Construction Estimating

Quick Start Guide

Feb 2018
Version 2.01c97 on Windows 7

was used for the screen shots in these notes.

We enhance & update the software on a regular basis

and minor deviations of the screen and menus

might be encountered in the current software versions you are using.
# Table of Contents

Chapter 11. Post Tender Control ................................................................. 55
  11.1 Selling Rate .......................................................................................... 55

Chapter 12. Value Engineering or Re-modelling ........................................... 57
  12.1 Resource List ........................................................................................ 57
  12.2 Bill of Quantities – Net vs. Gross vs. Selling ....................................... 58

Chapter 13. Other Candy modules ................................................................. 59
  13.1 Planning ............................................................................................... 59
  13.2 Link & Forecast .................................................................................... 60
  13.3 Cash flow ............................................................................................. 60
  13.4 Valuations ............................................................................................ 61
  13.5 Subcontract Manager .......................................................................... 63
  Cost & Allowable ....................................................................................... 64

Chapter 14. Candy User Interface ................................................................. 66
  14.1 Candy menu bar .................................................................................... 66
  14.2 Document navigation ........................................................................... 67
  14.3 Menus on the documents ..................................................................... 68
  14.4 Customising the System ..................................................................... 71
  14.5 Keystrokes, Icons and Mouse Functions ............................................. 72
Chapter 1. Downloading from the Internet

1.1 Introduction

This quick start guide’s intent is to get you up and running in Candy’s Estimating module. A more comprehensive explanation on the functionality of Candy Estimating can be found in the course notes, available for licenced users from their local distributors. (Refer page 7)

The latest version of the Candy may be downloaded from the Internet. The files may be used for a new Candy installation or to update the existing system.

The files can be copied onto a removable disk and installed onto any computer.

Create a folder on your hard disk named c:\ccsdownloads.

From the windows desktop click Start, Programs and Windows Explorer. On pull down menu select File, New, Folder, type ccsdownloads and press enter.

Load an Internet Web browser and search for the CCS web page.

In your browser’s Address/Location text box, type http://constructioncomputersoftware.com/solutions/solution-candy

Select the menu:

Download Candy free trial

Fill in your email adress to receive the download link

Download the system files to the c:\ccsdownloads folder.

Candy consists of a “setup.exe” installation file. The file should be downloaded. Click on the installation file. There will be an option to either Run/ Open the file or Save to disk.

Select the option Save this Program to disk.

Install or upgrade the CCS system

Only install CCS once the installation file has been successfully downloaded.

Start installation by clicking on the setup.exe file.
Chapter 2. Starting Up

2.1 **Starting Candy**

Start Candy from the windows desktop by double clicking in the Candy shortcut.

Complete the user Login with your User Name, Initials and Company name.

2.2 **Data Selector**

A data folder is created with the first installation of Candy on the computer and displayed the first time you open Candy. Highlight the path name and click on **Select** to open the Company selector.

2.3 **Company Selector**

This is the top-level menu in the data folder. You may create up to 24 companies in the selected data folder.

For example, if you are doing a tender in a joint venture with another firm, you can create a brand-new company on the computer for that bid.
To select a company, position the cursor on the required company and use **Enter** or Double click with the mouse.

### 2.4 **Create a New Company**

On the company selector, create a new company by clicking on the **Company** menu and select **Add a new company**.

![Company Manager](image)

Edit the company name to read “**CCS Training Company**”, click **OK**.

![New Company](image)

The company “CCS Training Company” has now been created.
2.5 Job Selector

Double click on the “CCS Training Company” to access the Jobs in the company.

The job selector will generate a new header and new job automatically.
You may create up to 99 jobs within a company and they may be created, copied, renamed, deleted and backed up either using the Job menu or using the Right-click menu.

To return to the Company manager after you have opened the Job manager, you can right click on the button to open the Company Manager.

Create a new Job

Click on the Job menu, select New job or click on button.

Edit the job name to read “Waste Water Treatment Works”
Click **OK**

Open the job by double clicking on the job or by clicking **Select**.
2.6 **System Registration**

In order to use Candy, the system must be registered with CCS and a monthly licence fee paid. CCS will allow prospective clients a free trial licence to assess the software.

The free trail download will give you an evaluation licence for 30 calendar days.

The only restrictions of the evaluation software are:

- You can only recover a backup, not make a backup
- You cannot export anything to Excel
- All the reports will have a watermark on it.

