TreeManager
Tree Management Software

User Manual
iSiMobile and *iSiLite*

INHALT PAGE

0   Foreword

Thank you for choosing the *TreeManager* software package. This user manual contains an explanation of how to instal the PC and handheld-device versions of *iSiLite* and *iSiMobile* and a description of the software's main functions.

This is our "iSiMan". We have put him in the left-hand margin to bring your attention to important pieces of information and also practical tips.

TreeManager instals two software components:

iSiMobile

- **iSiMobile** for on-site tree inspection using any Pocket PC or smartphone running Windows Mobile 5x or 6x operating systems

iSiLite

- **iSiLite**, the mini tree manager for processing data and planning tree work on a Windows PC

You can learn about the current programme functions of *iSiLite* and *iSiMobile* and see how to use the software by watching our narrated, step-by-step demonstration videos here:

iSiMobile: *www.tree-consult.org/isiman/isilite/helpdesk_isimobile/*

iSiLite: *www.tree-consult.org/isiman/isilite/helpdesk_isilite/*

0.1   Legal Information

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1 Installation

1.1 Preparing to instal the software

iSiLite can only be installed on PCs running on *WindowsXP* or *Win7* operating systems. If your PC runs on *WindowsXP*, then the *WindowsXP Service Pack 2* and *Microsoft.NET Framework3.5 SP1* are required. Please check under *Start/Control Panel/Software* whether these components are installed. If your PC runs on *Win7*, it is possible that *Microsoft.NET Framework4* has been preinstalled. Should this be the case, it will still be necessary to reinstal *Microsoft.NET Framework3.5 SP1*.
iSiMobile is software that has been developed for Windows Mobile 5x and 6x operating systems. Android and MAC systems are not supported. Before installing *iSiMobile* on your Pocket PC or smartphone, you will need to connect it to a PC.

1.2 Connecting the handheld device to the PC

Plug your handheld device or smartphone into a USB port on your PC and wait until a connection has been established via *Microsoft ActiveSync* under *Windows XP* or with the mobile device center *Mobile Device Center* under *Win7*. All automatic synchronisation settings have to be deactivated while this is being carried out.

1.3 Installing the software

To instal *iSiMobile* and *iSiLite*, download the executable file *treemanager.msi* at www.tree-consult.org/isiman/isilite/TreeManager.zip onto your PC. After unzipping the file, click on *treemanager.msi* The installation assistant will automatically instal all the necessary software components on your PC and on the handheld device or smart phone.

- *iSiLite* will be installed automatically in the directory
  C:\Programme\Brudi & Akontz\TreeManager

- *iSiMobile* will be installed automatically on the PC / Pocket PC in the directory
  My Device\Programs\iSiMobile

iSiLite can also be installed on Windows terminal server systems, e.g. server 2003/2008. The software is network compatible, i.e. there is no user management necessary for the database (*datasdf.sdf*) since there are no write access rights within *iSiLite*.

Download the installation file at:
www.tree-consult.org/isiman/isilite/TreeManager.zip

1.4 Registering the software

1.4.1 Registering *iSiLite*

Once *iSiLite* has been installed and opened for the first time, an entry screen will appear into which the licence number needs to be entered. If you do not yet have a licence number, please select the option "Request licence number", then enter and submit the required information (see Fig. 1).

A licence number will usually reach you within 24 hours. Please then note the licence number and keep it in a safe place. Every licence number that we assign is valid only for that particular device and is not transferable. When the licence number is entered, the licence type and period of validity will be displayed. The next time the program is opened, the licence number will remain hidden.

Fig. 1   Splash screen

Click on "Request licence number" to access the request form.

Enter your name and email address in the appropriate fields. When you click on "Request" (outlined here in red), an email containing your details will be sent to Freeworker (www.freeworker.de).
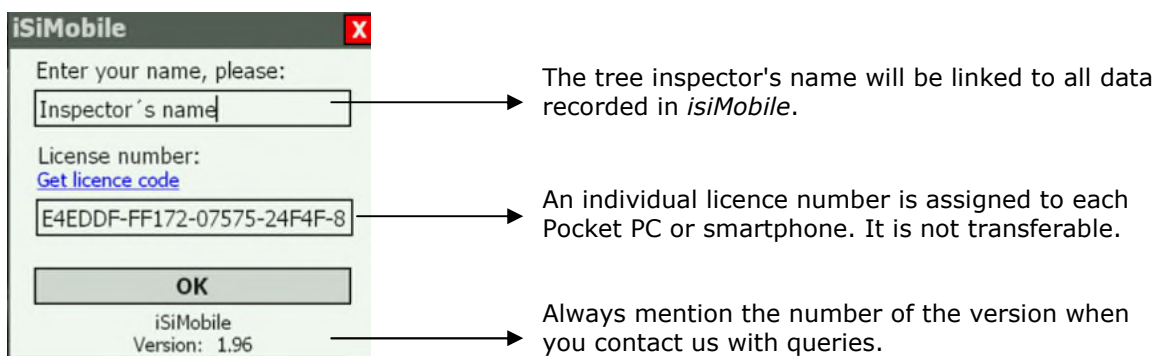
iSiLite contains an automatic **Update function** that runs in the background. When your PC is connected to the internet, your version of *iSiLite* is checked to determine whether it is up to date. If a new version of *iSiLite* is available, you will be asked if you wish to update the version that is on your PC. You will need to have administrator rights in order to carry out an update. If you wish to deactivate the function, you can do this under "Settings". If you decide to carry out an update, your current version of *iSiLite* will be completely removed from your PC and the newest version installed.

1.4.2   Registering *iSiMobile*

Once *iSiMobile* has been installed and opened for the first time, an entry screen will appear into which the licence number needs to be entered. If you do not yet have a licence number, please select the option "Request licence number". A licence request form will open up on your screen. Copy the text file and email it to the licenser (info@freeworker.de). Please read the entire text carefully and follow the step-by-step instructions.

iSiMobile and all its functions can be used for 60 days without a licence number. Once a licence number is entered, the tree inspector's initials will also be required (see Fig. 2).

Fig. 2   Splash screen

The tree inspector's name will be linked to all data recorded in *isiMobile*.

An individual licence number is assigned to each Pocket PC or smartphone. It is not transferable.

Always mention the number of the version when you contact us with queries.

Please address all queries regarding registration to Freeworker:

info@freeworker.de

Tel: +49 (0) 8105-27 27 27

2   *iSiMobile* **- Functions and features**

Once the *datasdf.sdf* file has been saved to *My Documents* on the mobile device and the tree inspector's name has also been entered, *iSiMobile*'s start-up screen will open. The *datasdf.sdf* file is a database developed especially for Pocket PCs to hold all data gathered during tree inspections. Further information about transferring and saving data from the *datasdf* database can be found in section 4.

2.1   **Start-up screen**

OK: Exit *iSiMobile*

New/Edit/Delete:
New projects can be set up, and projects can be edited or deleted.

Arrow button:
Takes you to the next level down (municipal area / green area etc.).

ArboTag:
A search function for tree badges. If a barcode scanner is used, the value will be entered here automatically.

Settings:
Here, you can select all of the fields for which data must be recorded. On saving your selection, the entry of data into these fields will become mandatory.

S: Version 1.80 and later contain the "S" (Save) icon. Clicking on "S" will save the database (*datasdf.sdf*) that is currently in use to the following directory:
Memory card\Inspector's name\Date_with_time stamp

2.2 GPS connection
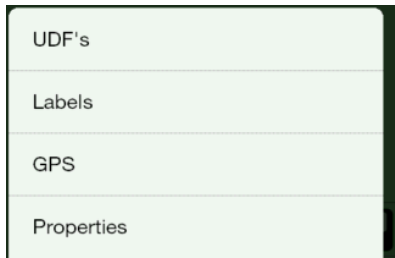
First of all, locate the GPS port. Do this by clicking on "Search". One or two ports will appear. Select for example *"GPS Intermediate Driver"* and then press "Start".

If no ports are visible, this could be due to the device manufacturer's drivers. Only the manufacturer can help here. Acquiring the manufacturer's assistance can be problematic, which is why our software should only be installed on the mobile devices that we recommend.
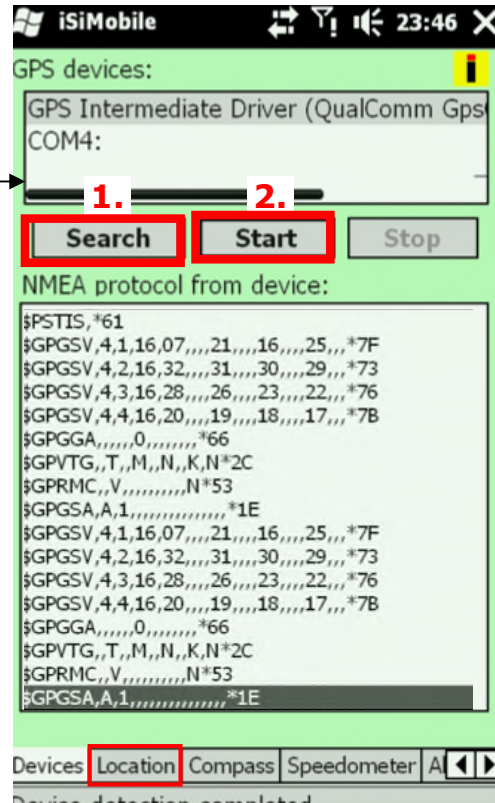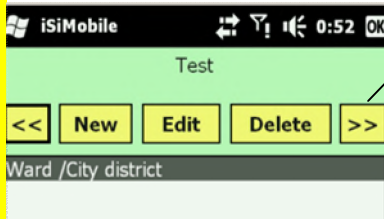

The NMEA protocol will now start to run. You will shortly receive a "fix", depending on the strength of reception in the locality. A fix signifies that a GPS connection has been established and the icon on Tile A turns green (see p. 14).

