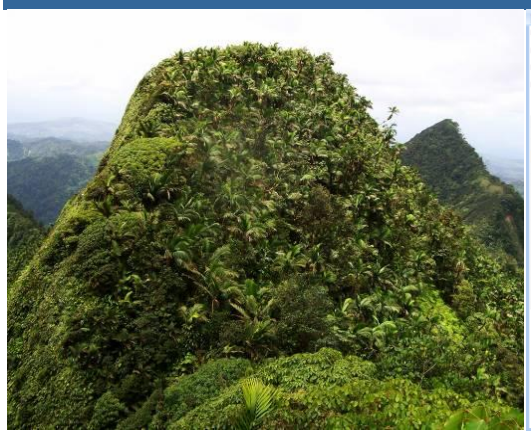
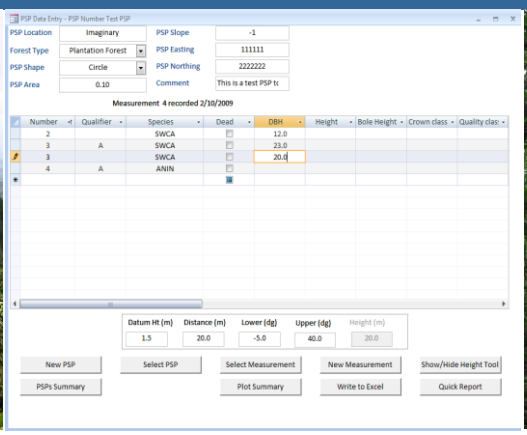
FCG International Ltd
in association with
AFC Consultants International GmbH

TECHNICAL REPORT 6

Presented to the European Commission and
Banana Industry Trust





NATIONAL FOREST DEMARCATION AND BIO-PHYSICAL RESOURCE INVENTORY PROJECT

CARIBBEAN – SAINT LUCIA

SFA 2003/SLU/BIT-04/0711/EMF/LC

THE SAINT LUCIA PERMANENT SAMPLE PLOT SYSTEM

User Guide

By

ROBERT B. TENNENT

Project Leader/Inventory Specialist
2009

This project is funded by the
European Union

FCG Finnish Consulting Group International

Cover illustrations: Elfin Shrubland on Mount Gimie Range (Roger Graveson, FCG); SL PSP screen shot (Robert Tennent, FCG); Deciduous Seasonal Forest at Grande Anse (Jenny Daltry, FCG-FFI).

THE OPINION OF THE AUTHOR DOES NOT NECESSARILY REFLECT THE OPINION OF FCG INTERNATIONAL LTD, THE BANANA INDUSTRY TRUST (BIT), OR THE EU.

THE AUTHOR AND FCG INTERNATIONAL LTD TAKE NO RESPONSIBILITY FOR ANY MISREPRESENTATION OF MATERIAL THAT MAY RESULT FROM THE TRANSLATION OF THIS DOCUMENT INTO ANY OTHER LANGUAGE, NOR FOR ANY ATTEMPT TO USE THE MAPS OR GEOREFERENCES IN THIS DOCUMENT FOR NAVIGATIONAL PURPOSES.

PUBLISHED BY

FCG International Ltd

Helsinki, Finland

COPYRIGHT

© 2009 Banana Industry Trust (Contracting Authority)

REPRODUCTION FOR RESALE OR OTHER COMMERCIAL PURPOSES IS PROHIBITED WITHOUT PRIOR WRITTEN PERMISSION FROM THE COPYRIGHT HOLDER.

RECOMMENDED CITATION

Tennent, R.B. (2009) *The Saint Lucia Permanent Sample Plot System: User Guide*. Technical Report No. 6 to the National Forest Demarcation and Bio-Physical Resource Inventory Project, FCG International Ltd, Helsinki, Finland.

The National Forest Demarcation and Bio-Physical Resource Inventory Project was funded by the European Union under the auspices of the Banana Industry Trust, and implemented by the Finnish Consulting Group (FCG) International Ltd in collaboration with the Saint Lucia Forestry Department.

Introduction

This manual is a user guide to the use of the St Lucia Forestry Department Permanent Sample Plot System (SL PSP). With the use of this user guide and the help system on your computer you will be able to make full use of the system.

