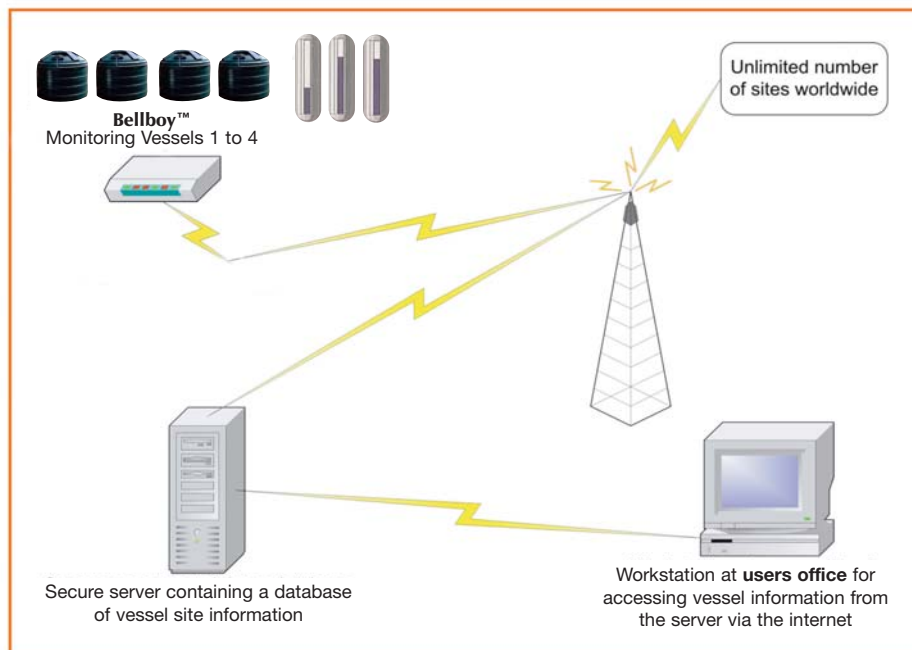


**THE DERWENT GROUP**

# Bellboy™

## Total Product Management System



**Bellboy™** increases the package of products and services from **The Derwent Group** which allows the contents of tanks or bulk material storage vessels to be monitored worldwide 24 hours a day 7 days a week. The system is an accurate measurement of consignment stock and can provide a run route for re-stocking (*future development*).

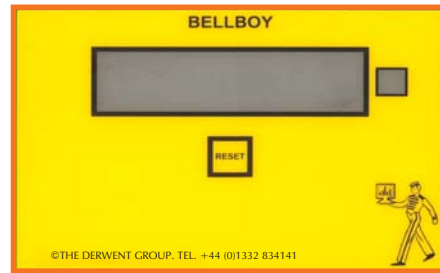
**THE DERWENT GROUP**

**Angelwill Ltd t/a The Derwent Group**

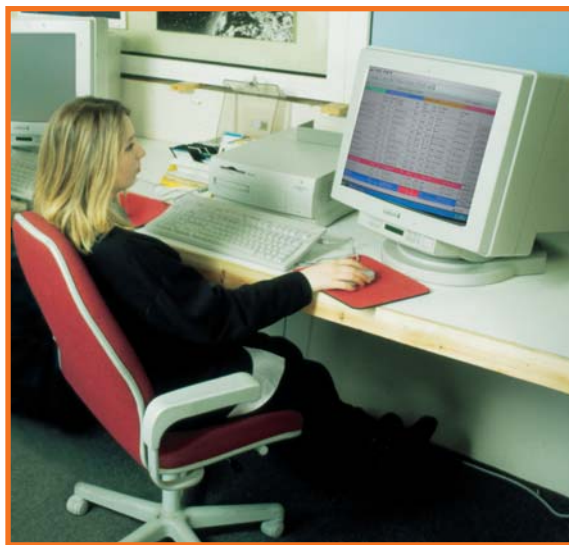
3 Duffield Road, Little Eaton, Derbyshire. DE21 5DR

**Tel:** +44 (0)1332 834141 **Fax:** +44 (0)1332 834145 **Email:** [bellboy@angelwill.com](mailto:bellboy@angelwill.com)

The **Bellboy**™ low cost measuring system, using a specially designed pressure transducer/ultrasonic sensor or existing load cells, accurately displays the amount of liquid or powder held in a storage vessel with up to 4 vessels per instrument to an accuracy of  $\pm 0.5\%$ . **Not** a rough estimate.



The **Bellboy**™ instrument updates at least once every 12 hours all levels of each vessel to a remote database hosted on a secure server for the product supplier or user to interrogate as required. The **Bellboy**™ will also notify the database if a vessel has had a delivery and the quantity delivered including time and date.



