SOFTONOMY ™

PACKPROF ™

Demo User Guide

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Questions to: info@softonomy.ie

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1. Introduction

Welcome to the **Softonomy PackProf** software product. This is a specialised environmental software solution for managing **packaging waste data** and information. By using this product, Companies can measure all packaging that is used within their business, both incoming and outgoing, and can generate statistical reports for meeting compliance criteria, such as those set out by *Repak*.

This **demo version** of **PackProf** uses *sample data* based on a fictitious company. The demo has been structured to meet the needs of the sample data. However, each implementation of **PackProf** can be tailored to integrate closely into a Customer's business and to meet any requirements or needs.

This document outlines the basic functionality of **PackProf** and takes the User through its capabilities by showing examples using sample data. A user may follow the actions described on the following pages with the special demo version of **PackProf**. Note that the demo version of the software is restricted and it also requires a software licence that is easily obtainable. If you have queries relating to **PackProf** and the demo, please direct these via email to info@softonomy.ie

2. Summary of PackProf Functionality

PackProf is a streamlined and powerful tool for managing, storing and reporting on **packaging waste** used within a business. Data relating to packaging is broken down into a 2-layer structure.

The first-layer details those items typically associated with a shipment of goods. It essentially contains data on those items that employees normally deal with. In this demo version, a basic unit of goods is called an **Item**. (Note: what is appropriate for each Customer is likely to vary depending on the type of business. eg: Parts may be used instead). In our sample data, *Bottle Caps* is an example of an **Item**.

The second-layer details the packaging that is associated with each **Item**. In this demo version, this is simply called **Packaging**. In our sample data, an example of **Packaging** for the **Item** *Bottle Caps* is a *Box*. Usually, an **Item** will have several types of packaging associated with it, and hence several entries of **Packaging**. In our sample data, the **Item** *Bottle Caps* also has *Pallet* **Packaging** and all the boxes are wrapped in *Wrapping* **Packaging.**

Fig 1: Data related to packaging is structured in two layers   © Copyright 2003, Softonomy Ltd.
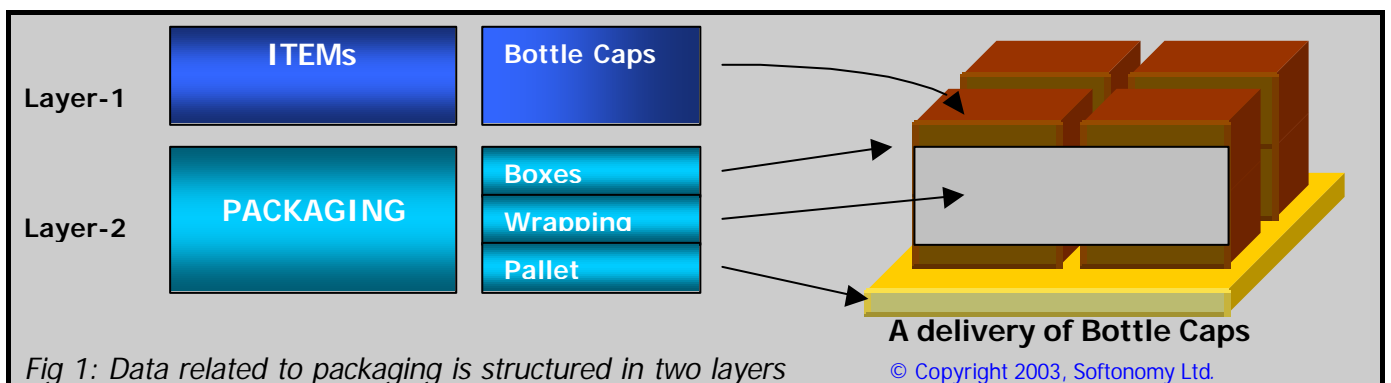
All **Item** and **Packaging** data, both *incoming* and *outgoing* packaging (referred to as **Input** and **Output** packaging), is stored and managed in the **PackProf** database.

