

7.

TRACKER MOBILE

7.1 Introduction

This chapter tells you how to use Tracker Mobile, the Pocket PC-based data capture module for the Tracker Software System. It covers the following topics:

- understanding the Pocket PC basics
- preparing the Pocket PC for surveys
- using the Pocket PC on site to record the results of a survey
- uploading the survey(s) to the database
- loading the survey photographs into the database.



Note that this chapter documents the generic Tracker Mobile process and your system may be significantly different.

7.2 Understanding the Pocket PC basics

This section provides a brief introduction to using the Pocket PC, including:

- charging the battery
- connecting to the PC
- using and abusing the Pocket PC.

7.2.1 Charging the battery

The Pocket PC battery lasts between three and eight hours of constant use and should be recharged overnight. The Pocket PC switches itself off after a few minutes of inactivity, so it should easily provide enough power for a full day's surveying.

If the battery becomes very low, the Pocket PC displays a warning and then appears to switch itself off. This protects the data already stored but prevents it from being used again until the battery has been charged.



If you experience problems with a flat battery, the fault may lie with the Pocket PC not switching off properly when you press the power button. If you press the power switch quickly it switches off; if you press it slowly it puts the Pocket PC into power saving mode which just switches off the backlight.

Use the mains adaptor (or optional car charger) to charge the Pocket PC as follows:

1. Plug the mains adaptor into the Pocket PC.
The charging light illuminates.
2. Leave the Pocket PC until the battery is fully charged.

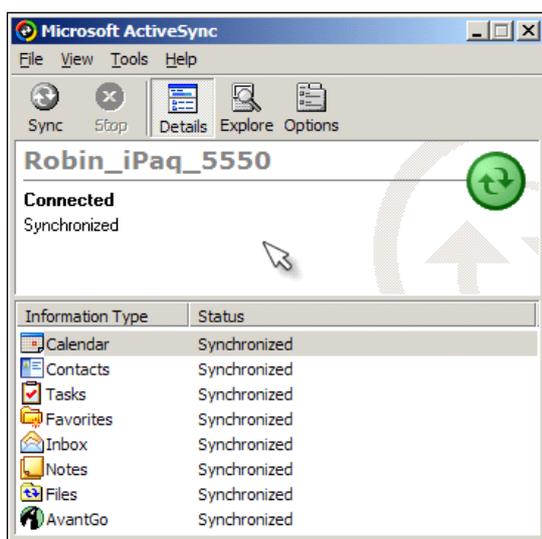
7.2.2 Connecting to a PC

To exchange data between the Pocket PC and the PC, you must connect the two. The easiest and most common method is to use the USB cable. It is also possible to make a wireless connection over a WiFi network or to make a remote connection by modem or mobile phone. Throughout the rest of this chapter, it is assumed that you are using a USB cable.

To link the Pocket PC to the PC:

1. Connect the Pocket PC and the PC by using the USB cable.

The connection software, *ActiveSync*, automatically starts up on the PC if the connection is successful.



2. Minimise the ActiveSync window by clicking on the  button in the top right-hand corner.

7.2.3 Taking care of the Pocket PC

Treat the Pocket PC as carefully as you would treat a mobile phone. Do not drop it or expose it to dust or water. Only tap the screen using the in-built stylus and never use a ballpoint pen or other sharp pointer. Rugged cases are available if required.

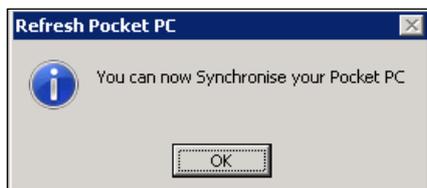
7.3 Preparing the Pocket PC

The Pocket PC needs some information from Tracker before you can use it for a survey. The process of updating the Pocket PC with this information is straightforward.

To prepare the Pocket PC:

1. In Tracker, select option 3, *Projects*, from the Main menu to display the Projects menu.
2. Select option 8, *Survey & Lab menu*, from the Projects menu.
3. Select option 7, *Refresh Pocket PC Files*, from the Survey & Lab menu.

The files take a few moments to prepare and then the following message box is displayed:



The files are automatically downloaded the next time you synchronise the Pocket PC.