The St Lucia Forestry Department PSP System is a Microsoft Access application. To gain full use of the system you are advised to learn how to use Access in full. The more you know about Access, the more you will gain from the SL PSP.

There are many good books on the use of Microsoft Access, and you should to obtain one, and make a full study of it.

Further information on Microsoft Access can be gained from the online help menu.

Rationale behind SL PSP design

The SL PSP System is a simple database designed to store measurements from repeatedly measured sample plots, know as Permanent Sample Plots. The system allows plot information to be entered, reports to be prepared, and data extracted to Microsoft Excel.

Most PSP data is used for the development of growth and yield systems. This is a highly skilled process, which manipulates the basic sample plot data in various ways, as determined by the growth and yield modeller. As such, the SL PSP system does not attempt to carry out any such analysis, as the development of growth and yield procedures is not a simplistic process. However, the SL PSP system allows you to extract the data for examination and checking.

The SL PSP system is designed to allow PSP data to be entered, stored, and extracted easily. Any growth and yield development will be carried out by a modeller skilled in the use of databases such as Microsoft Access, who will determine their own data extraction procedures.

Using the SL PSP

The SL PSP system allows for different types of forest information to be entered and examined using a simple one screen menu system. All menu options are accessed through the same page. The SL PSP system provides all the options available on the same page.

When the program is first run, the user sees the page shown below.

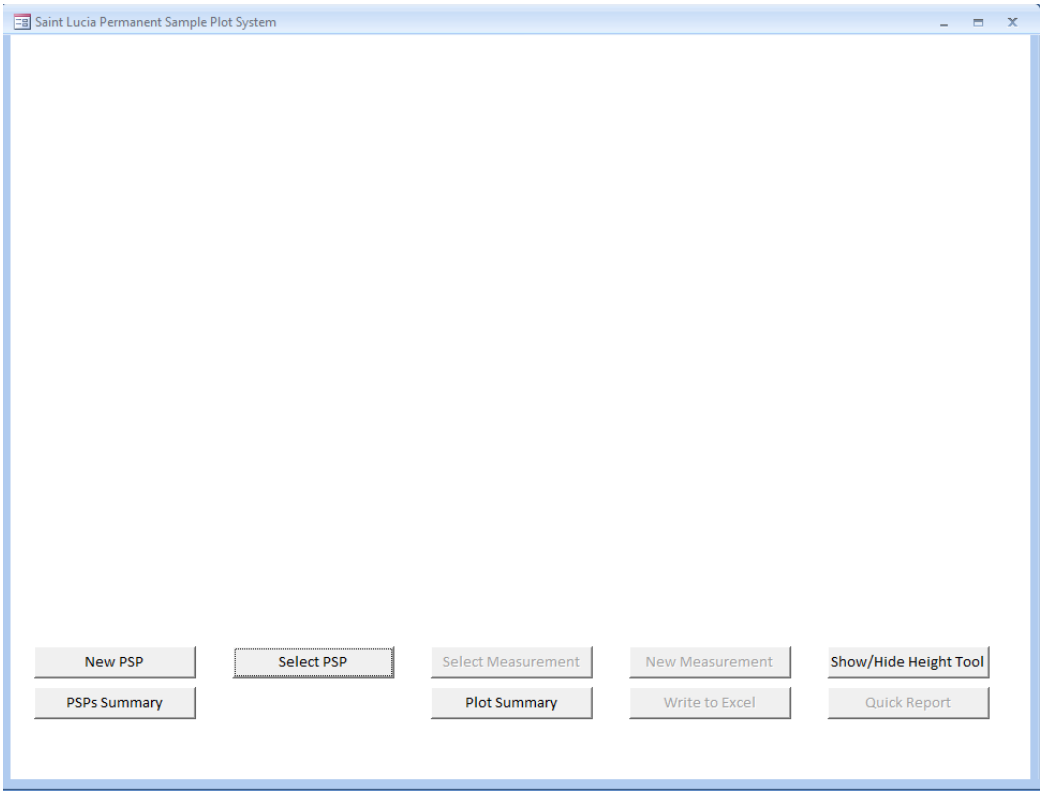


Figure 1 Opening menu for SL PSP system

The user can see clearly the available options. A new PSP can be entered, or an old PSP can be selected. A quick summary of details of PSPs already in the system can be viewed.