Changing data in the database is straightforward. *New* **Item** entries can be made along with their associated data, and **Items** may be *Viewed*, *Searched*, *Sorted*, *Edited* and *Deleted* as necessary. Similar actions can be performed on **Packaging** data. All saved changes made to the data are reflected immediately in the database and on the display screen.

Operational Data, such as production and purchasing data, is retrieved to determine the volume of packaging that has been either consumed or produced within any given time period. For example, in our sample data, there are 120 incoming units of *Bottle Caps* delivered. The **Operational Data** is combined with the packaging data to produce **statistical reports**.

Fig 2: Combining Packaging Data with Operational Data to produce Reports   © Copyright 2003, Softonomy Ltd.
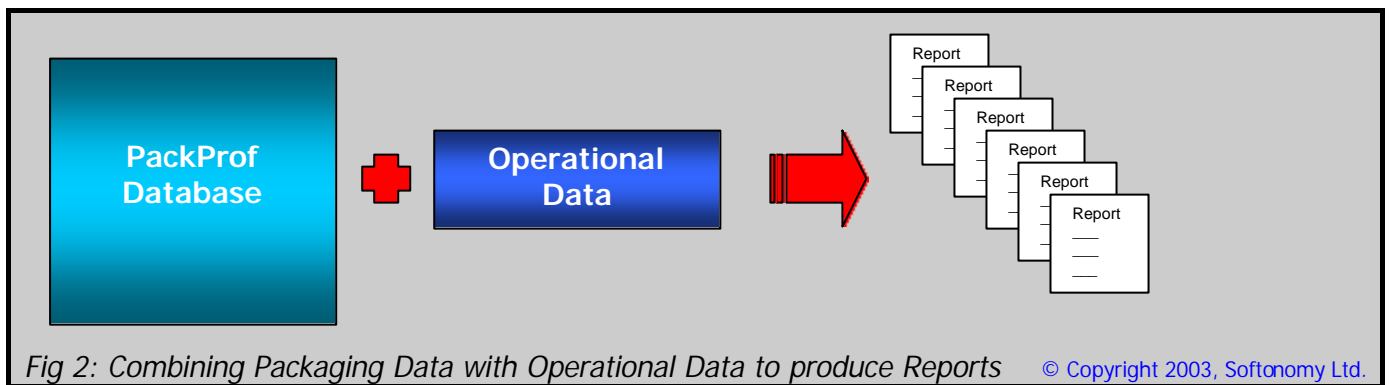
In summary, the basic aspects of functionality in **PackProf** are as follows:

  - **Items Table**:
    - displays the associated data for **Items** – each item has a unique *Item ID*

  - **Packaging Table**:
    - displays the associated data for **Packaging** pertaining to a single *Item*

  - **Upload Data**:
    - uploads **Operational Data** from a wide-range of user-selectable data sources

  - **Reports**:
    - combines the **Operational Data** and the packaging data in the database to produce **statistical reports** in a number of user-selectable formats

  - **Backup Data**:
    - users can create a backup copy of the database at any time without stopping the application

3. Explanation of Demo Data

The demo is simplified to ensure that the intelligence built into the **PackProf** application can be easily understood. The demo uses *sample data* that is based on a fictitious manufacturer of soft drinks, called **Z-Drinks Ltd**. This company manufactures two main products:

- Z-Cola
- Z-Orange

The products are manufactured from the following **Items**:

- Cola Concentrate
- Orange Concentrate
- Bottle Caps for Z-Orange
- Bottle Caps for Z-Cola
- Bottles for Z-Orange (1 litre)
- Bottles for Z-Cola (1 litre)
- Water
- Gas

The Cola concentrate is supplied from a company called A-Cola Ltd. The Orange concentrate is supplied from a company called B-Orange Ltd. Both types of concentrate are delivered in a 1,000 litre *intermediate bulk container*, which is made of a hard plastic. All containers are closed with a *metal cap* and are wrapped in *plastic wrapping* for safe transportation. As Z-drinks Ltd uses a single container of concentrate as a unit when making their orders, this is what we have termed a **shipping unit**.

