Technical Guide -
Installation, Scanning & Data Transfer

Heritage Inventory Software

Version 3

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RELEASE DETAILS

These instructions apply to Version **3** (Released August 2001).

Enter your allocated Serial Number and User code below for reference and technical support when you receive your CD ROM or disks.

SERIAL NUMBER: _____ **USER CODE:**_____

MINIMUM SYSTEM REQUIREMENTS

a) PC with Pentium processor (133MHz recommended), 16mb memory (32mb recommended), 256 (8bit) colour display (16 bit recommended) in 800x600 resolution (SVGA) with "Small Fonts". Arial Narrow fonts are required to view and print most reports.

b) 25mb of hard disk space for software, more if images are included with the database. Note that this version of the database uses externally linked images which can be located on local or network drives.

c) Windows 95, 98, NT and 2000.

PASSWORDS

To enter the Heritage Database Software select either READ or EDIT depending on what level of access you require. Then enter the corresponding password. The passwords are:

Access level	Security Levels	Password
Read access	Give to all read users	**read**
Edit access	Only give this password to those who will add or edit data	**shi01**

When your password has been accepted, you will arrive at the **Main Menu** of the database software. This screen allows you to enter into the database itself, to customise the database or to amend its configuration (ie links to data, images, and access permission).

IDENTIFICATION (ID) NUMBERS IN YOUR DATABASE

When you first install your database you will note that the numbering sequence of the data (displayed on the tool bar at the top of each screen) starts at your allocated serial number plus one.

If you are only using this one database you do not need to set these numbers but it is helpful to know what the numbering system is used for. These numbers are set by the Heritage Office.

The numbering sequence is used by the database software to track each item. All information entered into the database is linked back to the item number (also known as an

ID number). Once allocated a serial number your range on ID numbers will equal the serial number + 1 up to 10,000 records, more for some large agencies.

> i.e. if allocated the serial number 2330000, your database item numbers will start at 2330001 and you can use sequential numbers up to 2340000.

This will allow you database to be integrated into the Heritage Office's State Heritage Inventory at the equivalent item number e.g. 2330001 to 2340000. When future updates or changes are needed then this data range can also be extracted and/or copied over with updates.

Where you have any existing data in a spreadsheet or database format you should first provide this to the Heritage Office. This data will form the preliminary set of data on your database.

Where more than one database is needed e.g. for more than one council or government agency, then each database needs to be set at the appropriate starting number for that agency.

Where you wish to give work to a third party, there is scope to allocate a subset of numbers to them (which they can enter data against). It is recommended that you seek the assistance of the Heritage Office to do this and to later combine the database items.

Without controlling the item numbers in this way, data may accidentally be lost or written over when data is imported into the State Heritage Inventory

DATABASE SOFTWARE COMPONENTS

The database software has three main components:

a) the software *front-end* called **shiuser3.mdb** which contains the program itself and preloaded lists, for example, the list of all local government areas,

b) the data *back-end* initially called **shidata3.mdb** which will contain the data that will be entered, and

c) The **images** folder containing your images saved as a .jpg format.

This separation of the software front-end from the data back-end allows for networking and multiple databases to be created e.g. where a user needs to create separate databases for say more than one council or government agency. It also allows for easier software updates, protection of data, and easier backing up and duplication of data files.

The recommended way to install the software is to create a folder called **c:\shi** on your local computer and place the **shiuser3.mdb** file and **shidata3.mdb** file in the folder. Also create a subfolder called **images** within the **c:\shi** folder and place all your images in that folder. The database should work immediately by double clicking the **shiuser3.mdb** file as this is the default installation. The software can also be loaded on more than one computer and the data file moved to a LAN or Server which can be accessed by other computers with the installed software.

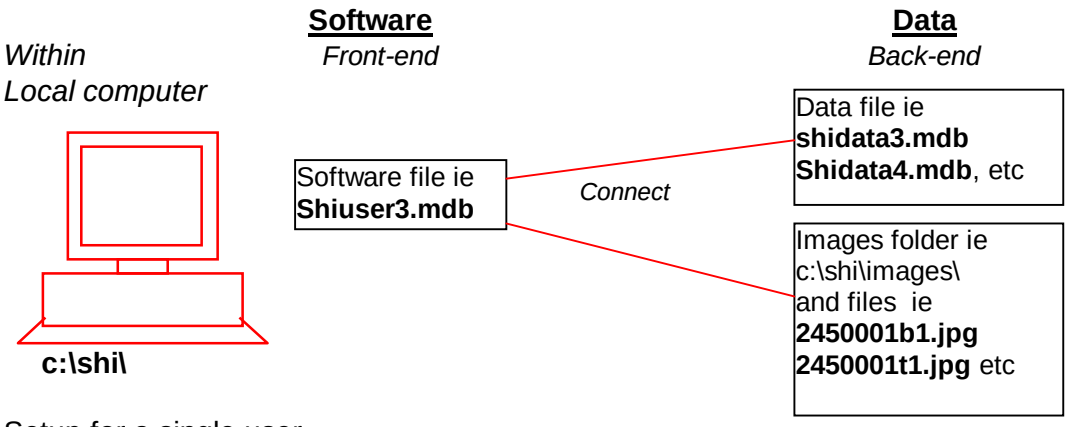
Note that although only one data file at a time can be connected to any copy of the software, copies of the database file itself can be created by copying and renaming the