Each time the user clicks on an option button, more details and options are shown. The following figure shows a user about to select an existing PSP for further input or examination.

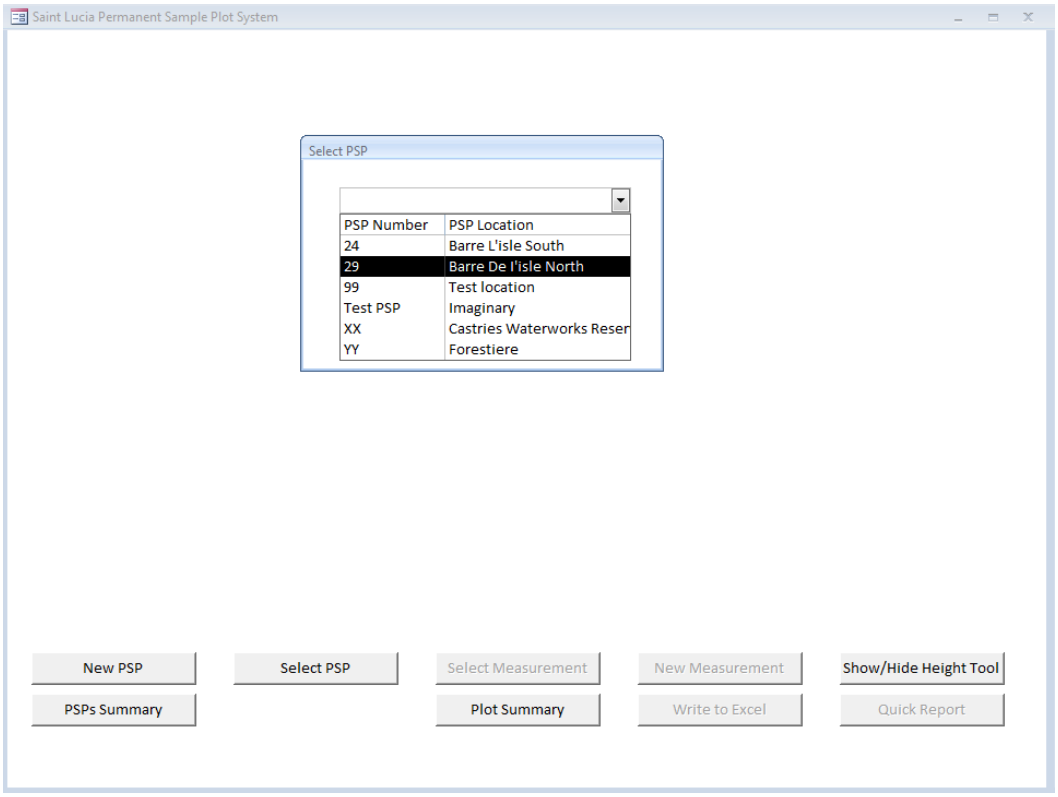


Figure 2 Selecting an existing PSP

The following figure shows the screen after a PSP has been selected

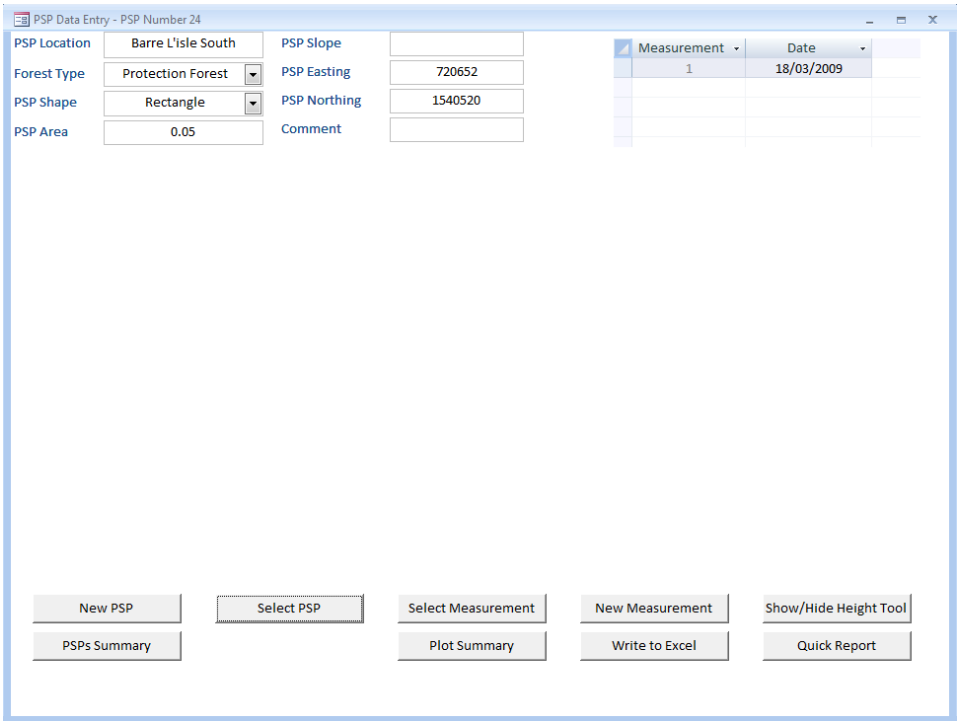


Figure 3 Options after a PSP has been selected

In Figure 3 the user has new options to Select a Measurement, input a New Measurement, as well as writing an Excel file report, or doing a quick report.

In the following figure, the user has selected an existing measurement. Now the data that was previously inputted can be edited.