The *Bottle Caps* are bought in bulk from C-Caps Ltd. A single shipping unit contains 25,000 bottle caps. The bottle caps are delivered in 50 cardboard boxes on a pallet, with 500 bottle caps in each box. The boxes are delivered on a pallet and they are wrapped in plastic. There are different caps for the Z-Orange and Z-Cola products.

The *Bottles* are bought in bulk from D-Bottles Ltd. A single shipping unit contains 1,200 bottles in 4 large cardboard boxes. The cardboard boxes are delivered on a single pallet and are wrapped in plastic for safe transportation.

For the period **Jul-Dec 2003**, Z-Drinks Ltd **received** delivery of the following ordered supplies:

Item	Units
Cola Concentrate	200
Orange Concentrate	100
Bottle Caps (cola)	80
Bottle Caps (orange)	40
Bottles (cola)	1700
Bottles (orange)	850

To manufacture their products, Z-Drinks Ltd use distilled water (delivered by tankers, hence no packaging) and mix it with the concentrate along with gas (also delivered by tankers, and no packaging). A single 1,000 litre bulk container of concentrate produces 10,000 1-litre bottles of product (dilution ratio is 10:1).

The bottles are filled, and then packed in units of 12 (called a case) using shrink-wrapped plastic, and these cases are further shrink-wrapped into a bundle of 72 cases for a shipping unit - this contains 864 bottles and is shipped on a pallet. This applies for both Z-Orange and Z-Cola.

The pallets are standard wooden pallets and are obtained from the supplies. This is what is called *Onward Reuse.* The plastic wrapping for each case is obtained on rolls from Irish suppliers. These rolls are taken on deposit and are returned to the supplier when used. As such, this plastic wrapping is delivered without packaging for itself. The plastic wrapping for a loaded pallet is obtained from a UK supplier, also on rolls that are rented. These are also returned to the supplier and as such are delivered without packaging for itself.
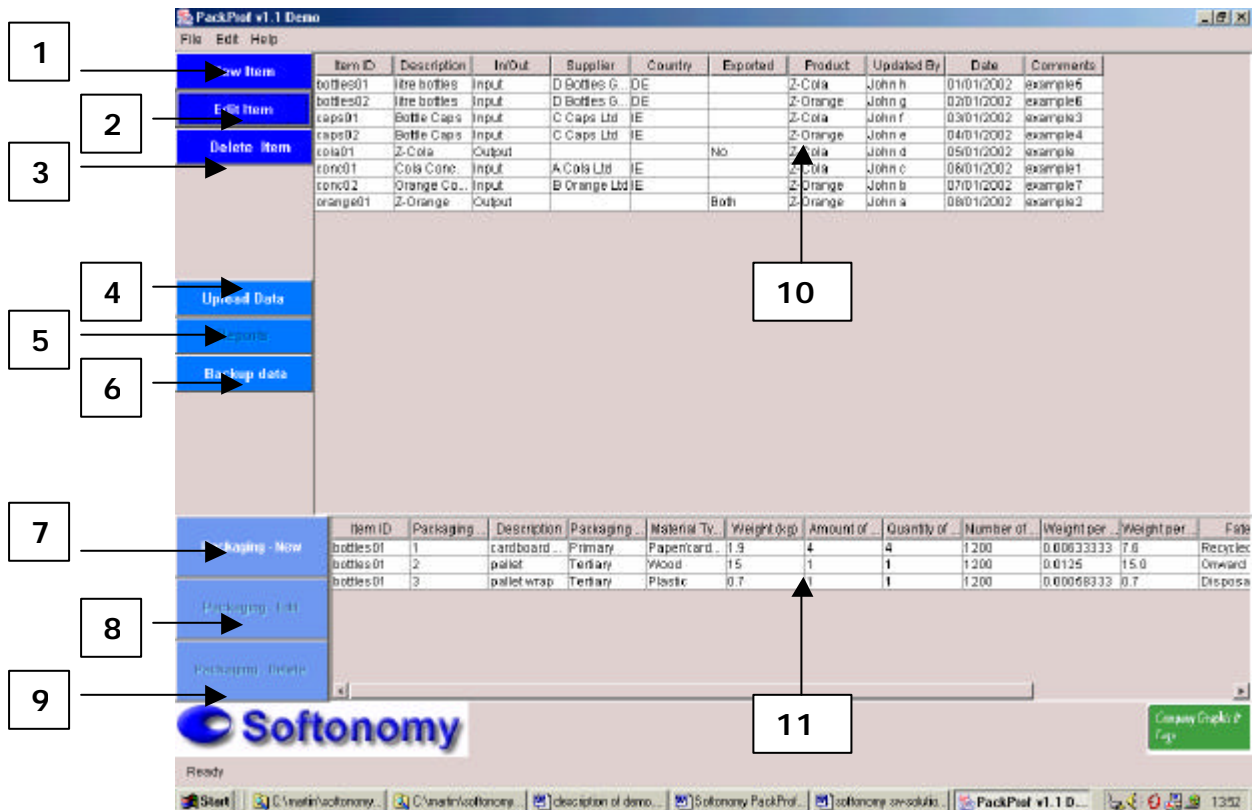
The number of pallets of beverage product **distributed** by Z-Drinks Ltd both for Ireland and for Export markets in the period from Jul to Dec 2003 was as follows:

Product	Ireland	Export	Total
Z-Cola	2310	0	2310
Z-Orange	600	555	1155

4. Screen Layout

PackProf has a main display screen where all key functionality is accessible. The key functions are accessed via easy-to-navigate *buttons* on the left hand side, as follows:

label	Button Function
1	**New Item**
2	**Edit Item**
3	**Delete Item**
4	**Upload Data**
5	**Reports**
6	**Backup Data**
7	**New Packaging**
8	**Edit Packaging**
9	**Delete Packaging**

The upper part of the screen (label 10) displays the **Items Table**. This lists *all* **Items**. The lower part of the screen (label 11) displays the **Packaging Table**. This lists the corresponding packaging data for a selected single item, eg: for *bottles01*.

5. Managing Items Data

5.1 Description of the Items Table

The *Items Table* consists of the following columns or fields:

Column Name	Description	Sample Data
Item ID	a unique identifier	*Caps01*
Description	The description of the *Item*	*Bottle caps*
Input/Output	one of *Input* or *Output*, dependant on the type of Item	*Input*
Supplier	Name of supplying organisation	*C Caps Ltd*
Country	Country where the Item is supplied from for Input Items	*UK*
Exported?	One of *Yes*, *No* or *Both* for an Output Item. If it is totally Exported (indicate a Yes), if distributed only in Ireland (indicate a No), or if distributed in Ireland and Abroad (indicate with a Both).	-
Product	For Input Items, indicate what product line or area of business it is used in.	*Z-Cola*
Updated By	name of user updating the record	*John F*
Date	Date of update	*03/01/2003*
Comments	free text box for any remarks	*Example3*

5.2 Sample Items Data

The *Items* data for Z-Drinks Ltd is summarized as follows:

Item ID	Description	In/Out	Supplier	Country	Exported	Product
conc01	Cola Conc.	Input	A Cola Ltd	IE - Ireland	-	Z Cola
conc02	Orange Conc.	Input	B Orange Ltd	IE - Ireland	-	Z Orange
caps01	bottle caps	Input	C caps ltd	IE - Ireland	-	Z Cola
caps02	bottle caps	Input	C caps ltd	IE - Ireland	-	Z Orange
bottles01	bottles	Input	D Bottles Ltd	DE - Germany	-	Z Cola
bottles02	bottles	Input	D Bottles Ltd	DE - Germany	-	Z Orange
cola01	Z-Cola	Output			No	Z Cola
orange01	Z-Orange	Output			Both	Z Orange

Clicking on a column heading will *Sort* that table according to the data in the selected column. For example, clicking on the column headed *Country* will sort the *Items Table* such that all *Countries* are listed alphabetically.