The fix status can be viewed on the Location tile (outlined here in red), as can GPS information drawn from the other tiles.
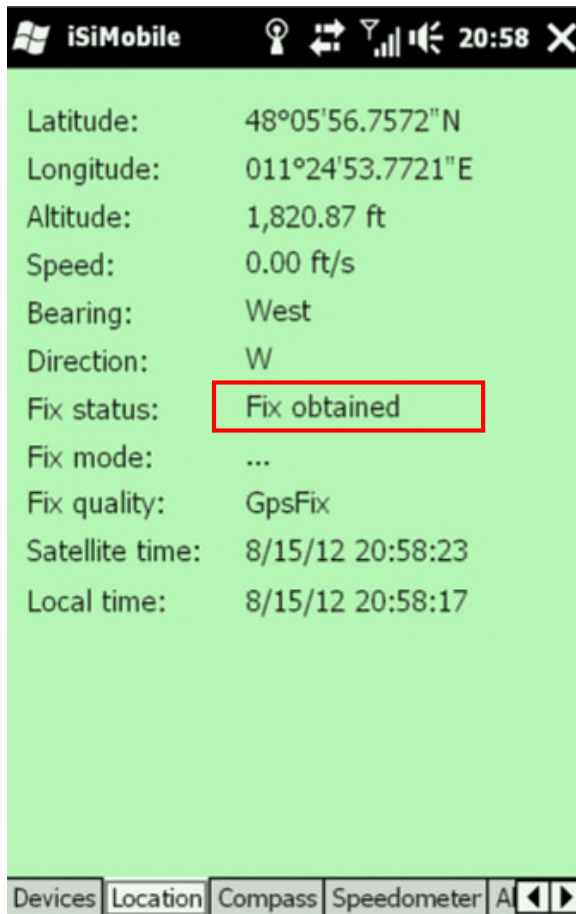
2.3   Project levels

The double-arrow key takes you into the project's next category of detail (cost account / green area / street). You can add, edit and delete items at each of these levels. The last level displays a table of the individual trees on the respective premises (see section 3.6).
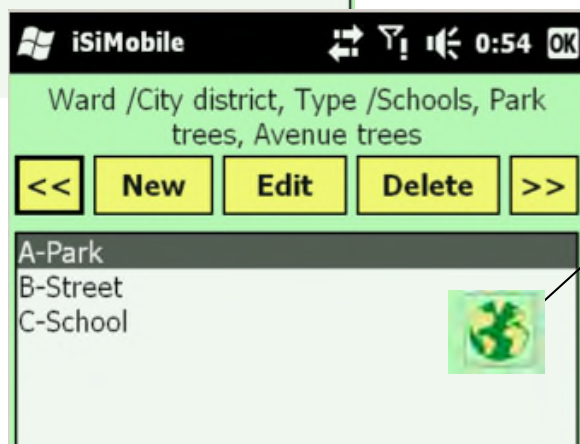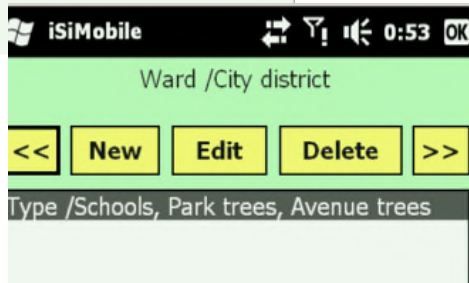
Click on "Map icon" to display the map.

2.4   Map module

The map module is not a stand-alone GIS into which you can import maps of your choice. It uses the maps of OpenStreetMap, a European open source project. Your device needs a SIM card, since the maps can only be accessed via the internet. Aerial views cannot be displayed. If required, it is possible to connect to Google Maps or Bing Maps (licence fees can amount to approx. 10,000 euros p.a.).

Attention: In *iSiMobile*, a tree's location is recorded in coordinates of longtitude and latitude and <u>not</u> in eastings and northings. If you are a user of *isiProfessional* and have entered tree coordinates according to the Gauss-Kruger system, you will need to click "Convert" in order to recalculate the coordinates before exporting them to *iSiMobile*.


2.4.1 Settings for the map module

"When the GPS module is active and connected to the internet, the map always homes in on the red cross in the middle of the screen.

When the processing mode is activated under "Settings", tree positions can be marked on the map as dots. The coordinates are recorded in the *datasdf* database as GPS coordinates (degrees longtitude and latitude).
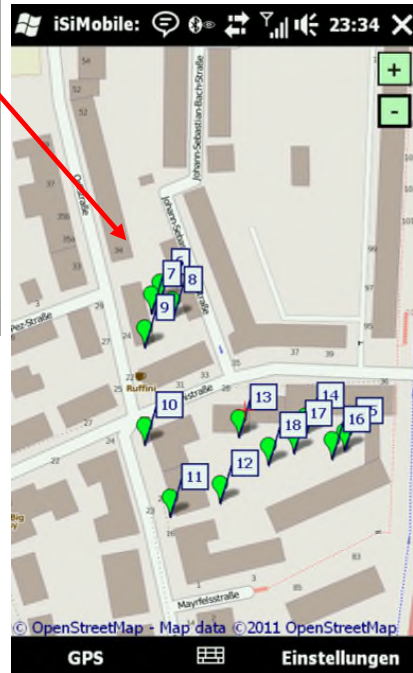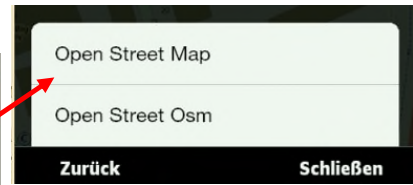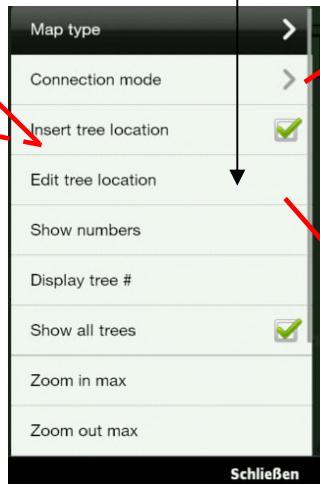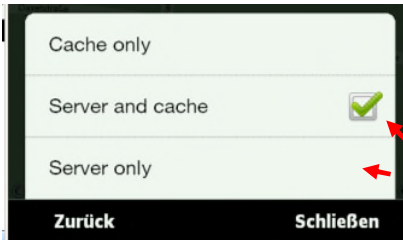
2.5 Green area / Street level

The command menu for the green area / street level contains different functions that can be applied collectively to all of the items being processed (trees / tree groups).

Recycle Bin:

The Recycle Bin holds trees and/or tree groups that have been deleted or felled. They can either be recycled or permanently deleted. It is important to press "Save" after making any changes in the Recycle Bin.
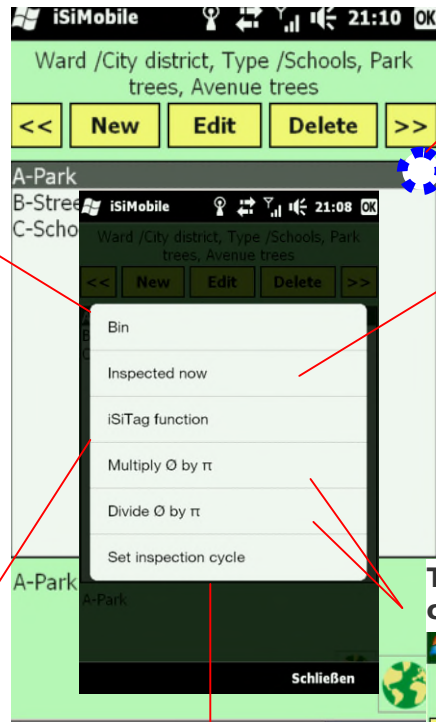
***Press and hold***: The command menu appears.

Apply inspection date: When clicking on this field, the current inspection date will be applied to all of the tree entries highlighted in that particular green area.

Trunk diameter or circumference:

This function enables the diameters of the trees in a particular green area / street to be converted into circumferences and vice versa.

iSiTag function:
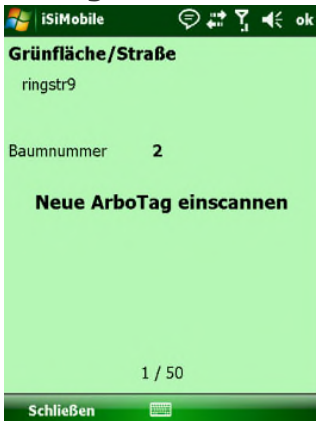
In this mode, the barcode scanner-interface becomes activated (if you are using one). When you scan the barcode of a new ArboTag, the number recorded in the original entry is replaced by this new number. The next entry is then automatically prepared for its number to be replaced.

Set inspection cycle:

Versions 1.80 and later include the "Set inspection interval" function. The value entered here should be the number of months until the next inspection. This value appears in the "UDF_N_6" column of the database.

2.6   Tree table level

The tree table contains all of the trees recorded on the respective premises. Here, trees or tree groups can be entered, edited, felled or deleted. Felled or deleted trees are transferred to the Recycle Bin.

Enter a new group.
Tile "A" opens.

Delete a tree / group.
The entry is transferred to the Recycle Bin "X".

Enter an individual tree.
Tile "A" opens.

Transfer a tree / group to the archive for felled trees "Y".

The ArboTag symbol activates the interface to enable the scanning of badge codes.

The table displays groups of up to 50 individual trees. If the green area / street contains more than 50 trees, a button appears with a single arrow. Tapping on this arrow will display the next 50 trees on that particular area.

The magnifying glass allows you to find an individual tree by entering its ArboTag number.

Edit sequence:
You can enter a whole number with a different prefix here to change a tree's number.

Copy:
This allows you to duplicate the details of an individual tree and enter them as a new tree. The master data and the complete inspection details will be carried over at the same time. This function is typical for carrying out inventories of tree avenues or stands of similar trees.

