of the graph, copy the data and add notes to the graph. Right click on the profile graph to access the options shown in Figure 27.

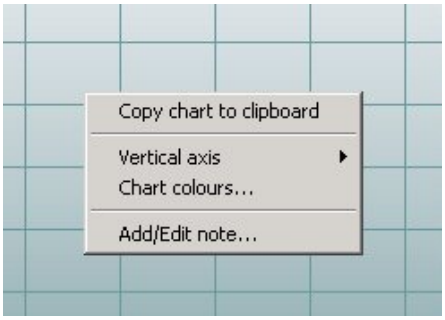



**Figure 27: Chart options**

The chart can be copied to the clipboard for pasting into other applications. The vertical (dB) axis of the graph can be changed to be either auto ranging (default), fixed range or set to the measurement range. The fixed ranges can also be set accordingly.

Notes can be added to the graph by selecting 'Add/Edit note' on the graph. The mouse cursor must lie over a data trace prior to right clicking. When selecting the Add/Edit note option, the dialog box appears as in Figure 28.

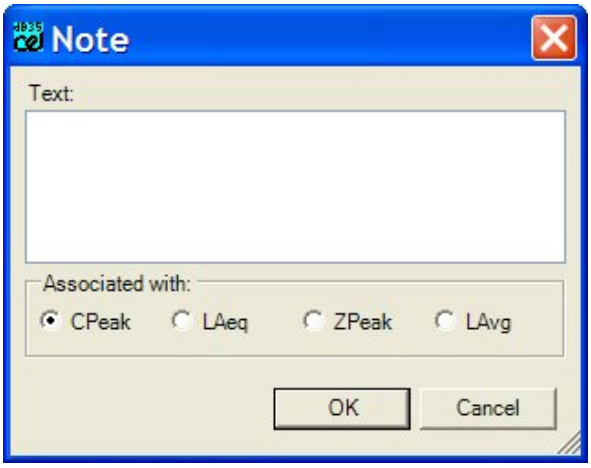
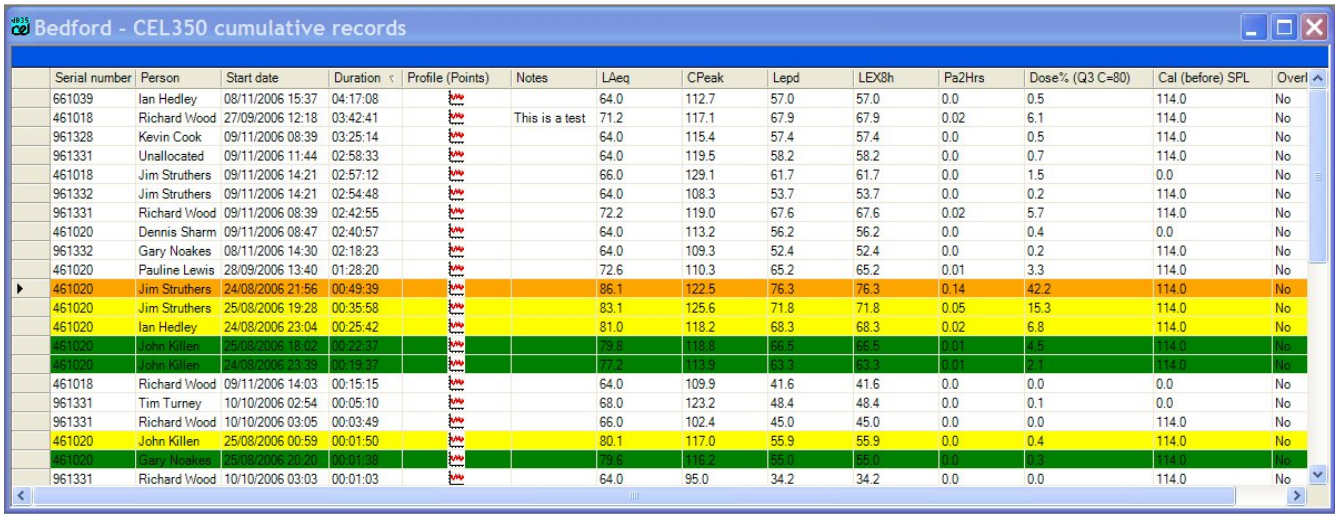



**Figure 28: Adding notes to profile graph**

This will allow a note to be added which will appear on the graph. Write the required text in the 'Text' box and associate it with the relevant parameter using the check boxes.

# 9 ACTION LEVEL EXCEEDANCES

Data can be automatically colour-coded within the cumulative data table to show which measurements have exceeded specific action levels. Press the traffic light icon  to colour the data according to the current settings, an example of which is shown in Figure 29. These action level exceedence levels are determined by the view currently selected, ISO, OSHA or Custom.




| Serial number | Person | Start date | Duration | Profile (Points) | Notes | LAeq | CPeak | Lepd | LEX8h | Pa2Hrs | Dose% (Q3 C=80) | Cal (before) SPL | Overl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 661039 | Ian Hedley | 08/11/2006 15:37 | 04:17:08 | | | 64.0 | 112.7 | 57.0 | 57.0 | 0.0 | 0.5 | 114.0 | No |
| 461018 | Richard Wood | 27/09/2006 12:18 | 03:42:41 | | This is a test | 71.2 | 117.1 | 67.9 | 67.9 | 0.02 | 6.1 | 114.0 | No |
| 961328 | Kevin Cook | 09/11/2006 08:39 | 03:25:14 | | | 64.0 | 115.4 | 57.4 | 57.4 | 0.0 | 0.5 | 114.0 | No |
| 961331 | Unallocated | 09/11/2006 11:44 | 02:58:33 | | | 64.0 | 119.5 | 58.2 | 58.2 | 0.0 | 0.7 | 114.0 | No |
| 461018 | Jim Struthers | 09/11/2006 14:21 | 02:57:12 | | | 66.0 | 129.1 | 61.7 | 61.7 | 0.0 | 1.5 | 0.0 | No |
| 961332 | Jim Struthers | 09/11/2006 14:21 | 02:54:48 | | | 64.0 | 108.3 | 53.7 | 53.7 | 0.0 | 0.2 | 114.0 | No |
| 961331 | Richard Wood | 09/11/2006 08:39 | 02:42:55 | | | 72.2 | 119.0 | 67.6 | 67.6 | 0.02 | 5.7 | 114.0 | No |
| 461020 | Dennis Sharm | 09/11/2006 08:47 | 02:40:57 | | | 64.0 | 113.2 | 56.2 | 56.2 | 0.0 | 0.4 | 0.0 | No |
| 961332 | Gary Noakes | 08/11/2006 14:30 | 02:18:23 | | | 64.0 | 109.3 | 52.4 | 52.4 | 0.0 | 0.2 | 114.0 | No |
| 461020 | Pauline Lewis | 28/09/2006 13:40 | 01:28:20 | | | 72.6 | 110.3 | 65.2 | 65.2 | 0.01 | 3.3 | 114.0 | No |
| 461020 | Jim Struthers | 24/08/2006 21:56 | 00:49:39 | | | 86.1 | 122.5 | 76.3 | 76.3 | 0.14 | 42.2 | 114.0 | No |
| 461020 | Jim Struthers | 25/08/2006 19:28 | 00:35:58 | | | 83.1 | 125.6 | 71.8 | 71.8 | 0.05 | 15.3 | 114.0 | No |
| 461020 | Ian Hedley | 24/08/2006 23:04 | 00:25:42 | | | 81.0 | 118.2 | 68.3 | 68.3 | 0.02 | 6.8 | 114.0 | No |
| 461020 | John Killen | 25/08/2006 18:02 | 00:22:37 | | | 79.8 | 118.8 | 66.5 | 66.5 | 0.01 | 4.5 | 114.0 | No |
| 461020 | John Killen | 24/08/2006 23:39 | 00:19:37 | | | 77.2 | 113.9 | 63.3 | 63.3 | 0.01 | 2.1 | 114.0 | No |
| 461018 | Richard Wood | 09/11/2006 14:03 | 00:15:15 | | | 64.0 | 109.9 | 41.6 | 41.6 | 0.0 | 0.0 | 0.0 | No |
| 961331 | Tim Turney | 10/10/2006 02:54 | 00:05:10 | | | 68.0 | 123.2 | 48.4 | 48.4 | 0.0 | 0.1 | 0.0 | No |
| 961331 | Richard Wood | 10/10/2006 03:05 | 00:03:49 | | | 66.0 | 102.4 | 45.0 | 45.0 | 0.0 | 0.0 | 114.0 | No |
| 461020 | John Killen | 25/08/2006 00:59 | 00:01:50 | | | 80.1 | 117.0 | 55.9 | 55.9 | 0.0 | 0.4 | 114.0 | No |
| 461020 | Gary Noakes | 25/08/2006 20:20 | 00:01:38 | | | 79.6 | 116.2 | 55.0 | 55.0 | 0.0 | 0.3 | 114.0 | No |
| 961331 | Richard Wood | 10/10/2006 03:03 | 00:01:03 | | | 64.0 | 95.0 | 34.2 | 34.2 | 0.0 | 0.0 | 114.0 | No |