Clicking (highlighting) a row in *Items Table* displays the packaging details for the selected *Item* in the *Packaging Table*. This Packaging is displayed on the lower part of the screen. You can find out more about managing the packaging data in Section 6. Managing Packaging Data.

5.3 Adding, Editing and Deleting Items

Adding: To add a new *Item* to the *Items Table*, click on the *New Item* button (label 1 below). This brings up an *Items Data* dialog window (label 13). Fill in the data fields for the *Item* you are adding, before clicking on the *Save* button (label 14). Eg: try adding the following item:

Item ID	Description	In/Out	Supplier	Country	Exported	Product
conc03	Lemon Conc.	Input	F Lemon Ltd	IE - Ireland	-	Z Lemon

Editing: Select the *Item* you want to edit by clicking once on the appropriate row in the *Items Table*. The selected row will be highlighted. Then click on *Edit Item* (label 2), which will bring up the *Items Data* dialog. Change the data as required and click the *Save* button. The changed data will be reflected immediately in the *Items Table*. Eg: try changing the description of *conc03*.

Deleting: In the event that you want to delete an *Item*, select the *Item* by clicking once on the appropriate row in the *Items Table*. The selected row will be highlighted. Then click on *Delete Item* (label 3). You will be asked to confirm the deletion request and you can select *No* at this point and the data will not be deleted. Note that once you confirm the deletion, the *Item Number* and its associated *Packaging* data will be deleted immediately from the database. Eg: try deleting *conc03*.

6. Managing Packaging Data

6.1 Description of the Packaging Table

The *Packaging Table* consists of the following columns or fields:

Column Name	Description	Sample Data
Item ID	the corresponding Item, non editable	Caps01
Packaging ID	a computer generated number, non editable	1
Description	Description of the packaging	Cardboard box
Packaging Type	One of three values: Primary, Secondary, Tertiary	primary
Material Type	One of 8 values:- "Paper/Cardboard", Glass, Aluminium, Steel, Plastic, Wood, Paper Composite, Metal Composite	Paper/Cardboard
Weight (Kg)	Weight of the Packaging (in kg to 3 decimal places)	1.800
Amount of Packaging	Quantity (number) of Packaging contained in a shipped unit	50 (boxes on a pallet)
Amount Of Items	Quantity (number) of Items contained in the packaging	500 (bottle caps in a box)
Number Of Items in Shipped Unit	Quantity (number) of Items contained in a shipped unit, automatically calculated, non-editable	25,000 (bottle caps on a pallet)
Weight Per Item	the weight (kg) of this packaging required to package a single Item, automatically calculated, non editable	0.0036
Weight Per Shipping Unit	the weight (kg) of this packaging required to package the Items in a shipping unit, automatically calculated, non editable	90.0
Fate	One of :- Reuse, Onward Reuse, Recycled (RPS, non-RPS), Recovery, Disposal (Compost, Landfill, Incineration).	Recycled-RPS
Updated By	Name of user (free text)	John C
Date	date format	07/01/2003
Comment	free text	Example3

The packaging displayed in the *Packaging Table* is that corresponding to the *Item* selected in *Items Table*. The *Packaging Table* is displayed on the lower part of the screen. If the number of entries in *Packaging Table* is such that they cannot all be displayed on the screen at the same time, a scroll bar on the right hand side can be used to scroll down the listing.

Clicking on any column label will *Sort* that column. For example, clicking on the *Packaging Type* column will sort the *Packaging Table* such that all packaging is listed according to type.