1. Column headers: Touch and hold the grey area for the command menu to appear

2. Tree climber: Signifies that tree work is still to be carried out

3. Green tick: Inspection date has been entered; inspection has been completed

4. Black arrow: Shows which line has been selected

5. Satellite: GPS data is available

6. Number in sequence: Trees are listed according to order of inspection

7. ArboTag: Tree's badge number
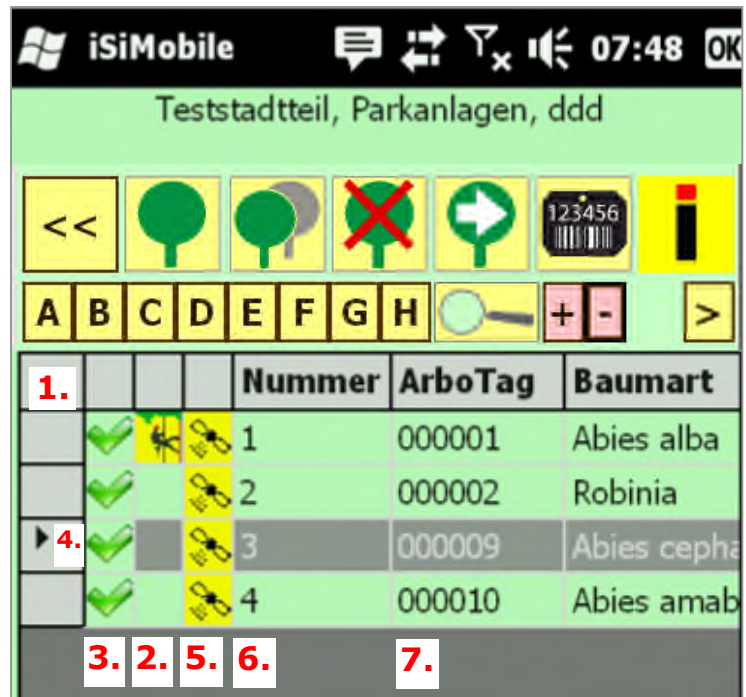
1. **Column headers:** Tapping on the column header will open up the command menu with the following options: Recycle Bin, set inspection date (for the selected tree) and enter Arbotag (iSiTag) for the selected tree.

2. **Tree climber:** If tile "**F**" contains tree work that has not yet been carried out, the tree entry will show a yellow picture of a tree climber. As soon as the task is marked as "completed", the icon will disappear, and the record of that particular measure will remain in the tree's history.

3. **Green tick:** The current date is entered at the Project level, under Menu - Settings - Properties. If the tree's record contains an older date (e.g. from the previous year's inspection) a red cross will appear to show that the inspection is still to be carried out.

4. **Selection symbol:** The black arrow shows which tree record is currently selected.

5. **Satellite:** If the tree's coordinates have been entered, and the fields GPS A and GPS B in Tile "A" both contain information, a satellite icon will appear here.

6. **Number in sequence:** Trees are listed according to their order of inspection. The consecutive numbering merely denotes the line number in that list.

7. **ArboTag:** The tree's current badge number is entered into this column. It is independent of the line number and is the set, unique identifier of a tree within a particular green area.

Clicking on the + - buttons to the right above the tree list during an inspection will add 1 to / subtract 1 from the consecutive sequence in the tree list. This allows gaps (e.g. due to a tree having been felled) to be closed, and new trees to be inserted into the list (e.g. after replanting).

2.7 Topic Tiles A-H

A variety of data relating to an individual tree can be recorded and processed on tiles A-H, which each represent a different topic. The tile currently in use (here Tile "A") is highlighted at the top of the tiles. Different keypad sizes and screen resolutions can sometimes lead to the tile row at the bottom of the image being covered up, which is why the tile row is now also displayed at the top of the tile.

2.7.1 Tile A – "Master data"
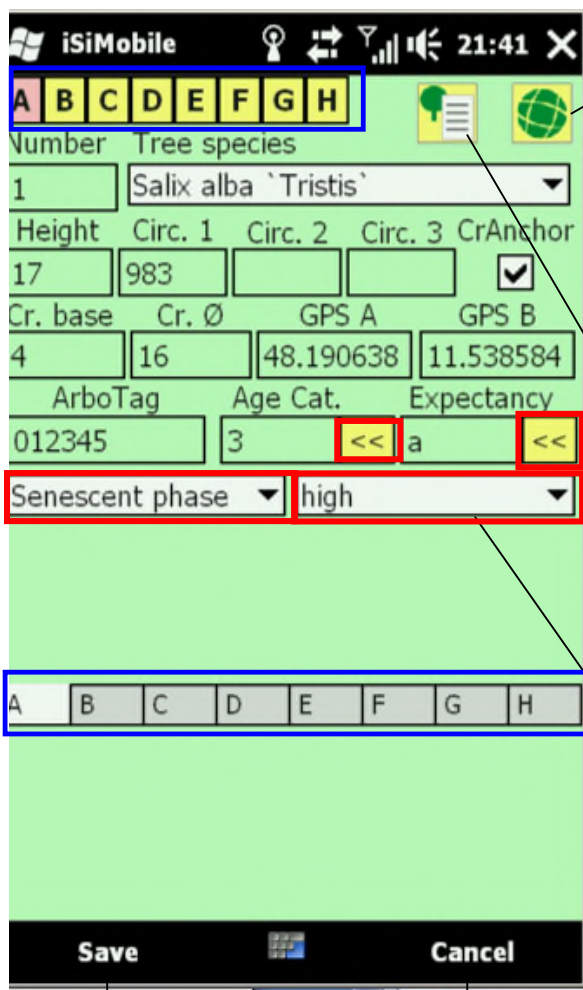
GPS inactive

GPS activated, but no reception

GPS activated and ready for use
On tapping the green button, the GPS coordinates will be entered and saved. They then appear in the GPS A and GPS B fields.

Clicking on the tree index button or on the small arrow under the heading "tree type" will open up a drop-down list of different tree types. A tree type **must** be selected in order for a record to be saved.
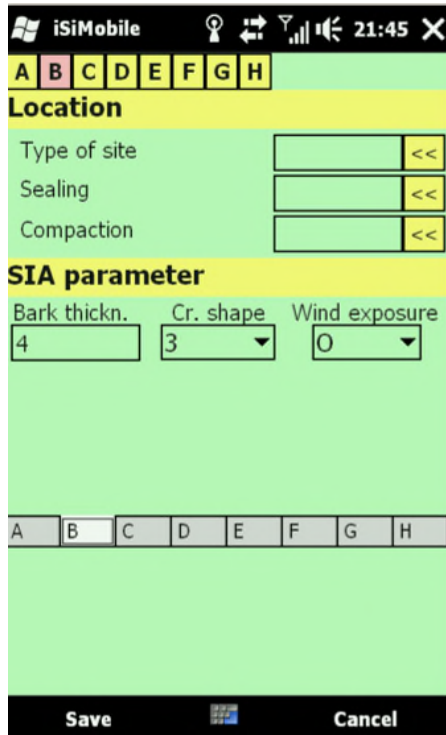
The tree index can be edited in *iSiLite*.

The fields outlined here in red are lookup table fields that can be edited in *iSiLite* and in *iSiProfessional*.

Pressing "Save" will save and close the record.

Pressing "Close" will close the record without saving any changes.

2.7.2 Tile B "Location and SIA data"

Tapping on the double arrow buttons will open up lists of options. These can be edited in *iSiLite* and *iSiProfessional*.
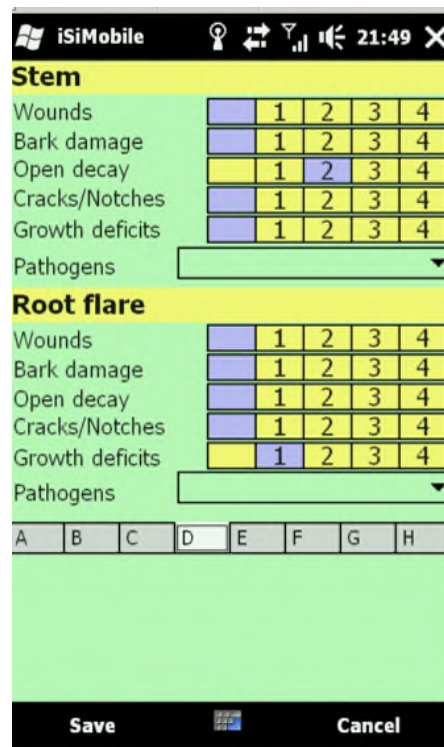
SIA parameters that have been entered here can only be processed further within *iSiProfessional*.

2.7.3 Tiles C and D "Damage analysis"

Damage or decay that has been detected in the various parts of the tree is entered into these two tiles.
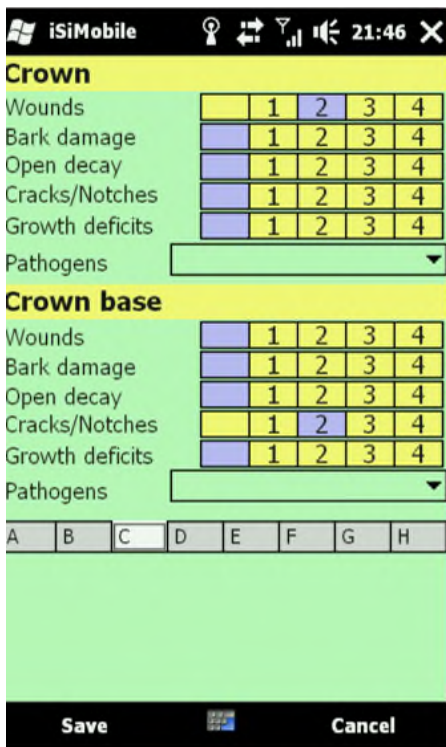
Tile "C" is where data on the crown (scaffold limbs) and the crown base is recorded (if applicable).