**Figure 29: Data colour coded according to action level**

If the action levels colours or levels need to be changed, click the button (as shown in Figure 30) to bring the Action Level control into view.

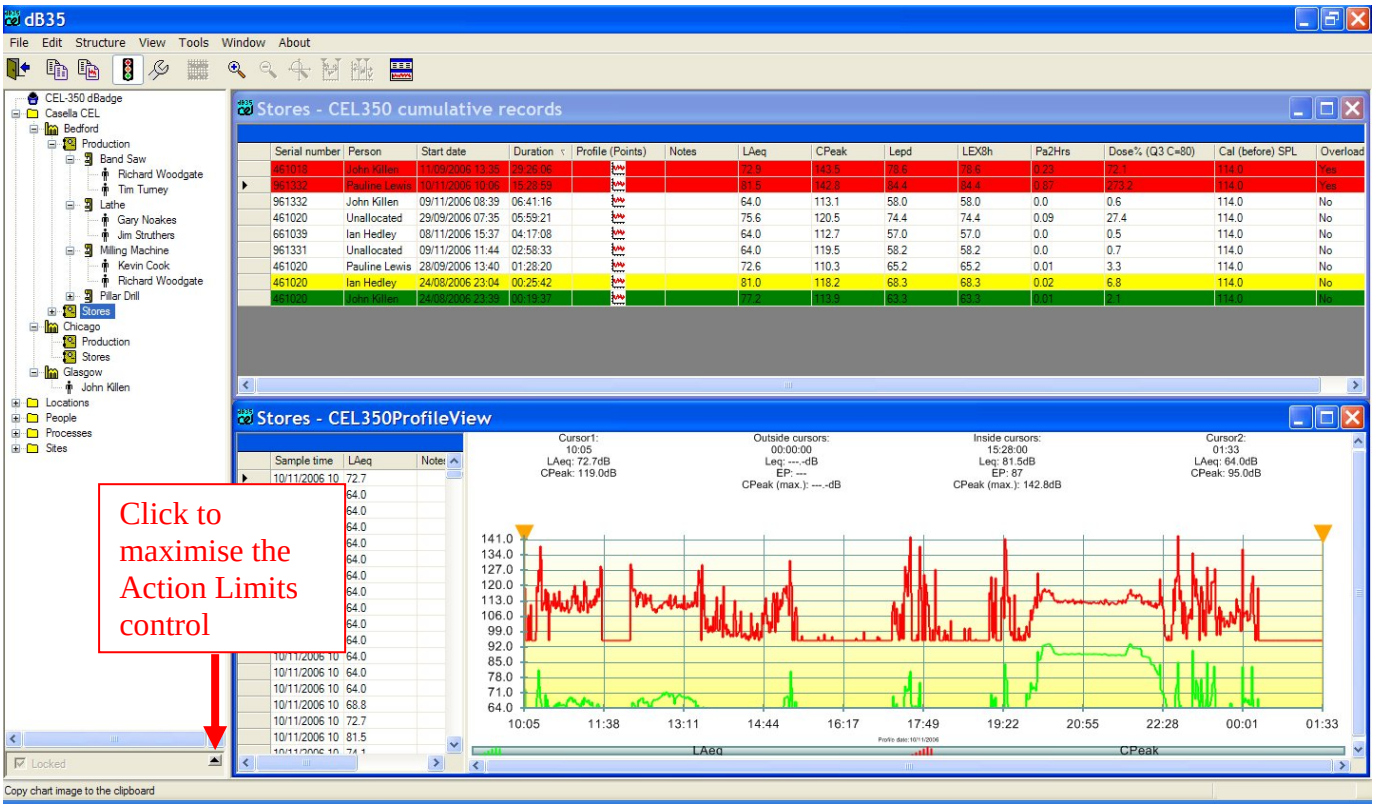



**Figure 30: Maximise controls for the action level colour coding**

The control will then be displayed as shown in Figure 31. To make any changes, the tick box next to 'Locked' will need to be unchecked. Action level colours can then be configured according to ISO, OSHA or specific Custom settings.

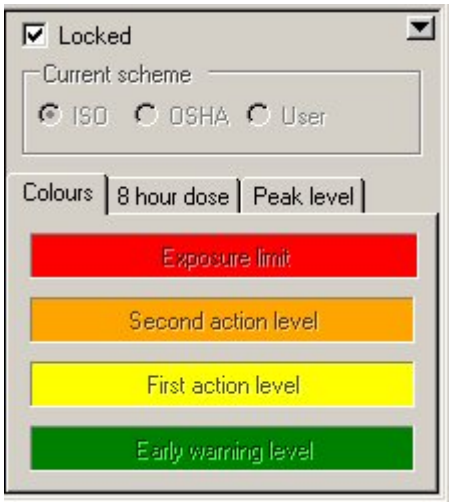



**Figure 31: Action limit control box**

The colours used to highlight the cumulative data table can be altered by left or right clicking the relevant coloured box (left click for background colour, right for text colour). This will open a new dialog box with the colour palette as shown in Figure 32.

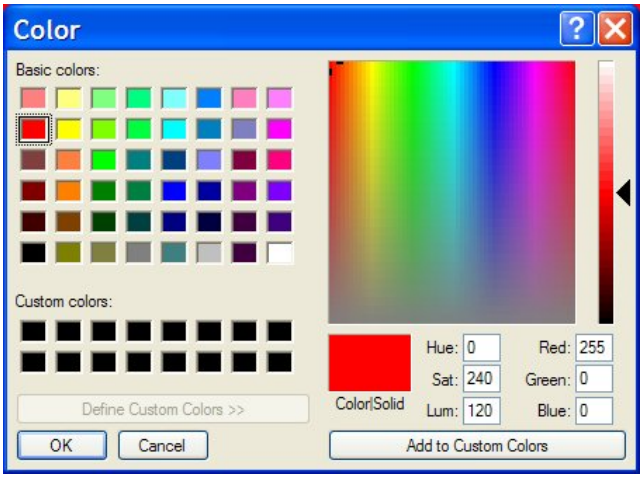



**Figure 32: Colour palette**

The action levels can be changed for dose and peak level by selecting the appropriate tabs, as shown in Figure 33 and Figure 34.