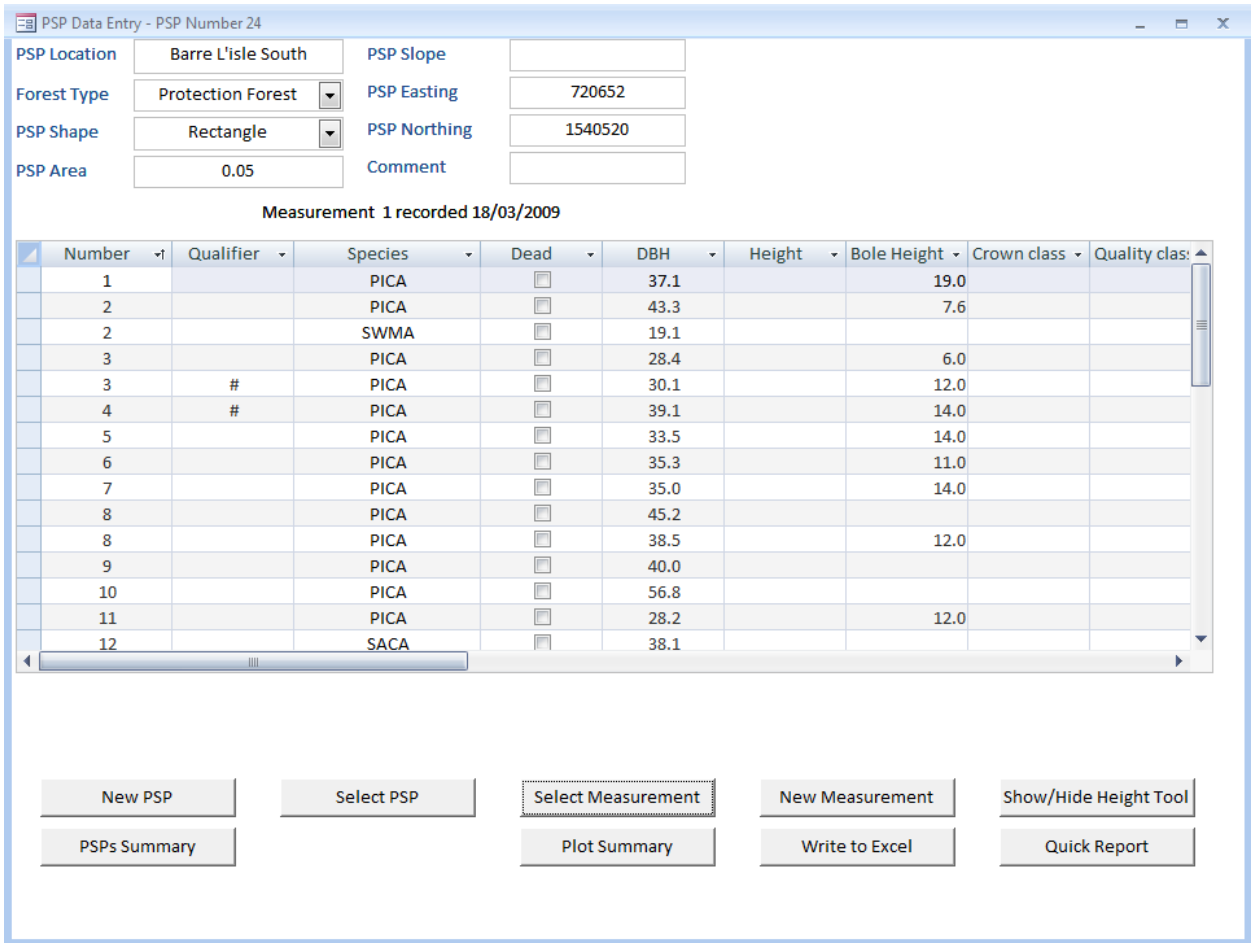


Figure 4 Screen showing measurement data ready to be edited.

The SL PSP system includes a height calculator, which lets the user input height measurement data, and calculates the height. Figure 4 above shows the button for the Height calculator.

When you click on the Height Calculator button, the following sub screen appears.

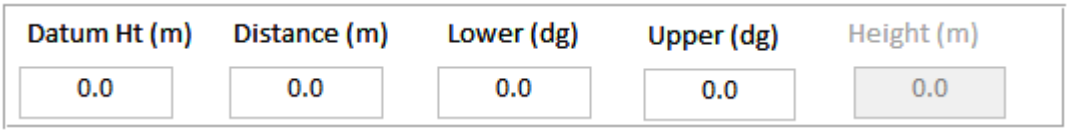


Figure 5 Height calculator

You can enter the height calculation data in any order. Remember that the height will not be correct until all data have been entered.

In Figure 6 below the user has added a new measurement and is entering the new information. The user has entered height calculation data, so that the height can be entered into the database.