Tile "D" is where data on the stem and the root flare are recorded. The values to be entered into these fields can be specified on the project tile under Options -> settings->Labels.
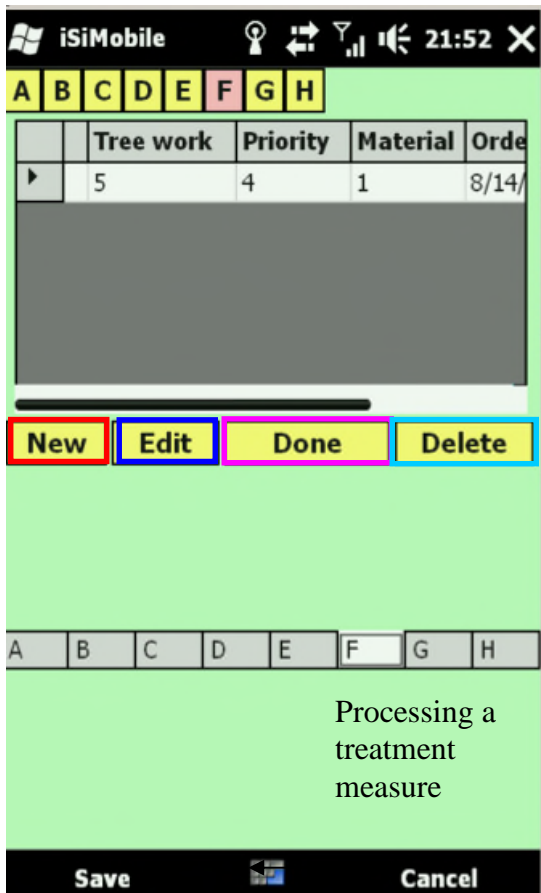
2.7.4   Tile E "Result"

A summary of the results of the the visual inspection is displayed on tile "E". Biological parameters are evaluated here that relate to the health of the crown, the tree's vitality, evidence of decay, malformation caused by growing conditions (forked trunk), and symptoms of diminishing stability.

—— Free text can be entered into the "Comments" field via the keypad.
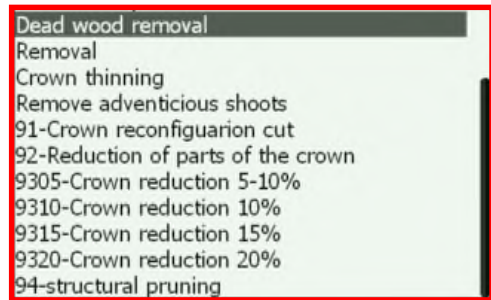
2.7.5 **Tile F "Management plan"**
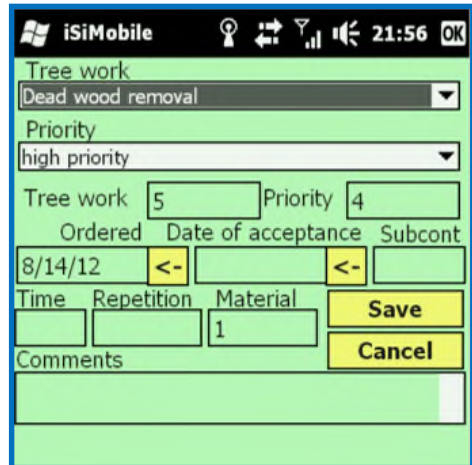

Processing a treatment measure

The work that has been entered or carried out must be saved.

Tapping "Close" will quit this function without saving.

New: Entering new tree work:

Edit: Editing tree work:

Completed: When tree work is ready for approval, tapping on the "Completed" field will allow the work to be filed as "carried out" and will automatically assign the date of completion.

Delete: Permanently deletes the selected measure.
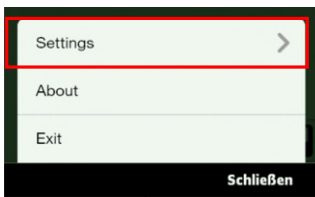
2.7.6 Tile G "User-defined fields (UDFs)"

The user-defined fields (UDFs) are empty fields that can be used for entering any type of information that the user requires. The default settings for the UDFs can be defined in *iSiMobile*, *iSiLite* and *iSiPro*.
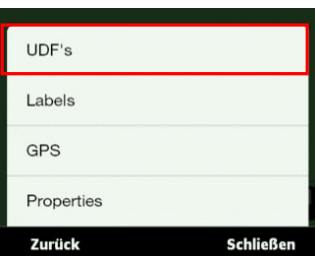

Set-up in *iSiMobile*:
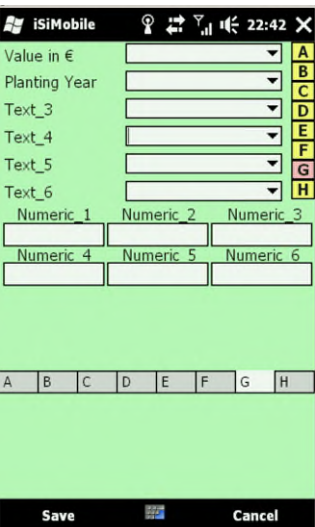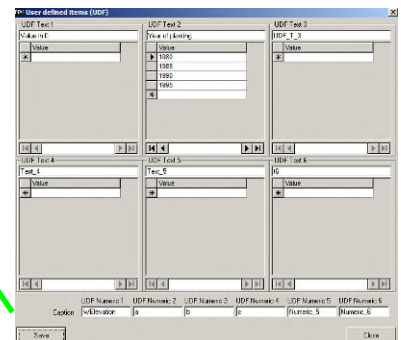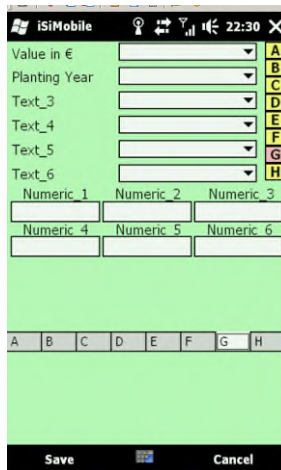At the project level under Menu/Settings you can define the field name.

Set-up in *iSiLite*:
You can define your own pull-down lists for the UDFs T1 to T6 under "Settings".

Set-up in *iSiPro*:
In *iSiPro* you can define your own pull-down lists for the UDFs T1 to T6.

There are two types of field available for use as UDFs:

1. Alphanumeric fields (AF = fields into which combinations of letters and digits can be entered). The first six AFs can additionally be set up to contain pull-down lists. These lists can be defined using *iSiLite* or *iSiPro*, but they cannot be set up on the Pocket PC. You can, however, enter any simple value into these AFs without having pre-defined the fields in any way.
2. Numeric fields (NF = fields into which only whole numbers of 1-1000 can be entered). You can enter any values into these fields – also on a Pocket PC. It is not possible to set up these fields with drop-down lists.
3. The UDF_N_6 field is the default field for the inspection interval. Here, you can enter whole numbers signifying the number of months to the next inspection and use them later for data queries.

2.7.7   Tile H "Photo module"

Photos taken using a smartphone or Pocket PC are transferred via the device's universal photo interface into *iSiMobile*. *iSiMobile* will create an "iSiphotos" folder on the memory card. Should the photos be required for further processing using any of the other *iSiman* components, then the folder containing the photos needs to be copied to the respective server or computer hard drive.

iSiMobile names each photo file automatically; the file name is made up of the ArboTag number, a hyphen and the date (in YYYYMMDD format) on which the photo was taken. You can store as many photos as you wish in the record of any individual tree. The camera and *iSiMobile* are connected to each other via the datasdf.sdf database on the Pocket PC.

> The interface merely represents a connection between the camera and *iSiMobile*. The camera functions are therefore specific to your particular mobile device. All photo settings (resolution etc.) need to be defined via the camera menu on your device.

Inserting photos:

1. Press **"New"** to activate the interface to the camera, then take the photo.

2. If the photo is acceptable, press **"Save"**. This button ensures that the photo is stored to the record and must be pressed after each new photo, if several are to be stored of that particular tree.

3. If only one photo is required, you can press **"Save"**, which stores the photo and closes the module.
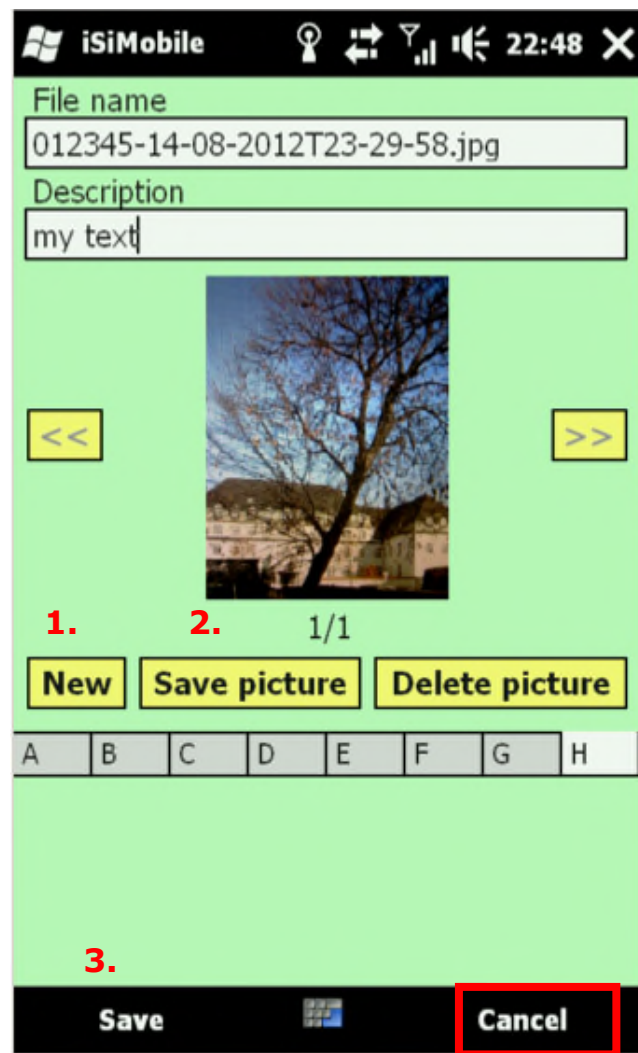
Saves the photo and closes the tile.