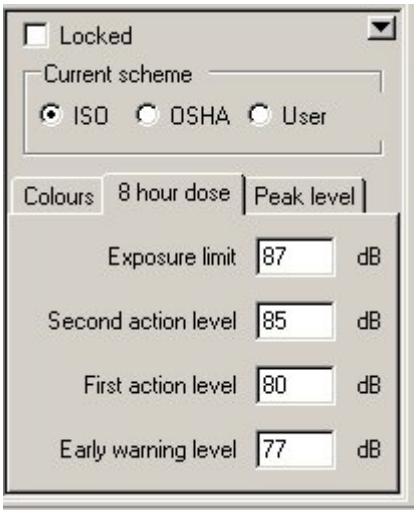



**Figure 33: Eight-hour dose colour levels**

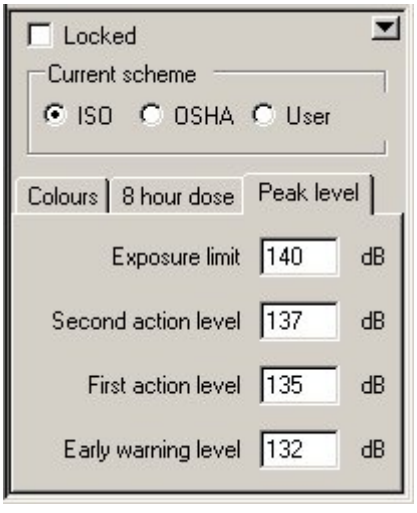



**Figure 34: Peak colour levels**

The new values and colouring are applied to the cumulative data table by pressing the traffic light icon.

# 10 PRINTING DATA

## 10.1 Printing cumulative data

Cumulative data can be printed in a tabular form. The data printed will be the parameters selected in the current view, together with any notes. Therefore, in order to select the data that you require printed, follow the steps in section 8.2 to alter the viewed data as required. Only highlighted measurements will be printed, so highlight the cumulative data that is to be printed as shown in Figure 35.


| Serial number | Person | Start date | Duration | Profile (Points) | Notes | LAeq | CPeak | Lepd | LEX8h | Pa2Hrs | Dose% (Q3 C=80) | Cal (before) SPL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 461018 | Richard Wood | 29/09/2006 07:35 | 05:58:49 | | | 72.2 | 118.2 | 70.9 | 70.9 | 0.04 | 12.3 | 114.0 |
| 461020 | Richard Wood | 27/09/2006 10:49 | 05:10:38 | | | 72.9 | 124.5 | 71.0 | 71.0 | 0.04 | 12.7 | 114.0 |
| 461020 | Tim Turney | 28/09/2006 07:49 | 04:37:51 | | | 73.3 | 118.4 | 70.9 | 70.9 | 0.04 | 12.3 | 114.0 |
| 461018 | Richard Wood | 27/09/2006 12:18 | 03:42:41 | | | 71.2 | 117.1 | 67.9 | 67.9 | 0.02 | 6.1 | 114.0 |
| 961328 | Kevin Cook | 09/11/2006 08:39 | 03:25:14 | | | 64.0 | 115.4 | 57.4 | 57.4 | 0.0 | 0.5 | 114.0 |
| 461018 | Jim Struthers | 09/11/2006 14:21 | 02:57:12 | | | 66.0 | 129.1 | 61.7 | 61.7 | 0.0 | 1.5 | 0.0 |
| 961332 | Jim Struthers | 09/11/2006 14:21 | 02:54:48 | | | 64.0 | 108.3 | 53.7 | 53.7 | 0.0 | 0.2 | 114.0 |
| 961331 | Richard Wood | 09/11/2006 08:39 | 02:42:55 | | | 72.2 | 119.0 | 67.6 | 67.6 | 0.02 | 5.7 | 114.0 |
| 461020 | Dennis Sharm | 09/11/2006 08:47 | 02:40:57 | | | 64.0 | 113.2 | 56.2 | 56.2 | 0.0 | 0.4 | 0.0 |
| 961332 | Gary Noakes | 08/11/2006 14:30 | 02:18:23 | | | 64.0 | 109.3 | 52.4 | 52.4 | 0.0 | 0.2 | 114.0 |
| 461020 | Jim Struthers | 24/08/2006 21:56 | 00:49:39 | | | 86.1 | 122.5 | 76.3 | 76.3 | 0.14 | 42.2 | 114.0 |

**Figure 35: Highlight data to be printed**

From the Main Menu select *File* | *Print Preview* or *File* | *Print* as appropriate (Figure 36). When the data is sent directly to the printer, the printer dialogue box will be displayed and the installed printer(s) can be selected and the settings changed as required.

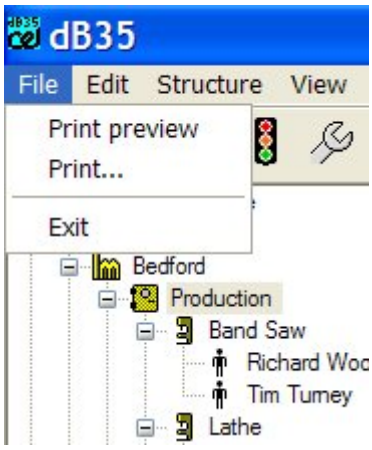



**Figure 36: Printing the data**

An example of a Print Preview screen is shown in Figure 37. From here the data can either be printed by pressing the Print button  , or exported to different formats by pressing the Export button  . For more details about the export option please refer to Section 12.4.