blank database file **shidata3.mdb**. Each can be tailored as needed. To alternate between database files you need to use the configuration procedure accessed by clicking on the **Installation Menu** button on the **Main Menu** screen.

SOFTWARE CONFIGURATION

a) The Single PC User

The simplest configuration (which is the initial default) is where the software is connected to the data files on a single PC within the folder **c:\shi**



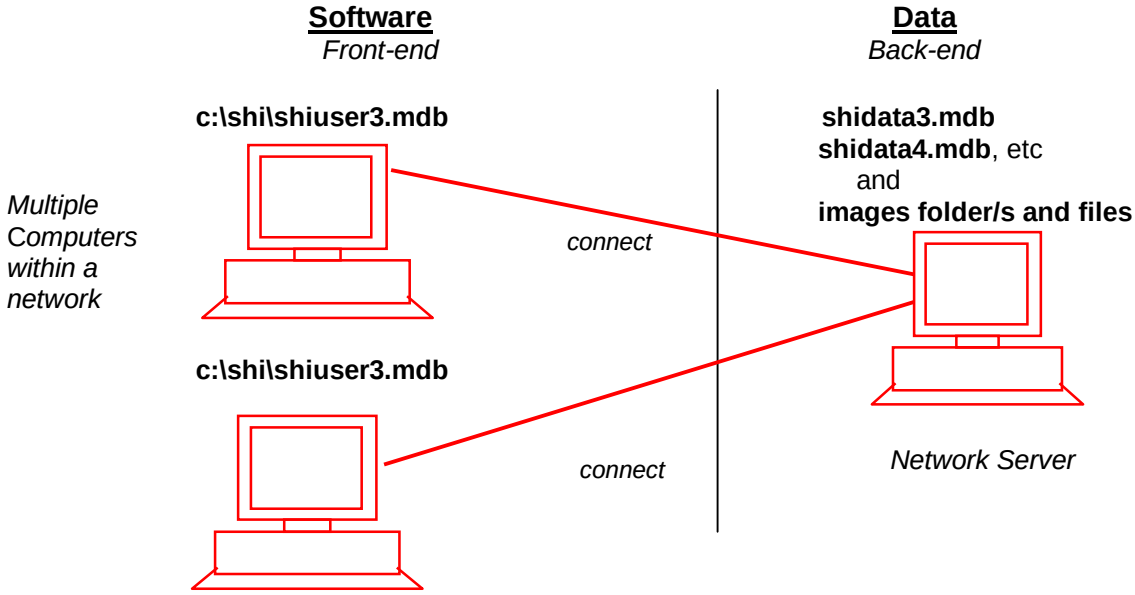
Setup for a single user

1) Note: This procedure assumes you have Office 2000 or later installed. Open Windows **Explorer** or **My Computer**.
2) Create a folder on your C drive called **c:\shi** then make a subfolder within the **c:\shi** folder call **images**.
3) Insert the software CD-ROM into the computer's CD-ROM drive. Using Windows **Explorer** or **My Computer** and open the CD-ROM drive. You will see several folders.
4) Open the Access2000 folder and copy the **shiuser3.mdb** file to **c:\shi**.
5) Open the Client Data folder and copy the **shidata3.mdb** file to **c:\shi**. Note: If you are receiving data from the Heritage Office it will be contained in the **shidata3.mdb** file.
6) Open the **images** folder to see if the folder has any images. If so copy these to **c:\shi\images**. Note: Before copying images ensure you don't overwrite any existing images.
7) To place a shortcut on your desktop right mouse click on **shiuser3.mdb** in **c:\shi** and select Send To and then choose Desktop (create shortcut) with your left mouse button. Close or minimize Windows **Explorer** or **My Computer** to see the Desktop.
8) Double click on the shortcut to start the database. Refer to page 3 of this Guide for information about levels of access and passwords.
9) If you wish to move this location, rename the folder or split the folder into groups, then see the instructions for multiple users below. If you wish to link your software to another database (backend) see the instructions for multiple users below.

For data entry and navigation instructions within the database, see the *Data Entry Guide*.

a) Multiple PC Users

A different configuration is required if you wish to have more than one persons (and computers) entering new records, editing data and/or reading the database file/s. Please ensure there is only one copy of the **shidata3.mdb file** and that all users are connected to the same **shidata3.mdb** file.