Closes the tile without saving.

2.8 iSiInspect

iSiInspect is a more detailed display of the tree table and is used to support follow-up inspections by providing visual references. *iSiInspect* can be established as a default setting at the Project level, under Menu / Settings / Additional settings.

Double-clicking on the column header will display the column content.

Clicking on the black **i** will open up the *iSiInspect* version of the tree list.

Blue: The blue field signifies that a tree work is still to be carried out. If there is also a value in this field, it denotes the priority of that particular item of work. Double-clicking on the blue field will transfer you automatically to tile "F" (management plan).

The photo icon shows that a photo link exists to the database. The photo does not have to also be stored on the camera. Double-tapping on this field will automatically open up tile "H".

Red/green: Inspection status

Red = not inspected
Green = inspected

The date can be entered on the start-up tile under *Menu/ Settings/Additional Settings*.

The satellite icon shows that there are GPS coordinates for the tree. Double-tapping on this field will automatically open up tile "A", where the GPS A (latitude) and B (longtitude) coordinates can be seen.

Black: a black field signifies that a cabling system is installed. Double-tapping on the black square will automatically open up tile "A".

The exclamation mark **!** indicates that the tree is irreparably damaged. Double-tapping on this field will automatically open up tile "E", which contains the overall assessment of the tree.

2.9   *iSiMobile* specifications

In order to use *iSiMobile* on your Pocket PC or smartphone, you will need:

- Windows Mobile 5 or 6.x operating system.
- A 624 MHz processor at the very least. We recommend a 806 MHz processor or higher.
- An SD Card of at least 2 GB.
- Screen resolution of at least 320 x 240.
- An integrated camera in your device for use of the photo function.
- An integrated bar code scanner or an integrated camera with Wedge software, for use of the *iSiTag* function.

In addition, you will need the following for the GIS functions:

- The GPS function requires an integrated SIRF III receiver and antenna.
- Internet access, which is only possible with devices equipped with a SIM card. (N.B. Mobile data services can incur additional costs).
- A capacitive screen or a touchscreen.

We recommend the following devices:

- Nautiz X 7, Kit 2
- Nautiz X 5, Kit 2
- HTC HD 2 (only WM 6.5, not Android!), along with a 2200 mAh battery
- Other HP or Fujitsu Siemens devices

Our product's functionality and graphics may differ depending on the system configuration. Certain functions may require enhanced or additional hardware.

3 *iSiLite* – Functions and features

Select *File / Open* to open the datasdf.sdf file. All of the tree data stored in the file will be displayed and can be used to create and print reports and tables (e.g. a list of management measures, templates for quotes).

> Changes to the data in the datasdf.sdf file – except for deleting and felling – can only be carried out in *iSiMobile* on the Pocket PC.

3.1 Start-up screen

1. **Number in sequence:** This shows a number within the consecutive sequence used for each green area. Entering a number into this field and clicking "Search" will bring up the corresponding tree record.

2. **ArboTag:** This field displays the sequential ArboTag number. A tree's number can be entered into this field. Clicking "Search" will call up and display the record containing the corresponding ArboTag number.

3. None of the data in the white fields can be changed in *iSiLite*.

4. **Glossary:** Clicking the field header will bring up a glossary explaining the value appearing in that particular field. The values listed in the text can be edited and extended under *Settings / Value tables*.

5. **GIS Button** ("Display tree on map")**:** Clicking this icon will open the OpenStreetMap map (this requires internet access) and display the tree in red.

6. **User-defined fields:** Entries that exceed 14 characters cannot be completely displayed in the white fields. The field headings are those that were entered originally on the Pocket PC.

7. **Delete:** Clicking this button will transfer the tree data to the Recycle Bin. The data can only be permanently deleted on the Pocket PC. The data can, however, also be retrieved via the Pocket PC, e.g. if the record was accidentally deleted.

8. **F for felling**: Clicking this button will transfer the record to the archive of felled trees. It can then only be edited or permanently deleted from the database using the Pocket PC. The crown diameter is set to "0" for trees that have been moved to the felled tree archive.

9. **Navigation buttons**: You can use these buttons to page forwards and backwards through the tree records or go direct to the first or last record in the set.

10. **Version number:** If you need assistance from our software support team, please be ready to quote this number.

11. **Database structure:** Your handheld device creates a structure that divides areas of trees into different sections. When applying a data filter, marking a particular section will cause that section to act as a subfilter.

12. **Path:** This shows the path where the *datasdf* database is stored.
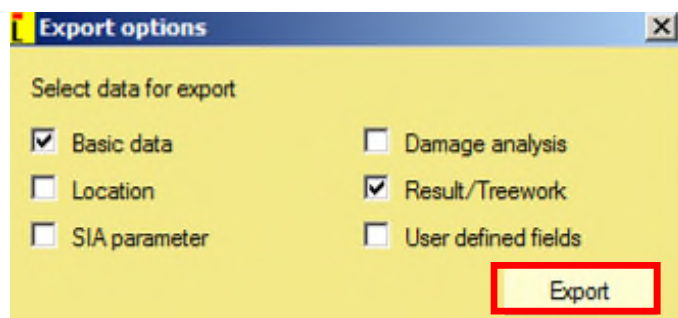

3.2   Data export

All licence types for *isiLite* will allow you to export data from the datasdf.sdf into an Excel sheet (.xls or CSV). There are two possibilities:

1. Data export for individually selected trees.
2. Data export for all of the trees in a selected green area.


Step 1 – Select trees:
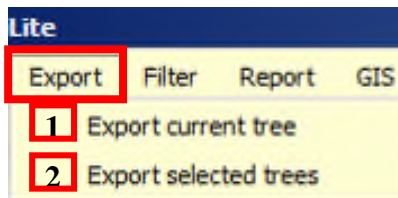
Step 2 - Select data items:

The tick-boxes for "Master data" and "Results / Tree work" are selected for export by default, since this data is required in the majority of cases. If you wish to export values from other tables, simply tick the appropriate box(es). The more information you export, however, the wider the table will be, making it difficult to keep an overview. Trees which have been prescribed two or more items of tree work will appear on more than one line (one line per open item).

Step 3 – Select data format:
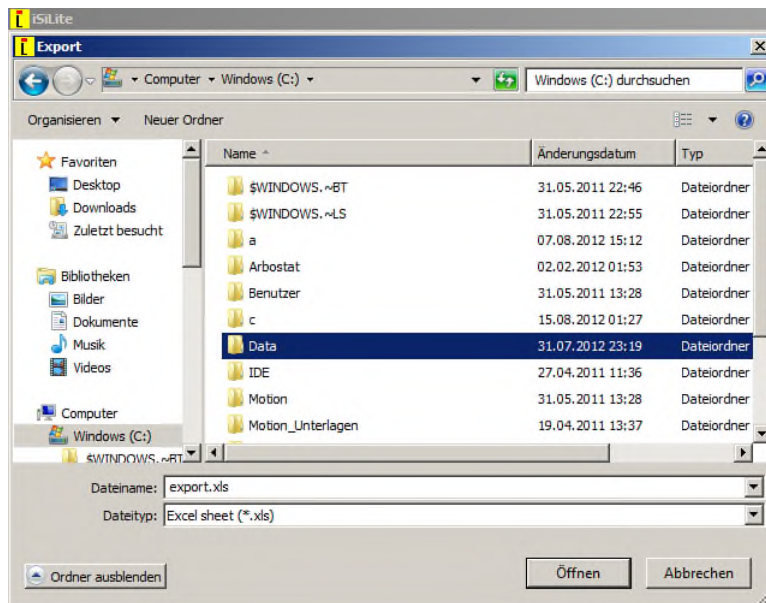
After clicking on "Export", you can choose to create either an .xls (Excel sheet) or a .csv file. CSV files are, in principle, text files that can be imported into any other type of database software.

3.3   Data filter

The "Data filter" section offers three functions:

1. **Data filters** can be set for the creation of a results list (see Fig. 3)
2. **Inspection interval:** As long as a value has been entered in the user-defined field UDF_N_3, filters can also be set on the basis of trees' inspection cycles.
3. **Archive of felled trees**

3.3.1   Applying data filters

Selecting "Data filter" will display all of the items contained in the list of types of "Tree work". Pre-selecting "AND" will allow you to mark any number of different database fields. Selecting just a single measure will give very precise results.
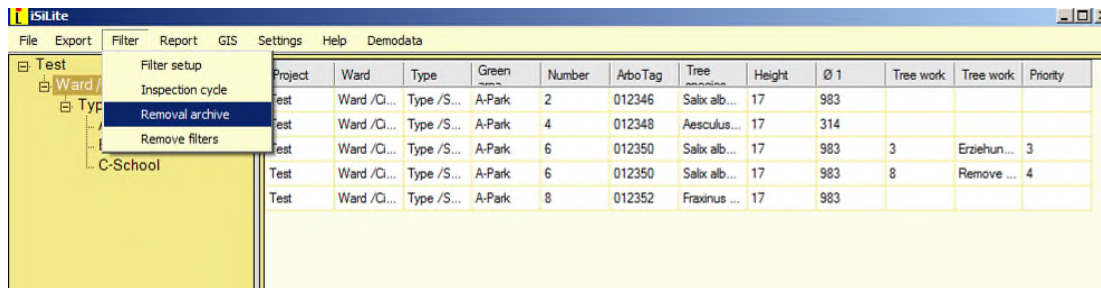
Fig. 3   Results table

The master data of trees with two or more items of prescribed tree work will show empty lines.