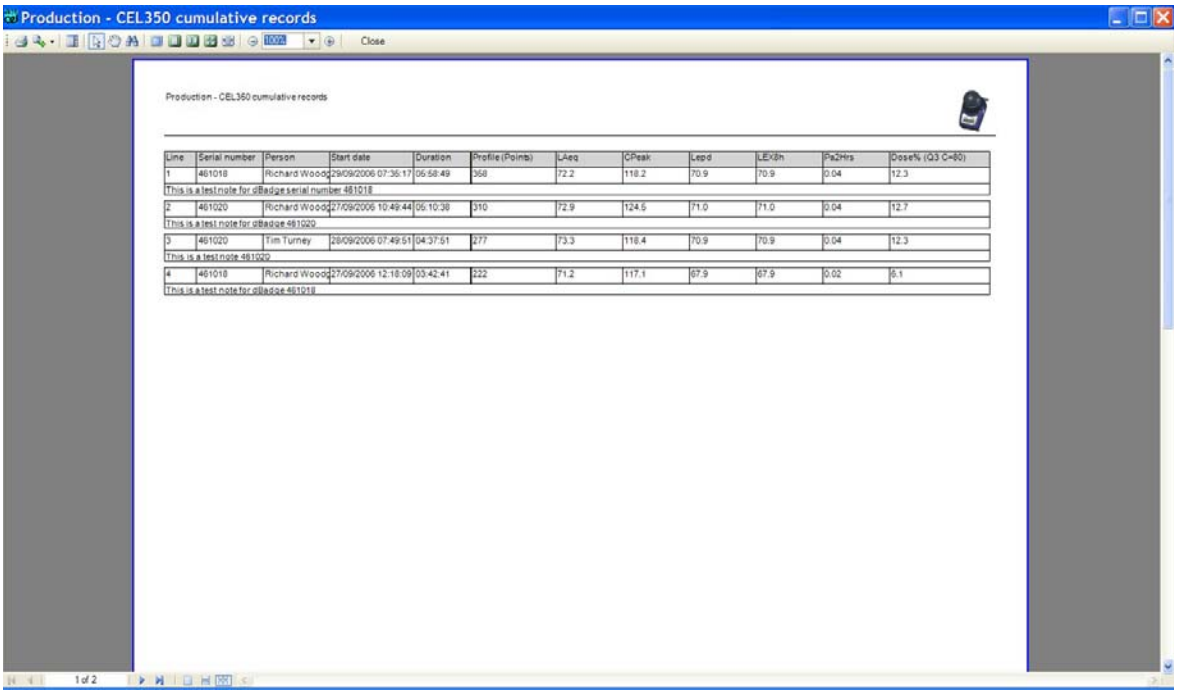



**Figure 37: Print preview of cumulative data**

## 10.2 Printing profile data

Profile data can be printed by pressing the 'Print' button or by selecting *File* | *Print* or *File* | *Print Preview* as appropriate. The dialogue box as shown in Figure 38 will appear. Combinations of the chart or the table can then be printed by ticking the appropriate box and then pressing the print button.

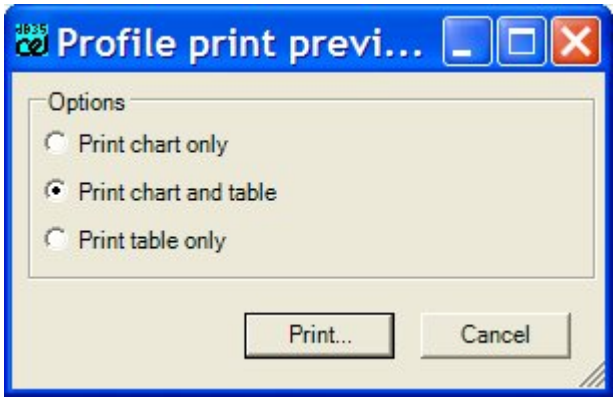



**Figure 38: Select data to be printed**

If 'Print Preview' is selected then the window as shown in Figure 39 will appear. By selecting 'Print Preview' this also allows data to be exported to other formats. This is explained further in section 0.

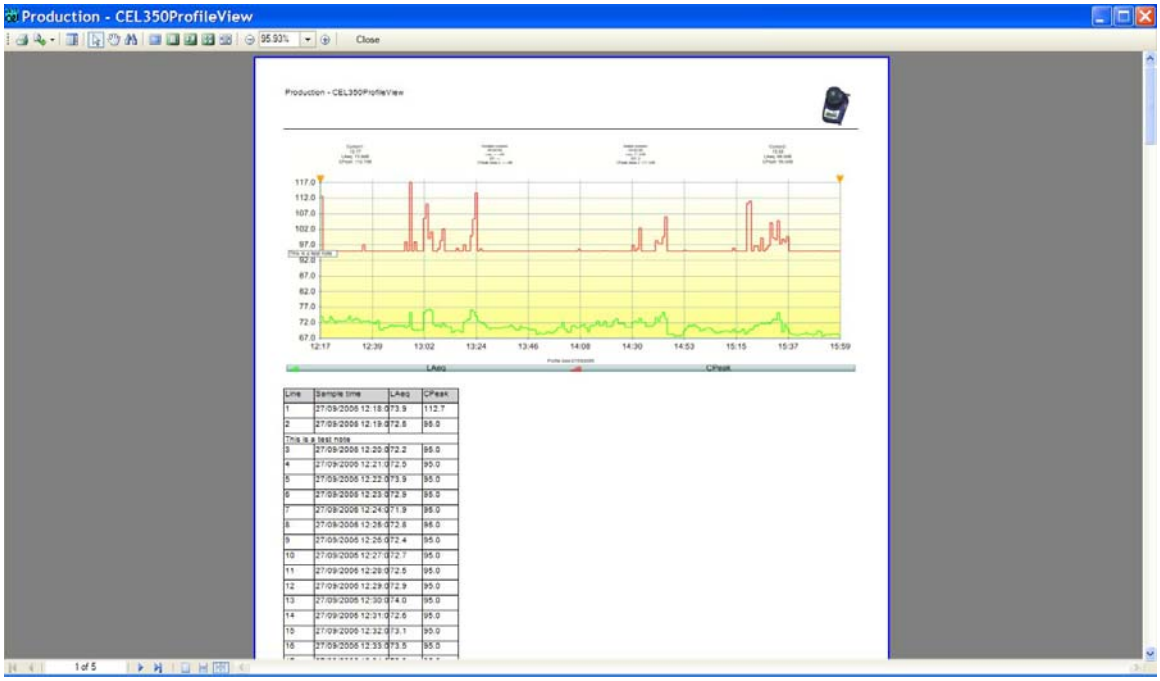



**Figure 39: Print preview of profile data**

# 11 OPTIONS MENU

The options menu provides access to various settings within dB35. To access the options menu press the icon on the tool bar or go to:

*Tools* | *Options*

A dialog box will appear as shown in Figure 40.

## 11.1 Copy/export options

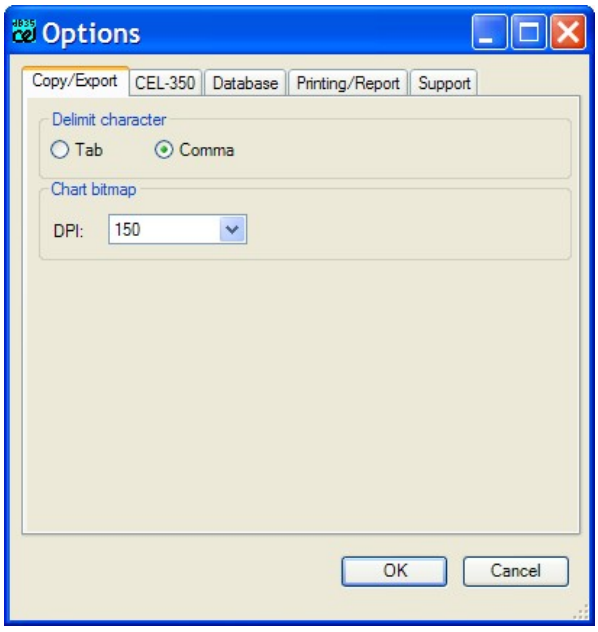



**Figure 40: Copy/export options**

The copy/export options allow changes to the way data is exported from dB35. When copying tables 'delimit character' specifies the character used to separate each parameter.

The chart/bitmap option determines the resolution of the exported chart image. i.e. web pages use 75DPI (Dots Per Inch), whereas documents use 300DPI.

The database tab is for use in non-standard installations and should only be used by experienced users of SQL database.

The support tab allows supplementary data to be captured in the event that support is required for dB35. If requested by Casella CEL support, ticking these options will result in a file stored on the operators PC that can be sent to Casella CEL for further examination.

## 11.2 *dB*adge communication options

The CEL-350 tab options are shown in Figure 41. Under 'Run data' option, if the check box is unchecked, data within the *dB*adge will not be deleted following a download.