The Pocket PC is now ready to be used for any surveys which you have prepared in Tracker.

7.4 Recording the results of the survey

The process of recording the results of a survey on Tracker Mobile involves the following steps:

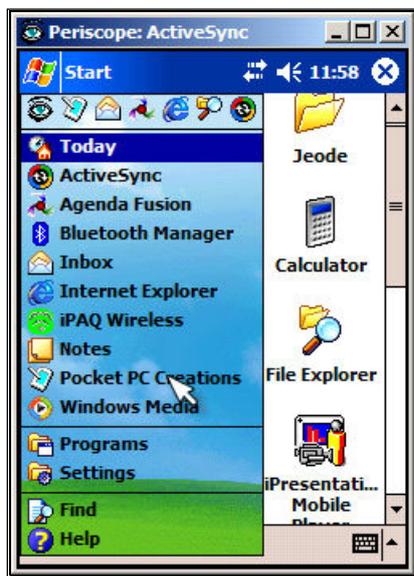
- start Tracker Mobile
- record a survey item
- check items or revise entries.

7.4.1 Starting Tracker Mobile

Tracker Mobile uses a piece of software called Mobile Data Studio (MDS), previously called Pocket PC Creations, on both the Pocket PC and the PC.

To start this program:

1. Tap the Start button at the top of the Pocket PC screen.
2. Select *Mobile Data Studio* from the drop-down menu if shown, or tap 'Programs' and then choose its icon:



If Mobile Data Studio does not appear to start, it may already be running 'behind' the main screen. To check this, click Start|Settings|Memory|Running Programs and activate it if necessary from the list of software that is already running.

3. Tap on the Tracker Mobile icon:



You are now ready to start the survey.

7.4.2 Recording a survey item

You record each item separately in Tracker Mobile. As the data is collected, the surveyed items appear in a list on the screen.

To record a survey item:

1. Tap on the New button at the bottom of the screen to start a new item.
2. Complete each field in turn.

First, complete the Project Details:



*If the **Hide Project Details** tick box is ticked, the top part of the screen is hidden so that when you record the next item you do not need to scroll down past it.*



Please note that your Tracker Mobile screens may vary slightly to those shown here and may appear differently on different devices.

Then complete the Building & Location Details:

And finally, complete the Item Details:

3. If the item is suspected asbestos, click the **Suspect?** tick box to show the additional fields including the material assessment and, optionally, the priority assessment:

4. Tap on the Finish button at the bottom of the screen to save that item.
5. Tap on the New button again to start the next item and repeat steps 2–5 until the survey is complete.

7.4.3 Checking items/revising entries

Once you have recorded items, they appear in a list which is displayed after you tap on the Finish button. You can review or edit any item on the list by simply tapping on it to select the item.

7.5 Uploading the survey to the database



This method of synchronising is unsafe if you use more than one Pocket PC in the company. If you have more than one Pocket PC in use, follow the method described in Section 7.6, Synchronising.

When you have completed the survey(s), you upload to Tracker to update the database with the new survey data. You can upload many surveys at once, as the Pocket PC can store a virtually unlimited number of surveys before uploading.

To upload to a Pocket PC connected via cable:

1. Connect the Pocket PC to the computer and wait until *ActiveSync* confirms that the connection has been made.
2. On the PC, open Mobile Data Studio (the software used by Tracker Mobile to link the Pocket PC data to Tracker) by clicking on the Tracker Mobile shortcut on the desktop:



3. Click on the Synchronise icon and wait until all of the records have been transferred:



As the records are transferred, they disappear off the list.

4. Check that the records have been successfully loaded.

You can do this by using one of the following methods:

- displaying the Data screen within Mobile Data Studio by clicking on the Data icon:



- checking on the Pocket PC that all records (Sessions) have been uploaded.

7.6 Synchronising

When you have completed the survey(s), you synchronise – or upload – your data to update the Tracker database with the new survey data. You can upload many surveys at once, as the Pocket PC can store a virtually unlimited number of surveys before uploading. Tracker Mobile enables you to synchronise data without the Pocket PC computer being *physically* connected to the computer running Tracker.

Before synchronising you are advised to back up your data.