6.2 Sample Packaging Data

The sample packaging data used in the demo is as follows:

Item ID	Description	Type	Weight (kg)	Material Type	No. of pack-aging	Items Per Pack-aging	Number Of Items	Fate
conc01	Bulk Container	primary	20.000	Plastic	1	1	1	reuse
conc01	Metal Cap	primary	0.030	steel	1	1	1	reuse
conc01	pallet wrap	tertiary	0.500	Plastic	1	1	1	disposal
conc02	Bulk Container	primary	25.000	Plastic	1	1	1	reuse
conc02	Metal Cap	primary	0.040	steel	1	1	1	reuse
conc02	pallet wrap	tertiary	0.600	Plastic	1	1	1	disposal
caps01	cardboard box	primary	1.800	paperboard	50	500	25000	RPS
caps01	pallet	tertiary	15.000	wood	1	25000	25000	onward reuse
caps01	pallet wrap	tertiary	0.500	Plastic	1	25000	25000	disposal
caps02	cardboard box	primary	2.000	paperboard	50	500	25000	RPS
caps02	pallet	tertiary	15.000	wood	1	25000	25000	onward reuse
caps02	pallet wrap	tertiary	0.700	Plastic	1	25000	25000	disposal
bottles01	cardboard box	primary	1.900	paperboard	4	300	1200	non RPS
bottles01	pallet	tertiary	15.000	wood	1	1200	1200	onward reuse
bottles01	pallet wrap	tertiary	0.700	Plastic	1	1200	1200	disposal
bottles02	cardboard box	primary	1.600	paperboard	4	300	1200	non RPS
bottles02	pallet	tertiary	15.000	wood	1	1200	1200	onward reuse
bottles02	pallet wrap	tertiary	0.600	Plastic	1	1200	1200	disposal
cola01	case wrap	secondary	0.100	plastic	72	12	864	
cola01	pallet	tertiary	15.000	wood	1	864	864	onward reuse
cola01	bottle	primary	0.050	plastic	864	1	864	end-user
cola01	bottle cap	primary	0.005	plastic	864	1	864	end-user
cola01	pallet wrap	tertiary	1.000	plastic	1	864	864	
orange01	case wrap	secondary	0.100	plastic	72	12	864	
orange01	pallet	tertiary	15.000	wood	1	864	864	onward reuse
orange01	bottle	primary	0.060	plastic	864	1	864	end-user
orange01	bottle cap	primary	0.006	plastic	864	1	864	end-user
orange01	pallet wrap	tertiary	1.000	plastic	1	864	864	

6.3 Adding, Editing and Deleting Packaging

Adding: To add new packaging to the *Packaging Table*, first select the *Item* that you want to add the packaging information to. Then, click on the *New Packaging* button. This brings up the *Packaging Data* pop-up dialog window. Fill in the data fields for the *Packaging* you are adding, before clicking on *Save*.

Eg: select the *Item ID*, *bottles01*
        Click on *New Packaging* button
        Enter the following data:

Description	Packaging Type	Material Type	Weight (kg)	# of Packaging	Items Per Packaging	Fate
demo	primary	glass	10	10	10	Reuse

This will create an entry for *bottle01*, with *Packaging ID* 4

Editing: Select the *Packaging* entry you want to edit by clicking on the appropriate row in the *Packaging Table*. The selected row will be highlighted. Then click on *Edit Packaging* and this will bring up the *Packaging Data* dialog window. Change the data as you require and then click on the *Save* button. The changed data will be reflected immediately in the *Packaging Table*. Eg: try editing the *bottle01*, *Packaging ID* 4 entry (the one just created)

Deleting: In the event that you want to delete *Packaging*, select the *Packaging* by clicking on the appropriate row in the *Packaging Table*. The selected row will be highlighted. Then click on *Delete Packaging*. You will be asked to confirm the deletion request. Note that once deleted, the *Packaging* and its associated data will be deleted immediately from the database. Eg: try deleting the *bottle01*, *Packaging ID* 4 entry

7. Reports

7.1 Uploading Operational/Volume Data

Several types of reports may be produced from **PackProf**. Before these are generated, it is necessary to upload **Operational Data**. This data can be uploaded from a number of sources, such as ERP systems, databases and other information systems and data sources. These sources provide volume data for both incoming and outgoing *Items*. The data typically covers a specific period in time, such as a specific month, quarter, half-year, or year.