The 'Calibration target level' option allows the *dB*adge calibration level to be changed. This would be necessary if the acoustic calibrator used with the *dB*adge unit has a different calibration level.

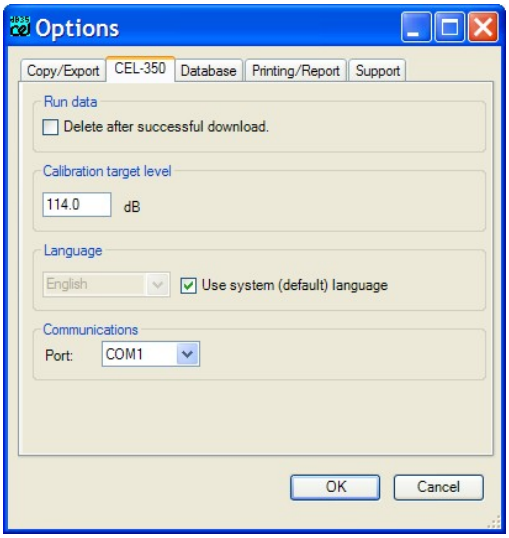



**Figure 41: CEL-350 options tab**

The 'Language' option allows the default language of dB35 software to be changed to a local language, either English, French, German, Spanish or Italian.

The 'Communications' option specifies the PC serial port to which the *dB*adge is connected.

## 11.3 Report options

A set of default report templates are provided in dB35. These define the layout and data in a report. Use this option to change the default paper size if required.

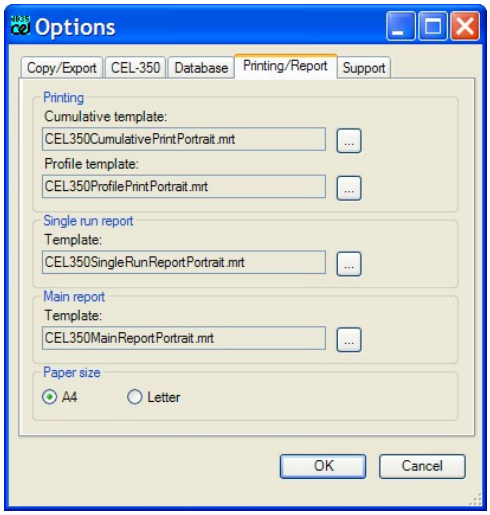



**Figure 42: Report options**

# 12 GENERATING REPORTS

Reports can be generated either for single measurements or multiple measurements from the tree structure as required. The report function is used to collate data in a new format.

## 12.1 Single run reports

Single run reports will print both the cumulative data and profile data. This will also include any notes added to the profile chart and the cumulative data. An example of a single run report is shown in Figure 43.


**Figure 43: Single run report**

In order to generate a single run report right click on the relevant measurement run as shown in Figure 44, then select ‘Preview run report’ or ‘Print run report’ as appropriate. The report will either be previewed as shown in Figure 43, or if ‘Print run report’ is selected, the print dialogue box will appear allowing selection of the relevant printer.

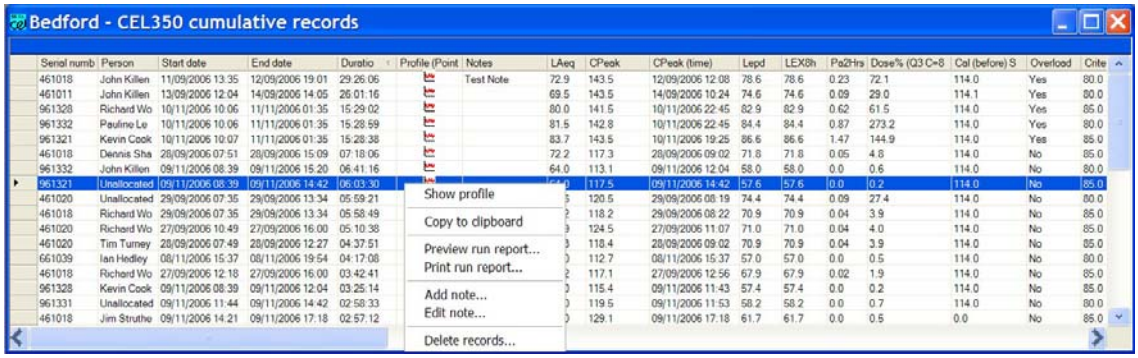



**Figure 44: Starting single run reports**

## 12.2 Multiple run reports

Data is included in the final report based on the portion of the tree structure selected as shown in Figure 45. In this example, all people and process data below 'Production' will be included, However, all individuals from 'Stores' and all other data from 'Bedford' will not be included.

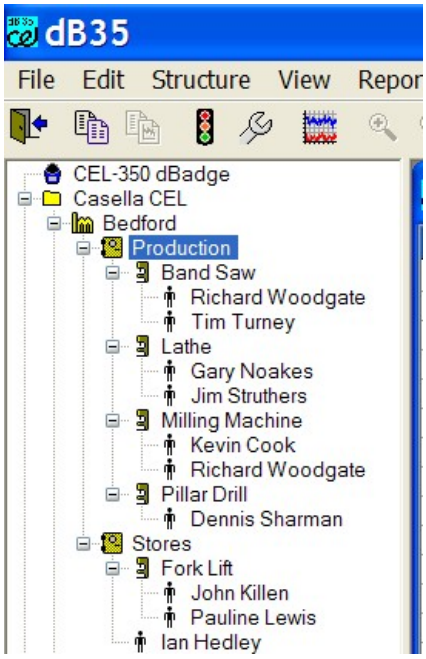



**Figure 45: Selecting data for reports**

To begin the report generation process, right click on the relevant part of the tree structure as shown in Figure 47, alternatively use the 'Report' Menu (Figure 46). In the example shown in Figure 45, selecting 'Generate report for this site…' will generate a report for 'Production' only under the tree section of 'Bedford', whereas selecting 'Generate report for this site (all records)…' will generate a report based on sites called 'Production' from ALL of the tree view.

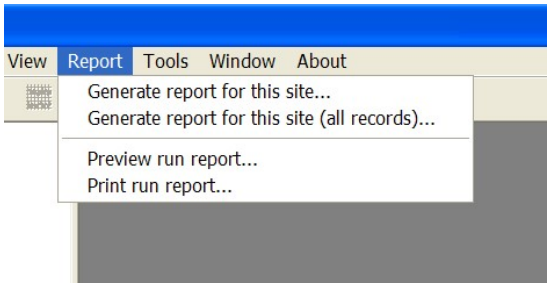



**Figure 46: The report menu**

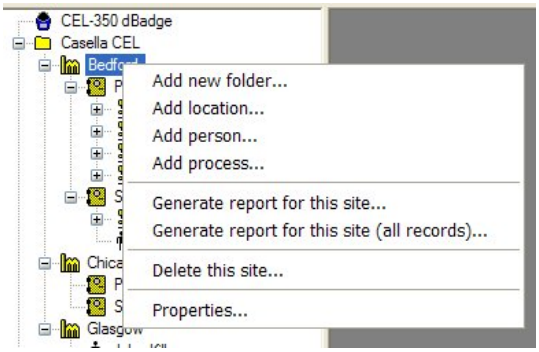



**Figure 47: Starting the report wizard**

## 12.3 The report wizard

Once the selection above is made, step 1 of the report wizard will appear as shown in Figure 48. Step 1 of the report wizard allows the data to be sorted by site, location, process and person as appropriate. By ticking the *Break on change* box, a section break will be included. Once the relevant selection has been made, press *Next* to move on to step 2.