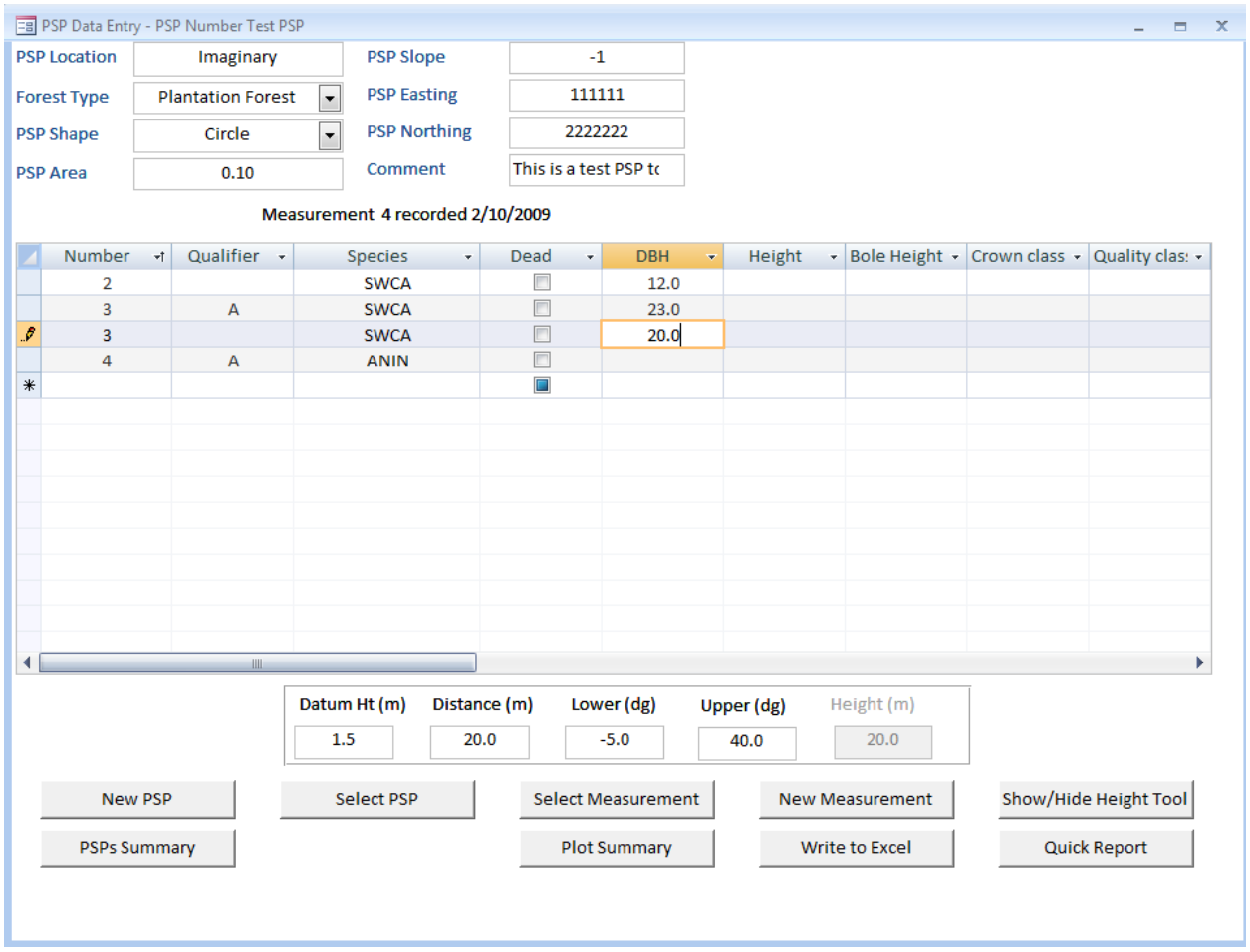


Figure 6 Entering measurement data for a new measurement

Reporting and data output options

The SL PSP system is designed to allow easy input of PSP data. It does not conduct any detailed analysis, as such analysis should be carried out by a trained forest biometrician.

The SL PSP system does allow for simple reports of PSP details. Figure 7 shows an example of PSP data for a test plot, composed of imaginary data.

Selected PSP

PSP Number	PSP Location	Forest Type	Shape	Area	Slope	Easting	Northing
Test PSP	Imaginary	Plantation Fores	Circle	0.10	-1	111111	2222222

Comment: This is a test PSP to trial entry of mulitple measurments

Measurements

1	1/01/2000
2	16/04/2005
3	1/01/2009
4	2/10/2009

002 Swartzia caribaea

Measurement	Dead	DBH	Height	Bole Height	Crown class	Quality class	Form class
1	☐	12	22		Subdominant		
2	☐	22	22	5	Codominant		
3	☐						
4	☐	12					

003 Swartzia caribaea

Measurement	Dead	DBH	Height	Bole Height	Crown class	Quality class	Form class
1	☐	14	24		Dominant		
2	☐	24	11		Dominant		
3	☐						
4	☐	20					

003A Swartzia caribaea

Measurement	Dead	DBH	Height	Bole Height	Crown class	Quality class	Form class
1	☐	13	23	5	Codominant	a	
2	☐	23	22		Dominant		
3	☐						
4	☐	23					

Figure 7 Example of PSP details report