The product supplier can, with internet access, use a web based application to access a series of reports giving vital management information regarding their stock levels and delivery information securely and remotely. The product supplier can offer to provide access for their customers to view just their own vessels as a value added service. Some examples are:

Display all vessels below a preset **Alert** level.

Any unusual increase in product usage will show an '**Alert**' in the usage trend indicator. Which vessels will need filling before a predicted date based on current usage.

**Bellboy**™ can be used to plan your delivery run routes and after inputting available vehicles on your fleet, you could use them to their maximum **advantage and capacity** to maximise product to be delivered thus reducing the number of drops per year to minimise transport costs (*future development*).

**Bellboy**™ can be integrated with automated billing systems giving the supplier a seamless stock control, logistics planning and invoicing package. The system can be run on a "need to know" basis with multiple users. I.e. the transport manager may need to see run routes (*future development*).

# Main screen display of the web based application

**BELLBOY - HOMEPAGE - VESSELS**

Current User: \_\_\_\_\_ Company: \_\_\_\_\_ Role: \_\_\_\_\_

No contact in last 12 hours		No contact in last 24 hours		Below Alert Level		Below Panic Alert Level				
Plant Name	Vessel No	Product in Vessel	Vessel Size Litres/Kg	Prev. Level	Curr. Level	% Vol	Available Capacity	Last Update	Contact	Neighbours
	1		2700		1800	66.7				
	2		1412		860	60.9				
	1		1590		105	6.6				
	2		5000		2925	58.5				
	3		3500		540	15.4				
	1		2700		351	13				

**Product Totals**

Product	Total Capacity	Total Quantity	Available Capacity
	11000	6800	4200
	2700	1530	1170
	4300	485	3815

**BELLBOY - TOTAL PRODUCT MANAGEMENT**

Company Code   
 User Name   
 Password

CUSTOMER NAME  
 ACCOUNT NO.  
 ORDER NO.  
 PLANT I.D. CODE  
 SITE ADDRESS  
 TOWN  
 POST CODE  
 SITE TELEPHONE NO.  
 SITE CONTACT  
 AREA MANAGER NAME  
 TEL NO.  
 MOB NO.  
 E-MAIL ADDRESS  
 BELLBOY INSTALLATION DATE  
 VESSEL OWNER  
 NO. OF VESSELS ON SITE  
 VESSEL NO.  
 PRODUCT IN VESSEL  
 VESSEL CAPACITY  
 PRESENT VESSEL LEVEL  
**ALERT** LEVEL %  
 PANIC **ALERT** LEVEL %  
 SUDDEN USAGE **ALERT**  
 PRODUCT USED THIS MONTH  
 PRODUCT USED LAST MONTH  
 LAST FILLED DATE  
 PLANT OPEN TIME AM PM  
 PLANT CLOSE TIME AM PM  
 SATURDAY AM PM  
 SUNDAY AM PM

**For a full list of features and benefits see overleaf**

## Main screen display of the web based application

- ⇒ **Head office and site staff spend less time on the land line telephone**
  - Saves associated costs i.e. call charges, staff time and interruptions
  - No running out of product, no costly **panic** deliveries, **NO RETURN** part loads
- ⇒ **All necessary vessel information can be viewed on one screen**
  - Indicates type of product in each vessel
  - No need for the user to dip, clean or read the site glass
  - The product supplier sets the **ALERT** level for each vessel from “**Their**” office
  - i.e. You can view all vessels at say 25% or any preset capacity by colour code
  - E.g. 1000 litres could be  $\pm 5$  litres **but** resolved to 10 litres or better
- ⇒ **Vessel level status updated every 12hrs (minimum)**
  - This deters theft and over filling or tampering with product
  - Any increase in contents, say water added to disguise actual product usage, gives immediate **ALERT**
- ⇒ **Automatic usage prediction for individual or group of vessels**
  - Can predict when vessels will **ALERT** at present usage trend/rate ie. see graph page
  - A sudden change of usage rate will **ALERT**
- ⇒ **Both product supplier and user can have the same accurate information**
  - Allows deliveries to be planned in good time
  - Reduces misunderstanding between supplier and customer staff
- ⇒ **STOCK CONTROL**

The **Bellboy**™ Total Product Management System will provide the following information which will allow **manufacturers** to plan production.
- ⇒ **Total** product, by name and vessel capacity and monthly usage of consignment stock
  - Present customer stock level of each product, by name
  - Informs the manufacturer/transport department of available capacity by product
  - Neighbours will show localised user product capacity available
- ⇒ **Self diagnostics for reliability**
  - Can send system fault **Alarm** - with time and date of event recorded
- ⇒ **Ability to monitor vessel contents worldwide (password protected)**

Continued product development. The Derwent Group reserves the right to alter product specifications without prior notice.