**Figure 48: Wizard step 1**

Step 2 of the report wizard allows selection of the cumulative data to be included in the report. As a default setting, the current cumulative view (see Section 8.1 Cumulative data) will be used. This may be altered accordingly as displayed in Figure 49. If you require the data included in the report to be returned to that shown in the cumulative data view, press *Reset to view*. Once the relevant data has been selected, press *Next*.

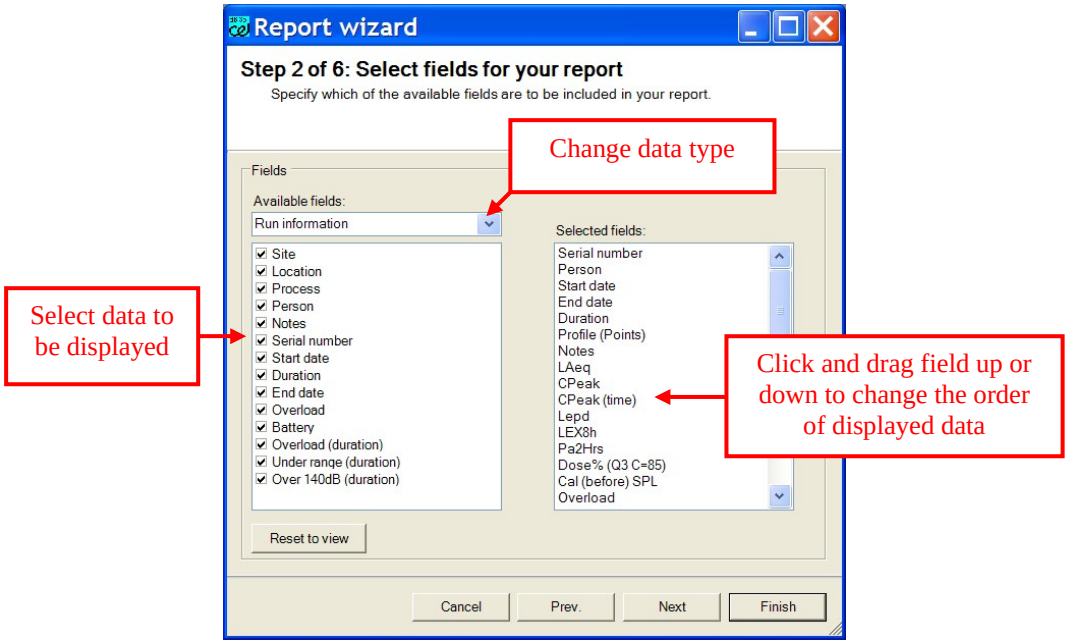



**Figure 49: Wizard step 2**

Step 3 of the report wizard allows the selection of the parameters shown on the time history graph. Up to four time history profiles can be selected by using the drop-down menus provided as shown in Figure 50. As a default, the data that is displayed in the current view will be used, see section 8.7 Customising profile data, for details on how to change this if required. Once the relevant selection has been made, press *Next* to proceed to step 4.


**Figure 50: Wizard step 3**

The date range of the data to be included is selected in Step 4 of the report wizard, as shown in Figure 51. As a default, all dates will be used, by checking the *Specify dates* box, *From* and *To* dates can be defined. Once the relevant dates have been included, press *Next* to move to step 5.

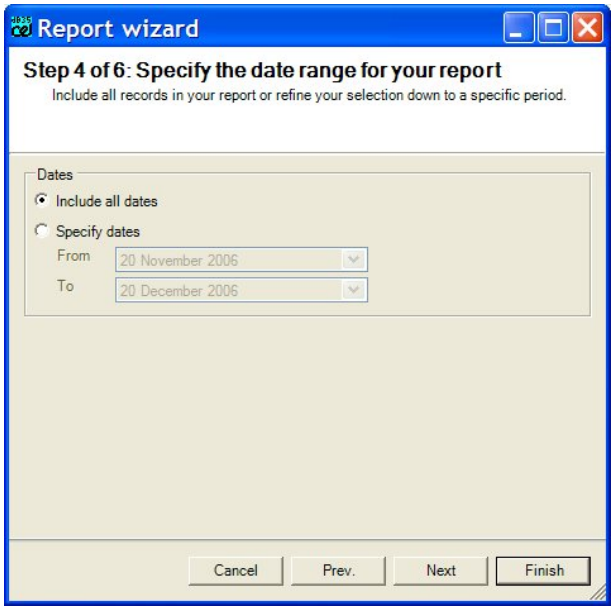



**Figure 51: Wizard step 4**

Step 5 of the report wizard is used to customise your report. This includes page headers, footers and a custom logo. Default headers, footers and titles are shown on the report automatically but these can be changed by un-ticking the *Use default* box as shown in Figure 52. The required content of the title etc can then be typed in manually. The graphic image file used for the logo may be found by using the *Browse* button ... . Once the necessary changes have been made, press *Next* to move to step 6.

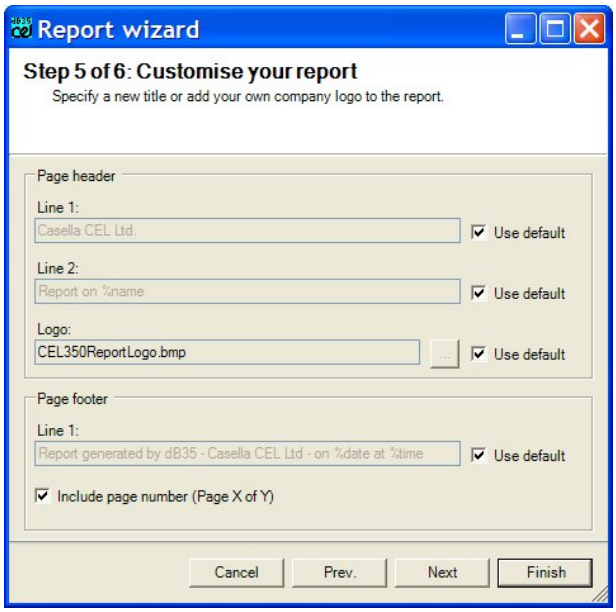



**Figure 52: Wizard step 5**

Step 6 of the report wizard is simply to select whether it is required to print or preview the report. Select the appropriate choice as required. Note, if you wish to export the report to other formats such as PDF, select the *Print preview* option. Press *Finish* to print or preview the report.

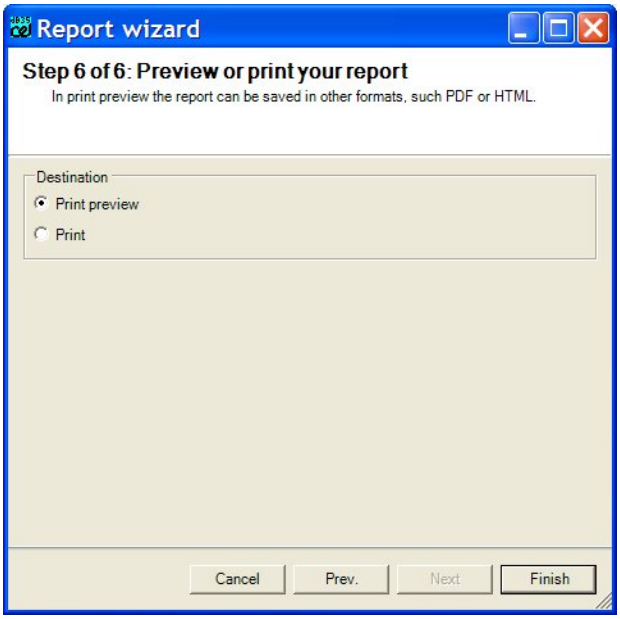



**Figure 53: Wizard step 6**

Depending on the quantity of data that being used in the report, it may take a few seconds to generate the report. During this time a dialogue box will appear showing the message displayed in Figure 54.