A summary report of all PSPs in the system can also be prepared, as shown in Figure 8 below.

When reports are prepared, they are shown on the screen in Print Preview format. You can then print the report to paper if you want by selecting the Print function from the Microsoft Access menu bar.

PSP Summary

PSP number	Location	Shape	Area	Slope	Easting	Northing	Forest type	No. measurements	No. trees	Comment
29	Barre De l'isle North	Rectangle	0.05	-6			Natural Forest	1	38	
24	Barre L'isle South	Rectangle	0.05		720652	1540520	Protection Forest	2	28	
XX	Castries Waterworks Reserve /Forestiere	Rectangle	0				Plantation Forest	1	76	
Test PSP	Imaginary	Circle	0.1	-1	111111	2222222	Plantation Forest	4	4	This is a test PSP to trial entry of mulitple measurments
99	Test location	Diamond	0.09	-5	1231	111	Natural Forest	3	11	Test plot

Wednesday, 14 October 2009 Page 1 of 1

Figure 8 Example of PSP summary report

The details of the PSP under examination can also be written to an Excel file by clicking on the button shown on the SL PSP screen. When you do this, the name and location of the Excel file is shown. If you want to use the Excel file, you should move the file and rename it, as the next time you write an Excel file, the same name will be sued, and the old data will be lost.