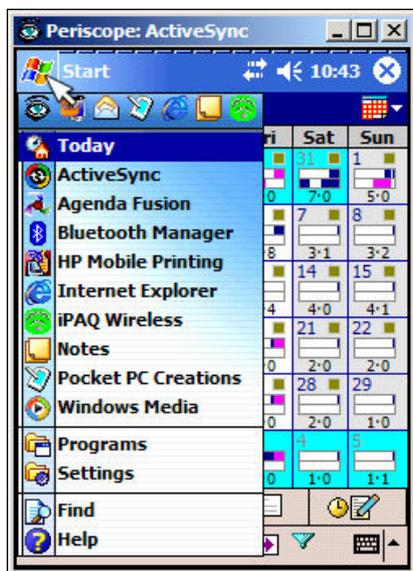
7.6.1 Backing up your data

You are advised to backup your Pocket PC data at the following times:

- before uploading/synchronising your data
- at the end of a day's surveying
- anytime you need to secure your data, for example in case of power loss or loss of the Pocket PC itself.

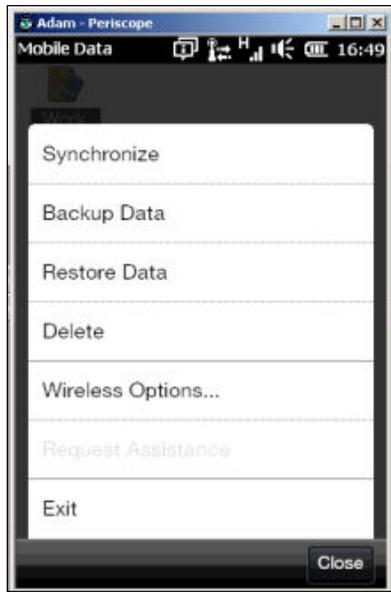
To back up your data:

1. Tap on the Start button in the top left-hand corner of the Pocket PC to display the menu.



2. Select *Programs* from the menu.
3. Select Mobile Data Studio from the list of programs.
4. Tap and hold on the Tracker Mobile icon.

A menu is displayed.



5. Select *Backup Data* from the menu.

A backup copy of your data is created and is stored on your Pocket PC. A message informs you that the project database was backed up. Only one of these backups can be stored at a time. The next time you back up, the previous backup is overwritten.



There is a Restore Data option on the same menu which you can use to restore the backup if needed.

7.6.2 Synchronising your data

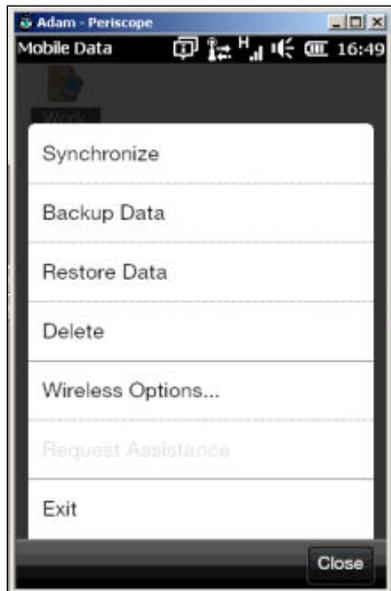
You synchronise your data to update the server or PC with data from the Pocket PC. To be able to do this, you must have first performed the set-up procedure.

Setting up

In order to tell the Pocket PC where the computer or server is that will receive the data, you must perform a set-up procedure. This specifies the required TCP/IP address. You only need to do this once. This procedure is normally performed by the System Administrator.

To perform the set-up:

1. In Mobile Data Studio on the Pocket PC, select **Menu**.



2. Select *Wireless Options...* from the menu to display the Wireless Synchronisation screen.



Note that Wireless Options is a misnomer as this includes non-wireless options, ie direct connection.



3. Ensure that the top option (Connect to a server) is ticked.
4. In the **Address** field, enter the TCP/IP address.
5. If you require a password, enter this in the **Password** field.
6. Tick the following options (leaving all other options unticked):
 - Automatically connect to Internet
 - Receive new sessions upon connect
 - Allow remote assistance.
7. Tap on **Done**.