**Figure 54: Report generation**

## 12.4 Exporting reports

When the *Print Preview* option is used as shown in Figure 53, reports can be exported in other formats.

To export the report, press the  key. Most popular file formats are supported including PDF, Excel and RTF (for Word) as shown in Figure 55.

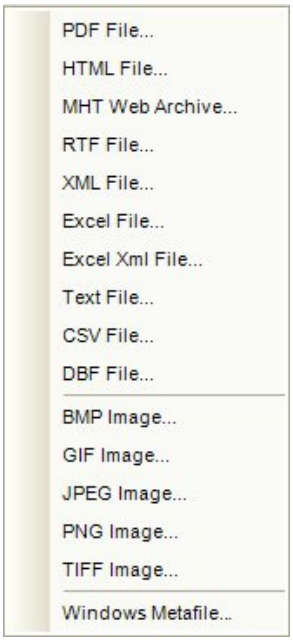



**Figure 55: Report export options**

When the appropriate file type has been selected, the export settings dialogue box will be displayed as shown in Figure 56. If you require the exported report opened straight away then check the *Open After Export* box. Depending on the file format selected, the exported report can be modified further.

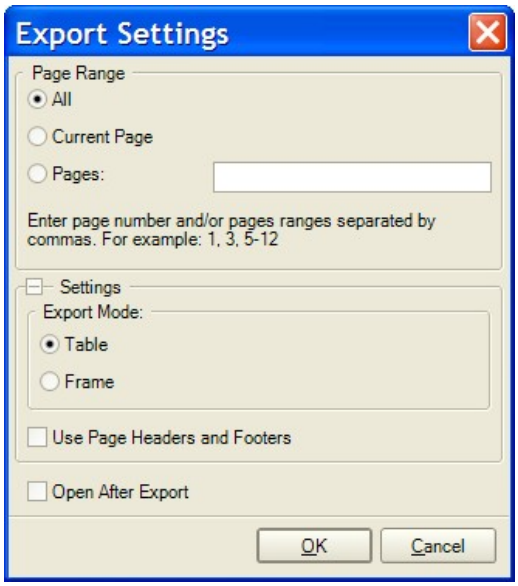



**Figure 56: Export settings**

# 13 BACKING UP AND RESTORING THE DATABASE

As with any valuable data, we recommend that the dB35 database is regularly backed up.

## 13.1 Backing up the database

From the Main Menu select:

*Tools* | *Database* | *Backup Database…*

The dialogue box shown in Figure 57 will be displayed. Use the *Browse* button to specify the location that the database is to be backed up to. Press *Backup…* to save database.

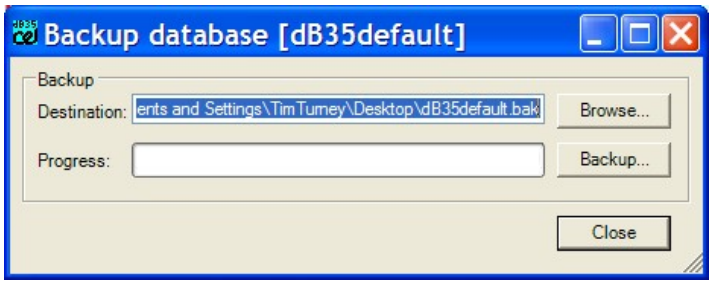



**Figure 57: Database backup**

## 13.2 Restoring the database

Restoring a database loads a previously backed up database into dB35.

**Warning! This operation will overwrite ALL existing data within the dB35 application.**

From the Main Menu select:

*Tools* | *Database* | *Restore Database…*

The dialogue box as shown in Figure 58 will be displayed. Use the *Browse* button to find the location of the saved database, press *Restore…* .The new data will be available the next time dB35 is started.

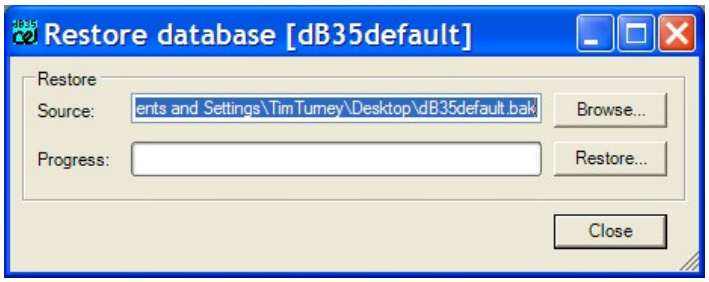



**Figure 58: Restore database**

# 14 EXPORTING AND IMPORTING DATA

Exporting and importing data is used to transfer portions of the database, either to other applications or to alternative copies of dB35.

## 14.1 Exporting from the database

Right-click on the part of the tree view to export as shown in Figure 59 and select the relevant Export option.

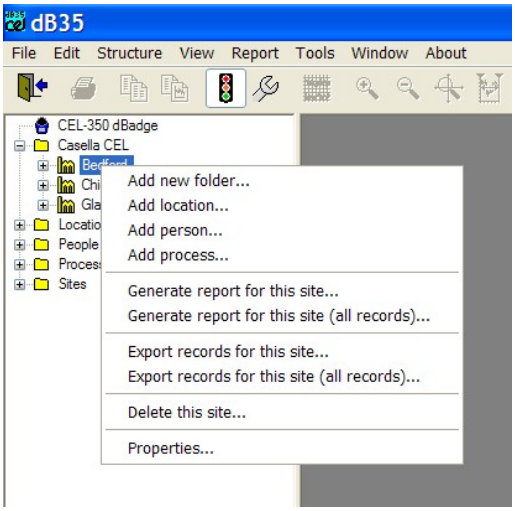
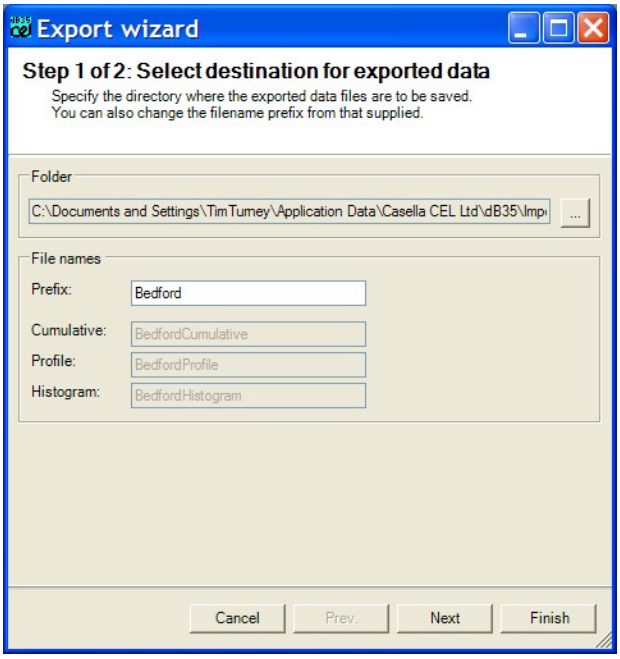



**Figure 59: Exporting data**

The Export wizard will then be shown. Use *Browse* to specify the export location. If required, the file name prefix can be changed from the default value. Press *Next* to proceed.