In this demo, sample operational data is provided in an *Excel* file. To upload the data, click on the *Upload Data* button. This pops-up the *Upload Data* dialog window. Select the source data type as *Excel* and click *OK*. This opens up a *file select* dialog. Select *files/data/operational data.xls* and click *Open*. The operational data is uploaded and will now reside in the memory of the **PackProf** application. At this stage, you are now ready to generate a report.

7.2 Generating Reports

PackProf can be used to produce a number of report types, such as **statistical reports** required by the *Repak* scheme or by *Local Authorities*. Reports can be produced in several formats, and can be exported and saved for later viewing.

In this demo, a sample *Repak 2003 report* can be produced in *Excel* format. To produce this report, click on the *Reports* button. This will bring up the *Report Format* dialog window. Select the report type as *Repak – 2003* and click *OK*. At this point the application will combine the packaging data in the **PackProf** database along with the *Operational Data* and perform all the necessary calculations that are required for the *Repak 2003* report. Once this data is ready, which is likely to be calculated in less than 1 second (!), the **PackProf** application will close (this is a demo version restriction). The application will then populate an *Excel* spreadsheet with the data for the *Repak 2003* report. This *Excel* file can then be saved as normal.

7.3 Statistical Report - Example

The key figures tallied in the **statistical report** using the *sample data* is as follows:

tonnes	paperboard	steel	plastic	wood
1.1 Irish Sourced Input Packaging				
Total Tonnes (including reuse packaging)	11.2	0.01	6.728	1.8
Reuse Packaging Suitable for Continued Reuse	0	0.01	6.5	0
1.2 Imported Input Packaging				
Total Tonnes (including reuse packaging)	18.36	0	1.7	38.25
Reuse Packaging Suitable for Continued Reuse	0	0	0	0
1.3 Internal Packaging Waste Management				
Total Tonnes (all packaging waste arisings)	29.56	0	1.928	0
1a. RPS	11.2	0	0	0
1b. Non-RPS	18.36	0	0	0
1. Tonnes for Recycling	29.56	0	0	0
2. Tonnes for Recovery	0	0	0	0
3. Tonnes for Disposal	0	0	1.928	0

	plastic
2.1 Irish Sourced Output Packaging - Supplied in ROI	
Total Tonnes (including reuse packaging)	34.041
Brandholder/Importer	34.041
Distributor	34.041
Retailer	20.952
2.3 Imported Output Packaging - Supplied in ROI	
Retailer	133.806
Brandholder/Importer	133.806
Distributor	133.806
Retailer	2.91
2.2 + 2.4 All Exports	
Filled Packaging	36.199

8. Administration

8.1 Creating Data Backups

The **PackProf** database can be provided in one of several formats and all leading and popular database systems are supported, such as Oracle, SQL Server and many others. Many of these databases support ODBC interfaces, which is a primary protocol of access used by the application. The demo version uses a simple Access database.

As the **PackProf** database is a *live* system, it is recommended that the user performs a data backup of on a regular basis (ie: weekly). This action is facilitated within the **PackProf** application. It is not necessary to perform this task in the Demo, but to do so, click on the *Backup* button (label 6). This creates a copy of the database in the *files\db* folder.

Appendix A. Technical Information

A.1 Operating Systems

The **PackProf** software product is designed to run on a number of popular operating environments such as Windows (NT, 98, 2000, ME, XP), Unix, Linux, etc. This demo version runs on Windows (NT4, 2000, 98, ME, XP) environments.

A.2 Java

The demo version of **PackProf** uses *Java Run-Time Environment (JRE)* technology. This is a popular and readily available environment that allows Java applications to run on many different environments. **PackProf** is distributed with a JRE.

A.3 Required Software

The following software is required to run the **PackProf 1.2 Demo** application:

➢ A suitable Windows operating system environment: such as Windows 2000
➢ Microsoft Office 97 or later