Methods of synchronisation

To synchronise from the Pocket PC, the Pocket PC must be able to reach the server's TCP/IP address over the Internet or an internal company network. The most commonly used method is over the Internet.

There are several ways for the Pocket PC to be on the Internet, including:

- **USB cable on a home PC**

The Pocket PC is connected via a USB cable to the home PC, which is on the Internet.
- **USB cable on an office PC**

As with the home PC, the Pocket PC is connected via a USB cable to the office PC, which is on the Internet.
- **mobile phone via infrared**

The Pocket PC's infrared port points to the infrared port on the mobile phone. For this method you need a Data Account from your mobile phone network (eg Orange, O₂, Vodaphone etc.). Dial up the Internet on the Pocket PC.



See your mobile phone manual and/or your mobile phone network's help desk for instructions on how to set this up.

- **mobile phone via Bluetooth**

Bluetooth is a mechanism for wirelessly connecting devices such as Pocket PCs, mobile phones, laptops etc over short distances. This method works the same as the infrared connection, but has the benefit that the two objects do not need to point at each other. To use Bluetooth, the Pocket PC and the mobile phone both need Bluetooth which must be activated in both.



See your mobile phone manual and/or your mobile phone network's help desk for instructions on how to set this up.

- **WiFi (wireless network)**

You can use this either:

- at home or in the office if a wireless network is available.
See your IT Administrator for instructions on how to connect to WiFi.
- at public 'WiFi Hotspots', such as most McDonald's, chain hotels, Starbucks, service stations, Internet cafés, etc.

The Pocket PC must be WiFi enabled to use this method.



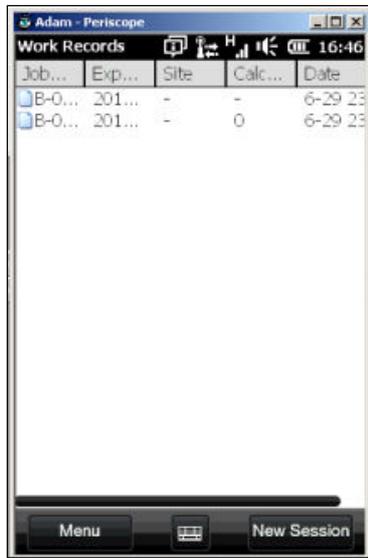
For further information on WiFi connection visit www.btopenzone.com.

Performing the synchronisation

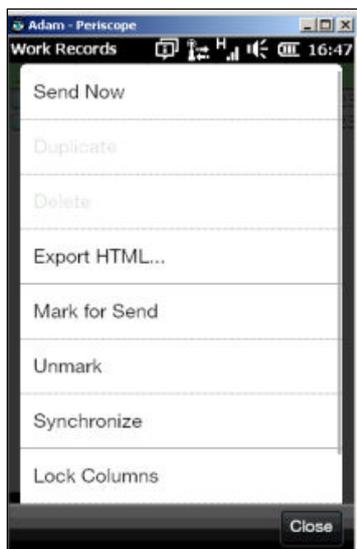
Typically, a Surveyor stores 150-200 items per day on Tracker Mobile. With this volume of data, only 2 days' worth of data can be stored on the Pocket PC with the software continuing to operate at a reasonable speed. For performance reasons you are therefore advised to upload daily.

To synchronise from the Pocket PC:

1. Display the list of items surveyed in Tracker Mobile:



2. Tap on **Menu** to display a menu.

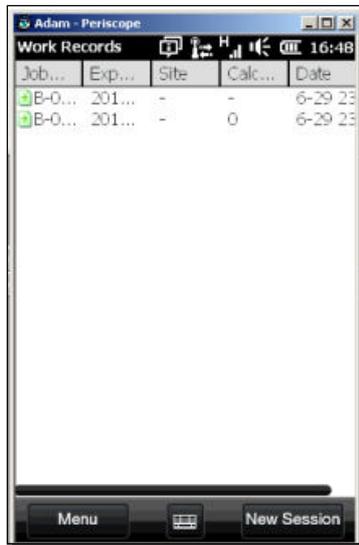


3. Select *Mark for Send* from the menu.

The folder icon next to each item changes from blue to green. Those items marked with a green icon will be uploaded during the synchronisation.