It is then possible to select whether the data is exported in a dB35 format, or a format to suit other applications such as Excel, see Figure 60. Once *Finish* is pressed the relevant data will be exported to the specified location.

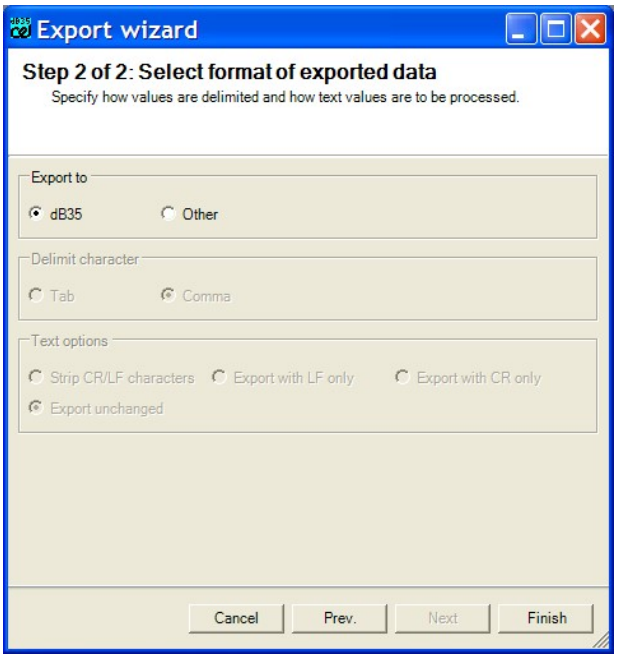



**Figure 60: Data export options**

## 14.2 Importing to the database

Data previously exported in dB35 format can be imported back into dB35. This can be used to exchange data with other dB35 users as required. To import data, right click on the CEL-350 *dB*adge icon in the tree view and select *Import records…* as shown in Figure 61.

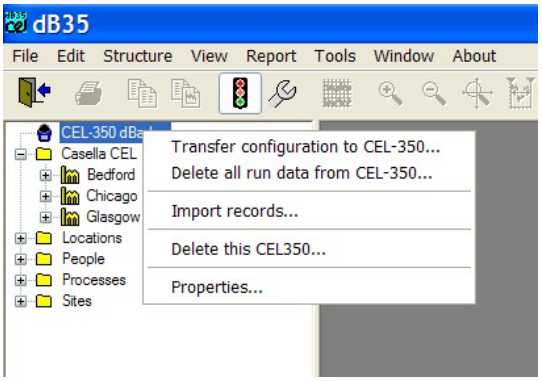



**Figure 61: Importing data**

The Import Wizard is displayed as shown in Figure 62. Use the *Browse* button ... to locate the previously exported data and then click *Finish*.

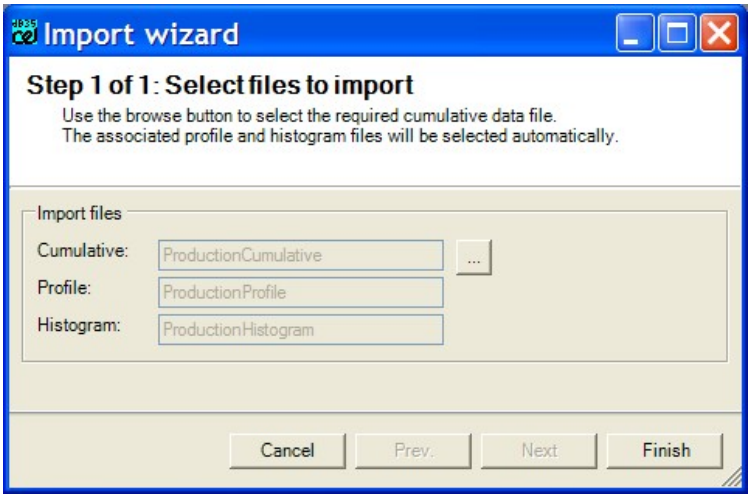



**Figure 62: Data import wizard**

Imported data may contain references to a particular site/location/process/person. These names may not exist in the database they are being imported to. During the import process dB35 will attempt to validate these references against existing fields in the database. If a matching reference cannot be found then a dialogue box will appear, an example of this is shown in Figure 63. This dialogue box allows the user to match unknown fields to those already available, or alternatively create new references as required.

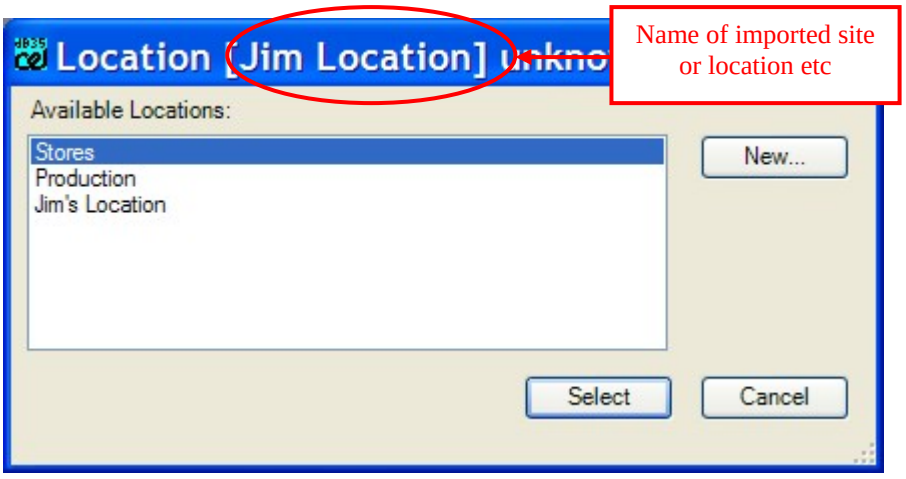



**Figure 63: Select Site/Location/Process or Person**

Please note, once this is complete, it is then necessary to create any new references to the tree view as per section 6.1.

# 15 SOFTWARE WARRANTY

The manufacturers undertake to replace any disk containing significant errors that are directly attributable to faulty design or manufacture that make the program unusable, and which become apparent during the warranty period. In order to take advantage of this warranty, the disk or disks must be returned, carriage paid, to the manufacturer's factory or accredited agent. The warranty period runs for three months from the date of receipt of goods.

Casella CEL Ltd's liability is limited to items of their manufacture and they do not accept liability for any loss resulting from the operation of, or the interpretation of results obtained by using this software. All technical information for individual sets of software is filed under the version and issue number given on the installation disks, therefore the version and issue numbers should be quoted in any correspondence concerning this software. In the event of a malfunction appearing during the warranty period, the disk or disks should be returned either to Casella CEL Ltd's local agent or to the Casella CEL Ltd's Customer Services Department at Bedford. Please include the following information:

Instrument type(s), serial number(s) and firmware version number(s)
Customer name and address
Contact name and phone number
Details of any PC and software involved, including version number(s)
Reason for returning the equipment with a detailed description of the fault
List of any error messages that may have been displayed