3.3.2   Filtering by inspection cycle
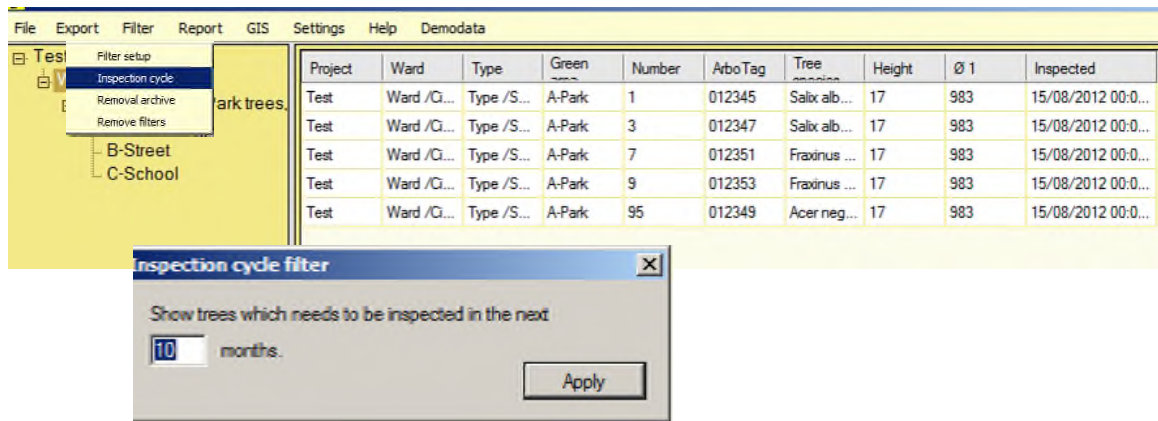
If values (whole numbers) have been entered in the UDF_N_3 field on tile "G" in *iSiMobile*, you can call up trees that are due to be inspected during a particular period of time.
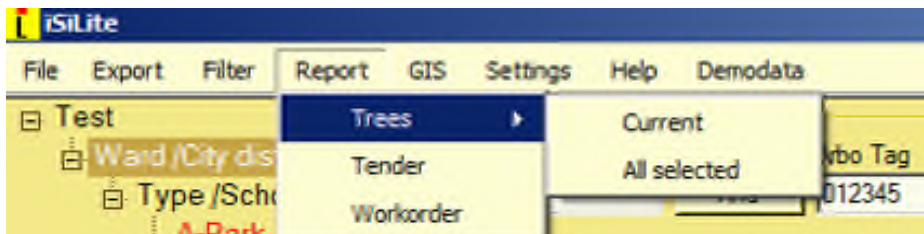
3.3.3   Archive of felled trees

You can transfer the records of removed trees to the felled tree archive using *iSiMobile* or *iSiLite*. These trees appear under "Data filter" in the functions menu as "Felled tree archive". This is basically the only active function in *iSiLite*. Felled trees can only be restored with iSiMOBILE.

3.4   Reports

The results of a data query can be displayed as reports with a pre-formatted layout. Once the filters have been applied, the template can be chosen from the "Reports" menu item. There are three different templates:

1. Tree data sheet
2. Quote
3. Tree work sheet

Tree data sheet

Quote

The tree data sheet is a report showing the physical status of a tree as documented at the time of inspection. It also contains the tree work items and the information that was entered into the user-defined fields.

The tree data sheet can be drawn up for individual trees or for entire green areas or streets.

The "Quotes" filter can be used for individual green areas, and also at a higher level – incorporating several green areas or streets. The logo can be edited and replaced (see section 3.6.4).

When creating the report, if you also run a query using a data filter, you can save the results as an Excel sheet and print that out to enclose with your quote when submitting a tender.

Tree work sheet

3.5 GIS

Using the internal GIS module requires internet access. It connects to the WMS (web map service) server of OpenStreetMaps, a free public map project part-financed by the European Union. External map material and aerial photos cannot be displayed.

3.5.1 Displaying an individual tree on a map

When an individual tree's record is open, clicking on the map button (top right-hand corner of the start-up screen) will open up the GIS map. The tree is displayed as a red symbol.

If you move your mouse over the red symbol, the tree's number will be displayed.

3.5.2 Map options
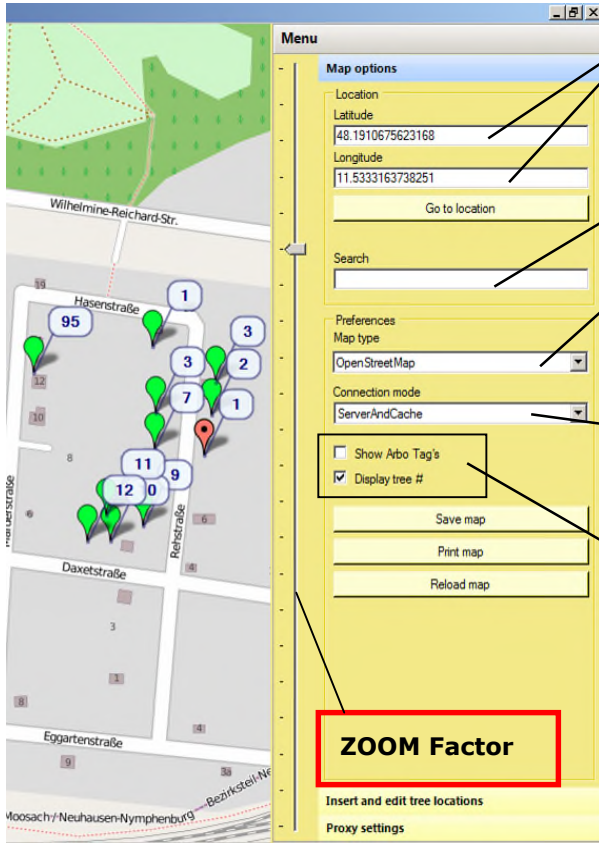
Tree positions are shown according to the WGS 84 coordinates system (in degrees latitude and longtitude).

Enter the place and press "Enter".

Select WMS server. Currently, there is only access to OpenStreetMaps.

Select connection type. Choosing "Cache" will only call up the data stored on your PC.

If "Display numbers" is selected, the numbers shown will be the sequential ones assigned to the trees for that particular green area. The ArboTag numbers will also be shown if you select "Display ArboTags".

You can move the map by clicking on it and holding down the left mouse button.

The map can be saved as a .png file and printed via the printer driver.

Load the map again if, for example, the display freezes due to an interrupted internet connection.
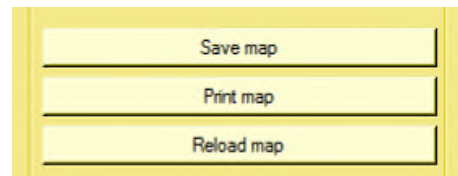
3.5.3 Proxy settings

If you work within a larger network or intranet and your internet access has been restricted by the systems administrator, you will need to apply for internet clearance.
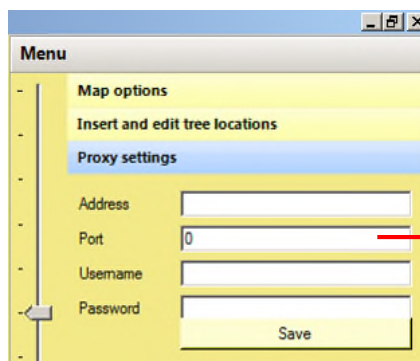
Entry field for the administrator.

3.5.4 GIS and data filters

When a data filter is applied, clicking afterwards on "GIS" will display the resulting trees as red symbols.
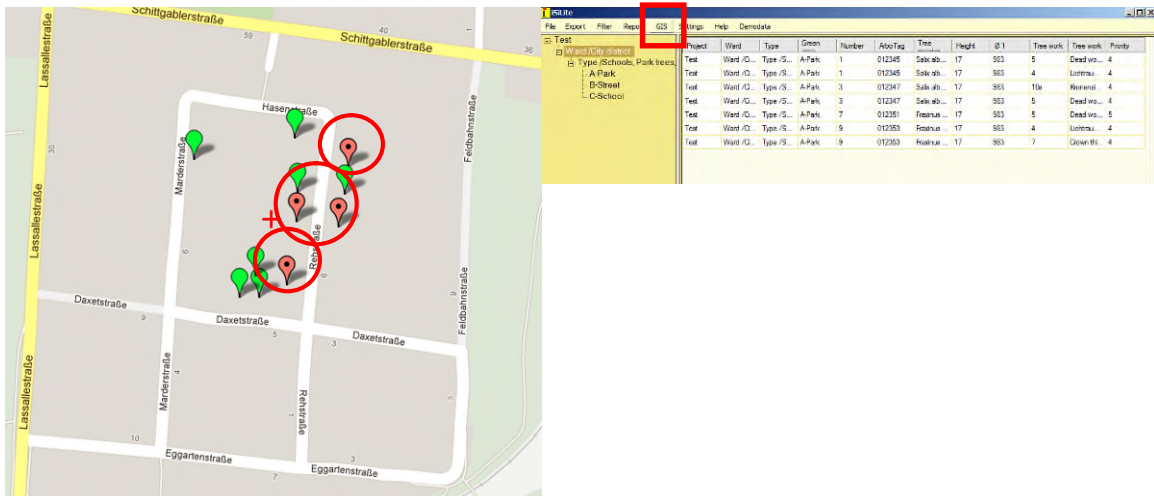
3.5.5 Entering tree positions on a map

If tree data was recorded on the Pocket PC but without coordinates, the positions can still be entered later on a map. It is also possible to delete coordinates without affecting the tree data, and tree positions can also be changed at a later time via drag and drop. This function, which is available in version 1.90 and upwards, has its own tab, "Digitize tree positions". Click on the tab to view the following screen.
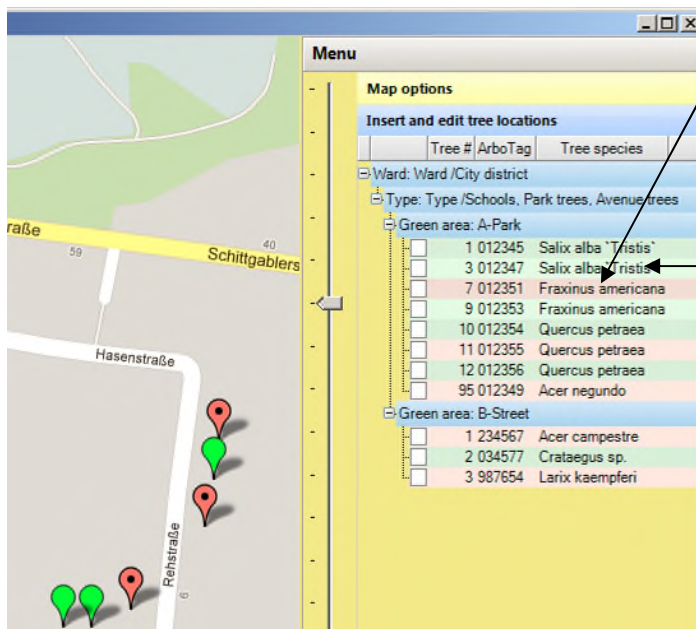
The positions of the trees shown in red have not yet been recorded. Clicking the left mouse button will register the tree's coordinates and save them in the database.