Further detail can be accessed thought the Microsoft Access system. Microsoft Access is relatively easy to use, and if more detailed reports are needed, an experienced Microsoft Access user will have few problems in preparing such reports.

If you want to explore the data with Access, you should make a copy of the files, and examine them on a different computer, to make sure you don't damage the actual PSP data. The Appendix gives more details on how the data are stored.

Appendix. Maintenance of the SL PSP

The SL PSP is not a complex computer system. There will need to be some elements of regular maintenance carried out, and the future upkeep of the system will need to be maintained. This appendix contains technical details to assist with this maintenance.

Hardware and software requirements

The SL PSP is a Microsoft Access 2007 application. The SL PSP requires a copy of Microsoft Access 2007 to run. This is usually purchased as part of Microsoft Office 2007. Any later version of Microsoft Access should be suitable to run the SL PSP.

The SL PSP can be run without a copy of Microsoft Access 2007, through the runtime software option, but modifications and ad hoc queries will not be able to be made.

The SL PSP is not a demanding application, and most modern computers should be able to run it. Any computer, which meets the specifications necessary to run Microsoft Access 2007 or a later version, will be suitable to run the SL PSP.

The SL PSP does not require a large amount of disk space. It is unlikely that the application will need more than 100 Mb of disk space.

Any computer built after 2007 should be capable of running the SL PSP.

Upkeep of the system

The SL PSP is self-maintaining, and needs little upkeep. The regular support of the computer hosting the system should ensure the system is up kept.

The computer the SL PSP is hosted on should be maintained at least monthly, with a disk check and disk defragmentation carried out.

The main element of up keeping is the regular backing up of the files, as discussed below.

SL PSP Computer files

The SL PSP is a Microsoft Access computer system. It is designed to be kept in the same directory as the St Lucia Forest Management Information System, a computer directory called C:\SLFMIS\. The SL PSP System accesses data tables use in the SLFMIS, so all the files in the SLFMIS directory are needed by the system.

The SL PSP System will not run without access to the files stored in the C:\SLMIS| directory

The system consists of two computer files, a *program file* and a *data file*. The *program file* is called SLPSP.ACCDB. This file stores the program details along with data entry screens, reports, and other program features.

The *data file* is called SLPSP_be.ACCDB. This stores the actual psps data.

The program file, SLPSP.ACCDB, does not change regularly. However the data file changes every time more inventory data is entered or changed.

Both files should be backed up regularly.

If you want to move the SLPSP to another computer, or if you want to take a copy to use on another computer, make sure that the files are copied into a directory with the same name on the same drive e.g. C:\SLFMIS\

If you copy them into a different directory, the program will not run, and you will need to get an Access expert in to help you. SL PSP makes use of the Access split database feature. This requires configuration of the different front and back ends of the system.

If there is a problem with the SL PSP, you may be sent a new version of SLPSP.ACCDB. If this happens, to update the SL PSP, you should copy the new SLPSP.ACCDB to replace the old SLPSP.ACCDB. You will be given careful instructions if you need to do this.

Backups

The information entered into the SL PSP is extremely valuable. You should make regular backups of your data. These backups should be kept in a safe place, with old copies of the backups stored in another building. If the main office building was destroyed in a fire or disaster, you could restore the SL PSP from a backup kept in another office.

You should backup all the files in the SLFMIS directory by copying them to a CD or other backup device.

Future development

The SL PSP is a Microsoft Access 2007 application. Future development should be possible by any competent Access 2007 developer. Some knowledge of forest practises may be required.

All software code is imbedded in the application. The Microsoft Access 2007 development environment includes Visual Basic, which was the language used to develop the subroutines and functions called by the application. The Visual Basic development system renders all code visible to the developer.

Further development should be possible with a backed up copy of the application by any competent Access 2007 developer. No specialised development tools were used in the development of this software.