Advanced users who do not want to send all items can highlight only those items that they do want to send, by using the stylus, and then tap and hold to display a menu. From the menu, select Mark for Send. Only the selected items, which are now marked with a green icon, will be sent.



4. Tap on **Menu** and select the *Synchronise* option from the menu.

A dialog box displays progress; the items disappear one by one from the list as they are uploaded. The items only disappear off the list once the server has confirmed receipt, so there is no danger of losing items.

The likely transmission speeds are:

Connection	Item without photo or voice notes	Item with photo** or voice notes
Cable/cradle at office (on same LAN)	10s per second	Several per second
GPRS (mobile)*	2-5 seconds	10-30 seconds
3G (mobile)*	Several per second	1-2 seconds
WiFi	Several per second	1-2 seconds
Home cable/cradle with Broadband	Several per second	1-2 seconds

* Transmission speed can vary considerably depending on signal strength and other factors.

** The size (resolution) of the photo makes a big difference to the transmission speed – send smaller photos if you can.

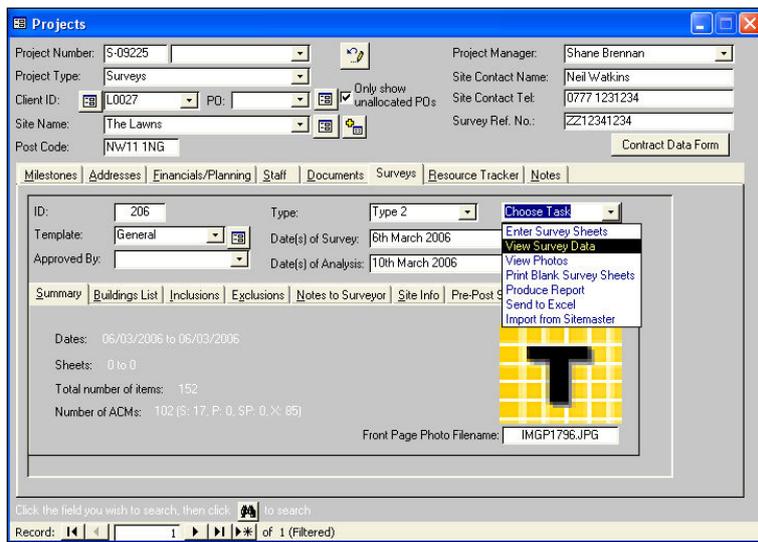
When there are no items left on the list, the upload is complete and your data is synchronised.

7.7 Loading the survey photographs

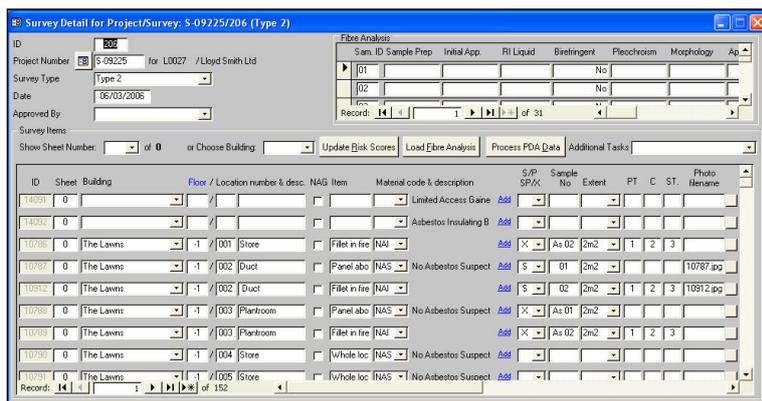
Once you have uploaded the survey into the database, the photographs captured during the survey need to be extracted from the Tracker Mobile records into .jpg files and stored on the server in the usual location.

To extract the photographs:

1. Open the project record as normal in Tracker.
2. Go to the Surveys tab and from the drop-down list on the **Choose Task** field select the *View Survey Data* option.



The Survey Detail window is displayed.



3. Click on the Process PDA Data button to extract the photographs into the project's folder on the server.
4. Close the Survey Detail screen and return to the Projects Window.
5. Select the *View Photos* option from the drop-down list on the **Choose Task** field to check that the photographs are OK.