The coordinates of the trees highlighted in green have already been entered.

To delete a tree's coordinates, click on the tree symbol with the right mouse button and select "Yes".

To alter a tree's position, click on it and hold down the left mouse button, then move the tree to the desired position.

3.6   Settings

This menu item allows you to enter your preferences for the following:

1. Language
2. Value tables
3. Photos
4. Logo
5. Automatic updates

3.6.1   Language

Currently, you can choose between English, German, Italian, French Spanish and Latvian. After changing the language, you will need to restart *iSiLite*.

3.6.2   Value tables

In the database, various different variables can be determined by the user. They are contained in different tables in the database. Lookup tables can only be edited in *iSiLite or iSiPRO* but not on the Pocket PC/smartphone.

3.6.3   Photos

To use the photo function, your Pocket PC or smartphone has to be equipped with a camera and a memory card. The first time you take a photo when using *isiMobile*, a folder called "iSiPhotos" will be created on the memory card. This photo folder needs to be copied onto your PC or server.
The next step is to link the photos to the trees in the database via Settings / Photos by selecting the path to the photo folder "isiPhotos" and confirming with "OK" (Fig. 4). The next time you open *iSiLite*, you will have to repeat this step.

Fig. 4   Selecting the photo folder
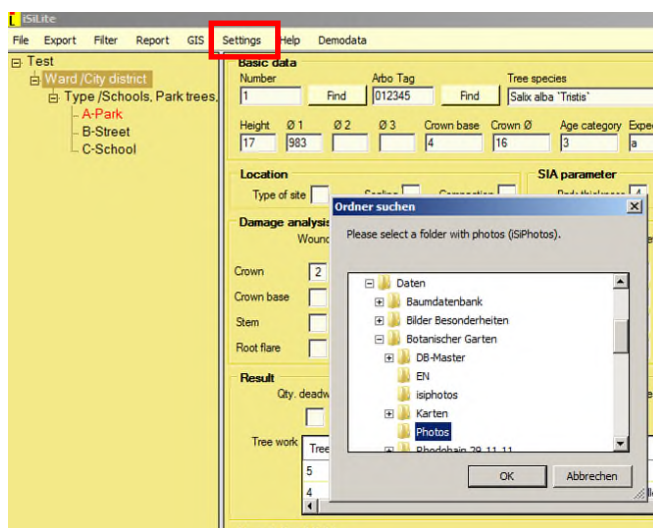
Fig. 5   Displaying photos
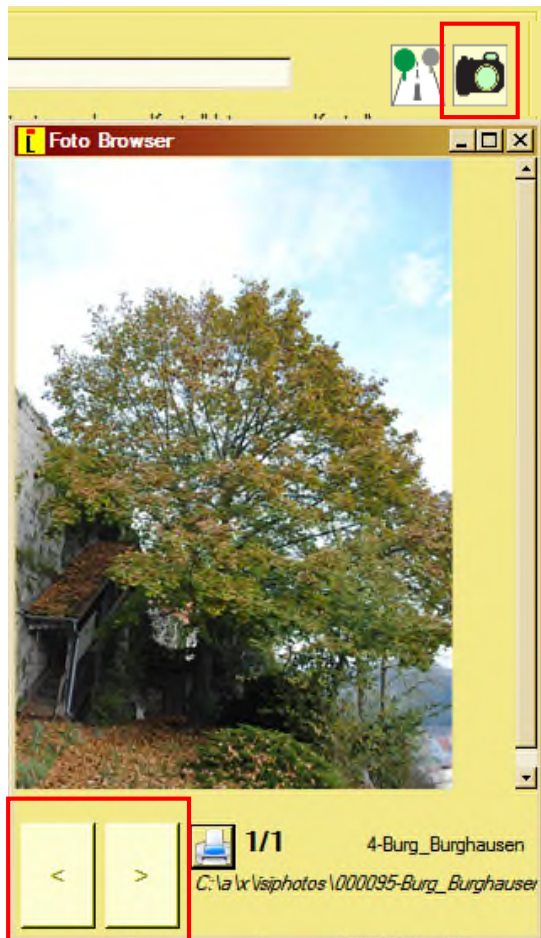
Clicking on the camera symbol will call up the photo(s) of the respective tree.

A double-click on the photo will enlarge the image (zoom +). If several photos have been taken of the tree, they can be viewed by clicking the forwards / backwards buttons (bottom left).

3.6.4   Applying your own logo

This function allows you to automatically incorporate your own logo in all of the reports (tree data sheet, quote, tree work sheet).
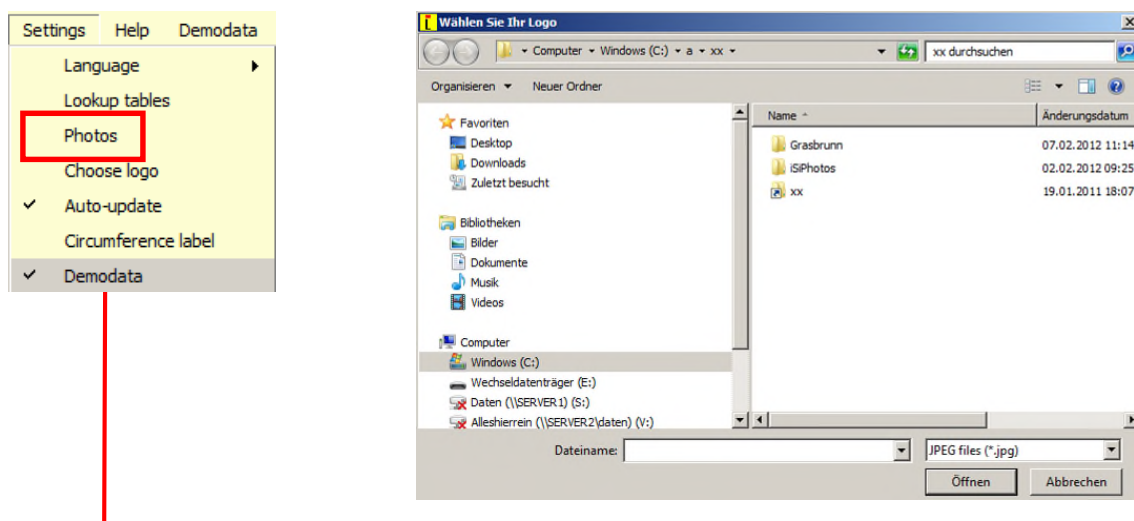
This is the command that sets the path to the logo that you would like to appear on all of the reports.

Your logo needs to be in .jpg format. After importing the logo, a message will appear showing the directory in which the logo has been saved.

3.6.5   **Automatic update**
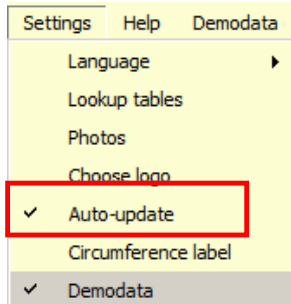
If "Auto-update" displays a tick symbol, once you are connected to the internet, the newest version of *isiLite* will be automatically downloaded. Users working within networks will need to have the appropriate rights, however.

Installation of the new version does not require a new licence number. If "Auto-update" has not been selected, the program will not search for updates.

3.7   Help

If you are connected to the internet, selecting the menu item "*isiLite* Help" or "*isiMobile* Help"will call up Flash films that show narrated demonstration videos explaining all of the *isiLite* and *isiMobile* functions. You will need the appropriate software in order to view these videos, e.g. Adobe Flashplayer (get.adobe.com/de/flashplayer/).


Click on the .htm or .swf file to view the required demonstration film.

3.8   *iSiLite* specifications

Your PC must fulfil the following requirements in order to run *iSiLite*:

- Operating system: Windows XP/Windows 7 (32 or 64 bit), Windows Server 2003/2008. *iSiLite* has been designed for use on modern multi-core processors. All 32 Bit versions of Windows 7 support up to 32 processor cores; the 64 Bit versions can support up to 256.
- 1 GHz processor or higher with 32 Bit (x86) or 64 Bit (x64)
- 1 GB RAM (32 Bit) or 2 GB RAM (64 Bit)
- 16 GB free hard disk space (32 Bit) or 20 GB (64 Bit)
- DirectX 9 graphics device with WDDM 1.0 or higher driver
- Screen resolution: 1024 x 768, 1280 x 800 etc.
- An audio output device in order to hear the voice-over in the Help Flashfilms.

Additional requirements for use of the GIS functions:

- Internet access (additional costs may be incurred).
- Windows Touch and Tablet PCs require special hardware.
- If you intend to create DVDs or CDs, you will need a compatible optical drive.