Setup for multiple users (eg via a LAN or File Server)

1) Ensure that the SHI database software is closed. Move and/or rename the **shidata3.mdb** file from the **c:\shi** directory to the desired network directory and make a note of the new file name/location eg **k:\heritage\shi\shidata3.mdb**

2) Move any existing images into one or more folders on the network e.g. **k:\heritage\shi\images**. If more than one folder see the information on Image Storage.

3) Run the SHI database software. The **shidata3.mdb** file and images directory must be "re-connected" by selecting the **Installation Menu** button on the **Main Menu** screen. The password to access the **Installation Menu** is **shi01**

4) The **Installation Menu** will present you with a set of step by step options. Press the **Help** button next to each option for assistance at each step. Press the **Back** button at any time to retrace your steps.

5) Type in the full path and filename of the database "back end". e.g. **k:\heritage\shi\shidata3.mdb**. Click on **Next**.

6) Type in the full path of the location of image files. e.g. **k:\heritage\shi\images**. Select **Connect**. This will create the links between the database files. Click on **Next**.

7) You will be asked to give the database a title, edit the wording to suit your needs if required and click on **Save** and then click on **Next**. To keep the existing name just click on **Next**. The database title you have chosen should appear on the top of the screen.

8) Click on **Finished**, you should now be at the Main Menu Screen.

For each user PC on a network, this configuration procedure must be carried out again, and the connection to the "back end" made at that time.

For data entry and navigation instructions within the database, see the *Data Entry Guide*.

CUSTOMISATION

Some components of the database can be customised for individual users. These include the ability to set your own:

- logo image
- database title
- Report headers and footers
-

These options are available from the Main Menu of the inventory database and require the Edit password.

IMAGES

One or more electronic images can be added to each heritage item within the database. These images can include a wide range of types, e.g. maps, photographs, paintings, sketches, etc. (Also see the Image Screen section of the *Data Entry Guide*).

To add these to the database the original image must be scanned first, if not available ellectronically. The following guidelines provide advice on image scanning and on storing the images so that the database can access them effectively.

Note that the system devised for naming image files is crucial when the images are transferred to the Heritage Office to ensure data is not lost.

Scanning

In scanning, as with any photographic process, the final result should determine the parameters of the process. These relate to resolution (pixels), colour depth and sharpness. Always work backwards for the final application to determine how an image should be scanned. The following notes cover the main aspects of image scanning.

Resolution

Images can be attached to the database at one of two sizes: **400x400** pxl for large images and **125x125** pxl for thumbnail images (although the thumbnail is optional in version 2.0 as the database will display the larger image as a thumbnail automatically).

Pixels are the smallest picture elements that make up an image. Sometimes terms like pixels per millimetre (PPM) or dots per inch (DPI) are used, and these relate to a printed image, not a screen image. The higher the DPI (dots per inch), the larger the image file.

Some software desktop publishing packages operate in the PPI or DPI resolution, but in absolute terms the image should be defined in pixels.

Sharpness

Any scanned image generally has to be sharpened to correct for the loss of detail in the

scanning process. This sharpening works by increasing contrast between adjoining pixels of different colour or tone.

Resizing

Any image can be resized, but any resizing process degrades the information in the image. **It is always best to produce the scan at the resolution you intend to use.** Alternatively scan at a higher resolution and then reduce the image to the required size.

File Format

It is important to save the file in a format that will be appropriate to the intended use and potential future uses. Image files can be stored in a number of file formats but for the heritage database software, it is suggested that **JPG** is used as the preferred compressed file format (use high quality/low compression if possible).

File Storage

Image files can take up a large amount of hard disk space so it is important to know what they are called and where they are saved. This will help in finding and transferring the scanned files.

For a small number of images it is recommended that you store them in a single directory (eg. c:\shi images or c:\scan\). If you have a large number of images you could split them into more than one folder but each folder should be a subset of the same directory, e.g. **c:\shi\images\manly** or **c:\shi\images\wellington** where the common directory is **shi\images** . In this case the path **c:\shi\images**\ is placed in the configuration menu and **hornsby** or **manly** is placed in the Path field in the image screen for the relevant images.

Some database users have found it useful to save these onto other devices such as a CD ROM. In this case the path and subdirectories could direct the database to look on the CD to display images. This would free up memory but the CD would need to be inserted for images to be viewed or printed.

File Names

The image names must match the heritage database item numbers rather than descriptive words. Using the item number for the image file name will ensure that when images are transferred to the Heritage Office for placing on the State Heritage Inventory then images will maintain their connection to the correct item. The final letter added will distinguish between more than one image for the one item. The ending three digits indicate the type of image format that you have chosen.