Our product's functionality and graphics can vary depending on the system configuration. Certain functions will require enhanced or additional hardware.

4   Data management with *iSiMobile* and *iSiLite*

4.1   The "datasdf.sdf" file

The *datasdf.sdf* file is an SQL database that has been specially designed for Pocket PCs. The *datasdf.sdf* file contains all tree data and so-called value tables. Value tables are standardized option menus such as the list of tree types and the list of treatment measures, which are available to you as you record your data. If you possess a power user licence for *iSiLite*, you can use *iSiLite* software to edit the value tables as often as you wish.

## 4.2   Data transfer between PC and Pocket PC

In order to be able to view data with *iSiLite* software, the *datasdf.sdf* file must first be transferred from the Pocket PC to the PC. *Microsoft ActiveSync* is the software that enables data transfer in Windows XP; *Mobile Device Center* performs this task in *Windows 7*. The database can also be transferred using an SD card in combination with a card reader.

4.3   Opening the database in *iSiLite*

The data collected during the tree survey is stored in the datasdf.sdf database file, which is located by default in the *My Device\My Documents* directory on the handheld device. The first time you launch the *iSiMobile* software, an empty datasdf.sdf will automatically be generated that is immediately ready for use.

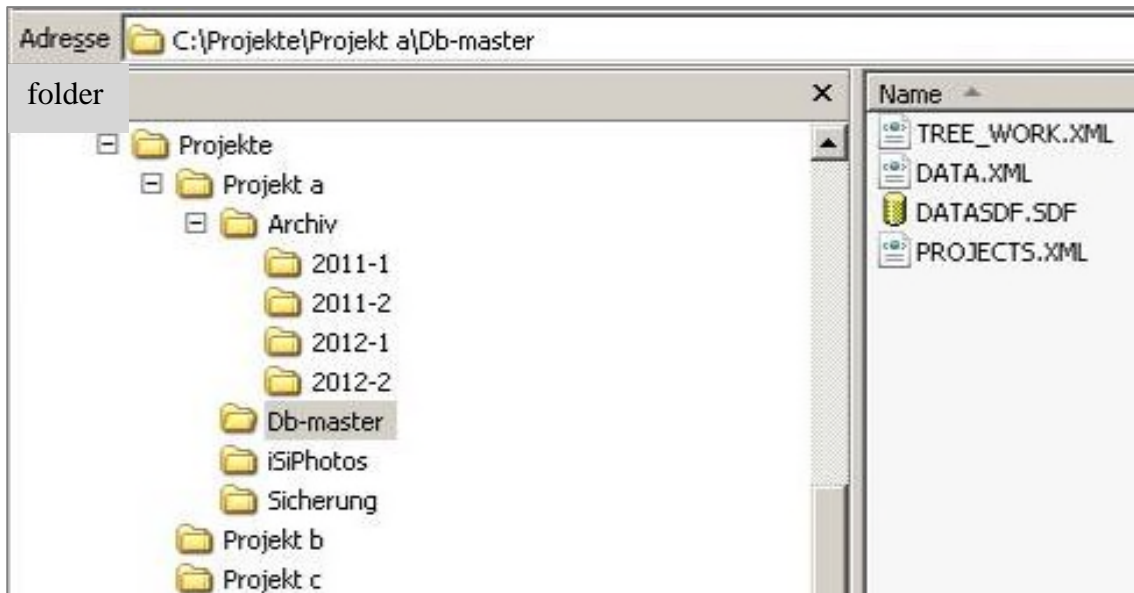To open the recorded tree data in *iSiLite*, go to *File\Open* to open the datasdf.sdf file on your PC (see Fig. 6).

Fig. 6   Opening the datasdf
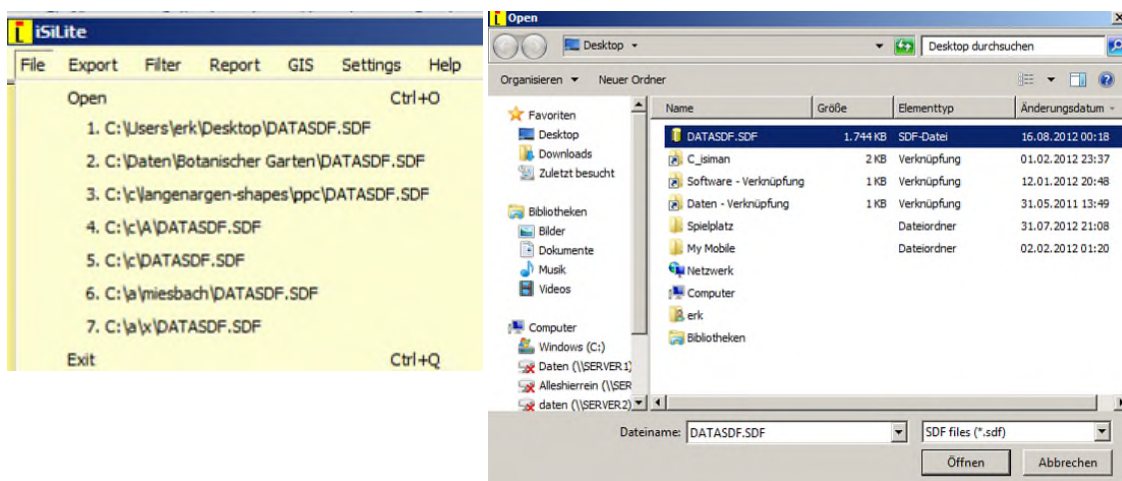
4.4   Data storage and backup

We recommend that you store and organize all your project-specific data (*datasdfs*, photos, maps, documents etc.) in a clear folder structure on the hard disk of your PC (Fig. 7).

Fig. 7   Folder structure on the PC

- the *Db-master* folder always contains the current *datasdf* file of a particular project

- the *Backup* folder contains a backup file of the current *datasdf* from the *Db-master folder*

- the *Archiv* folders can store the *datasdf*s of consecutive follow-up inspections in chronological order

- the *iSiPhotos* folder contains all photos named according to ArboTag numbers – and can be copied over directly from the memory card of the handheld device

4.5 Creating and storing projects

New projects can only be created in *iSiMobile* on a Pocket PC. Data will automatically be stored in the datasdf.sdf file on the Pocket PC. In order to prevent loss of data and disorder within the data, we recommend that you adhere to the following steps:

1. Check whether important data is contained in the *datasdf (*in the *My Documents* directory on the Pocket PC). If this is so, you should store the file on your PC. Copy the *datasdf* into the appropriate project folder (see section 2.3). The *datasdf* file on the Pocket PC can then be used for a new project.

2. After saving the *datasdf.sdf* on your PC, *iSiMobile* can be restarted on the Pocket PC and a new project initiated (see step 1). Old projects shown in *iSiMobile* can now be transferred to the Recycle Bin and permanently deleted from there, as they are now stored on a PC.

3. Carry out the tree survey

4. After completing the tree survey, transfer the *datasdf* from the Pocket PC via data transfer to the corresponding project folder on your PC (section 4.2). In *iSiLite* you will be able to open the file by selecting the menu items *\File\Open*.

5. If you have taken photos, transfer them after completion of the tree survey to the PC: transfer the iSiPhotos folder on the SD card of the Pocket PC to the PC. To view the photos in *iSiLite*, ensure that the path to the iSiPhotos folder is set up correctly under *\Settings\Photos*:
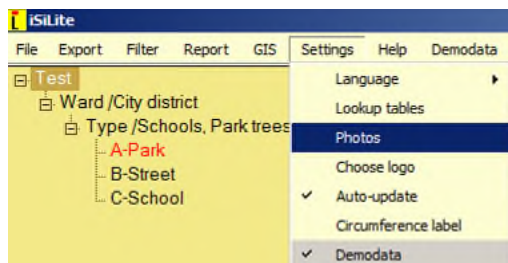
4.6 Switching between two *datasdf* databases on a Pocket PC

Several smaller projects, e.g. for different private clients, can easily be recorded and processed within the same datasdf database. If you have several larger projects (e.g. different municipalities), it is advisable to record them as such, i.e. in separate databases, especially with regard to maintaining a clear overview when storing the data. The different databases should be stored in their respective project folders on your PC (see section 2.3) and can then be worked on as usual in *iSiLite*.

iSiMobile always "reads" data from the *datasdf.sdf* in the *My Documents* directory on the Pocket PC. If you rename the datasdf, *iSiMobile* can no longer recognize it. Doing this therefore allows a second datasdf to be created, which is done by making a copy of the first. By renaming the datasdf-databases, you can switch between them at will.

1. Rename the datasdf in the *MyDocuments* directory, by calling it e.g. *datasdf-mytext.* As long as the file displays this name, it <u>cannot</u> be opened in *iSiMobile*.
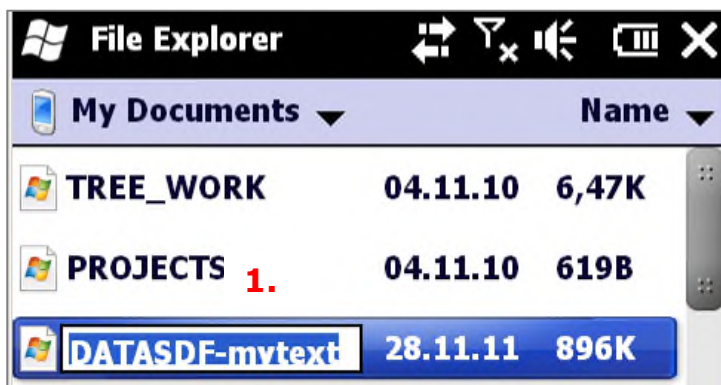
2. Now create a copy of the *datasdf* file and rename it *datasdf.* This file will be recognized by *iSiMobile*.

3. *iSiMobile* can now be restarted and a new tree survey project can be set up and used.