For 400 x 400 pixel images save the image as the record number e.g. **2450001b1.jpg**, **2450001b2.jpg**…where the item ID = 2450001 and 'b1' indicating it is the big picture image number one and BMP indicates it is formatted as a bitmap image.

For 125 x 125 pixel images save the image as the record number e.g. **2450001t1.jpg**, **2450001t2.jpg** …where the item ID = 2450001 and 't1' indicating is the thumbnail image number one and BMP indicates it is formatted as a bitmap image.

Linking images to the database

For the database to display images, an entry must be created for that item on the **Images** screen. Select an image type (Photograph, Map, etc.), add a caption and enter the image file name into that field. The default image file path is set from the Configuration screen. If images are to be stored in a different sub-directory, that sub-directory must be entered on the Images screen.

When the image is available, it will be displayed within the database. If no thumbnail image is available, the database will automatically resize and display the large image.

General Scanning Procedures

Creating a scanned image

1. Decide on the desired image size in pixels.
2. Calculate the DPI based on image size and required image resolution.
3. Open your image scanning and editing software
4. Set the DPI for the scanned image size.
5. Set image options - transparency/reflective, colour/B&W, DPI, etc.
6. Prescan image.
7. Select area to scan.
8. Scan image (slightly larger area than needed).
9. In your image editing software select area required (crop) using RECTANGLE tool, freehand or fixed size option to 400pxl wide or 400pxl high, depending on "landscape" or "portrait" proportions.
10. Save image file according to your numbering sequence, e.g. **c:\shi\2450001b1. jpg**
11. Adjust tonal values (brightness, contrast).
12. Adjust colour balance. (optional)
13. Sharpen image. (optional)
14. Save final file, e.g. **2450001b1. jpg**

NOTE: For scanning images of the same size/format repeat only steps 8-14.

Creating thumbnails

This is necessary for version 3.0 of the heritage database software as it will enable thumbnail images to be displayed on the web.

To create a thumbnail of an existing image:

1. Resize image to 125pxl wide or 125pxl high, depending on "landscape" or "portrait" proportions.
2. Sharpen image.
3. Save final file, e.g. **2450001t1. jpg** ("t" in name denoted thumbnail).

Scanner worksheets

Attached at the rear of document are sample worksheets for recording image scanning settings. These sheets can be a useful reference if scanning is carried out over a period of time or by different people.

PROVIDING YOUR DATA TO THE HERITAGE OFFICE

Once you have finalised the entry of your data into the database, it is ready to submit to the Heritage Office for inclusion in the State Heritage Inventory (SHI).

Prior to sending your data you should check that fields are entered correctly and that any information is properly referenced and images are acknowledged and copyright has been approved. It is recommended that printed samples be sent to the Heritage Office for review and feedback. If conducting your study with an external consultant we suggest that you obtain ownership of copyright on all text and images at an early stage.

You should also ensure that you have formal clearance to do so to enable us to enter a data distribution agreement with your organisation or the commissioning organisation. This agreement will spell out the terms and conditions of the Heritage Office and the Data Provider to the time of data transfer. (A copy may be sighted on request.)

To provide your data to the Heritage Office you will need to send us a copy of you database file (initially named **shidata3.mdb**) and all your images in the **images** folder.

The format used to transfer the file to the Heritage Office will depend on the size of the database file and images, whether you can compact them and the hardware you have available to you. The Heritage Office can use any of the following methods:

Email
Where your email system can attach files, you can email you data to the Heritage Office. This will work for many databases with a maximum of around 2MB in size or larger if compacted first. It is recommended that you compact databases prior to sending to both speed up the transfer and to make the data less likely to be damaged during transit. The recommended compaction tool is ZIP (available on most PCs or as a download on the internet). Note that most email programs place a limit of the size of file attachments allowed. Please email to watters@heritage.nsw.gov.au

CD ROM or DVD
Burn the files to a CD ROM or DVD. CD ROMs can fit up to 650MB of data and DVD ROMs can fit up to 4.5 GB of data. Please post to the postal address below marked to the attention of Stewart Watters.

UPDATES
Version updates are available from the NSW Heritage Office website at:
http://www.heritage.nsw.gov.au/software

FEEDBACK
Your feedback is encouraged for improvements to future releases. All published material and software are copyright the NSW Heritage Office.

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SCANNER SETTINGS WORKSHEET

SUBJECT TYPE->		
	SETTING	**RESULTS**
IMAGE TYPE		
COLOUR DEPTH		
DPI		
HIGHLIGHT		
SHADOW		
GAMMA		
NOTES:		

This sheet designed is for keeping notes on overall scanner settings.

SCANNING WORKSHEET

ITEMITEM ITEM - FILE NAME	ORIG. FORMAT	LENGTH in MM	DPI	HIGH-LIGHT	SHADOW	COMMENTS

This sheet designed is for keeping notes on individual scanned images