The data accumulated during the trial period can be used when you rent the full system.

Once the trail licence has expired the software will indicate a non-registered system.

If your system has not been registered, the system registration dialogue will be displayed with a broken key.

![Unlicenced system](image)

The registration process is completed telephonically with your local distributor (refer next page); using a set of unlocking codes.

If the system has been registered the job selector will be displayed.

To register the system, please contact your local CCS office.

The contact details are avialble at [http://constructioncomputersoftware.com/contact-us](http://constructioncomputersoftware.com/contact-us)
Chapter 3. Importing the Bill of Quantities

A bill of quantities can be created by:

- Manual entry of bill items.
- Copying items from a previous Bill of Quantities.
- Importing an entire Bill from an external file, e.g. Excel™, WinQS™ or QS Plus™ etc., provided by the client or Professional QS

Let’s first import these Bill pages below from Microsoft Excel.
3.1 Setting up a new estimate

**Do this:**
Click the Bill Prep menu.

If there is no Bill of Quantities present in this job, the first time you try to access it, the setup dialog will appear.

The setup dialog is used to select a master reference job and to enter the tender details. Working with Masters will be covered in detail in later chapters.

For pricing the “Waste Water Treatment Works”, we currently have no Master and all items will be imported, entered and priced from first principles.

When we have finished pricing this job, it can be used as a Master for any other job

**Do this:**
Since we have no previous jobs and no Master, make sure that the master checkbox is not ticked. Contract reference information and other general details may be entered into the Estimate Details dialog. You can change these tender details from the Main > Estimate details menu.
3.2  **The Bill Importer document**

A special Bill document exists in Candy for importing Bills. The Bill Importer document contains all the tools required to import and format the Bill.

**Do this:**

Click **Bill Prep > Bill Importing**.

There are no bill items at present. We will copy a Bill from an Excel spread sheet and paste it into this document.
3.3 Importing a BoQ from an Excel spread sheet

Copying all the Bill data in the Excel spread sheet to the clipboard

Do this:
Create an Excel file as indicated below and select all the data using Ctrl-A.

Click Edit > Copy (or Ctrl-C) to copy the Excel data to the clipboard.
Pasting the bill from the clipboard

Return to Candy. On the Bill Importer document, and choose Tools > Import Bill > Paste bill from clipboard (or Ctrl-V).

The Column Selection dialog appears. We need to identify the Item number, Description, Unit and Quantity.

Click the item in the list on the left which identifies the column under the big grey arrow. The arrow will then move to the next column. Click Continue when you have finished.

The bill import indicates that 19 items were imported – 18 bill items and one column heading row.

The bill quantity hash total displays the sum of all the quantities imported (ignoring the unit types)

This is used as a quick check to see if all the bill items are imported.

Compare this to the sum of all the quantities in Excel.

If the same; all quantities have been imported.
The Bill Importer document now shows the imported items.

Note the entire bill is imported on page 1.

**Remove unwanted lines**

All the information including the column headings created in Excel are imported. To remove the Excel column headings, select the row with the unwanted heading, right-click to open the menu and select **Delete** or use CTRL + DEL on the record.
Repaginating the bill

The original Bill contained two pages; our imported bill consists of one long bill page. We need to set page break marks in the New Page No column for all the items which must start on a new Bill page. Then we will repaginate the Bill to see the page breaks.

We want all the metalwork items to be on page 2.

**Do this:**

To set a page break on H.D. Bolts and miscellaneous metalwork right-click in the New page no. column for this item, and choose *Set page break marks*.

Click Yes to the confirmation dialog.

The “+” represents the page break mark.

Now we can repaginate the bill.

Since we want to do something to all items in the Paginate column, right-click on the New Page No. column heading and select *Paginate the bill*. 
There are additional options that can be set for pagination which are not handled in this course. For this course we will keep the default settings.

Click **OK** to confirm the repagination...

...and confirm pagination complete.
And this is the end result:

We have now completed importing the Bill. You can close this document.

Now we’ll use the ordinary Bill documents to setup the summary heading levels and price the Bill items.
3.4 The Document Manager

The Bill of Quantities can be viewed, edited and priced using various layouts in the Document Manager.

**Do this:**

Open the Bill Document Manager by clicking on **Documents > Estimating Document Manager**.

The Document Manager contains a standard set of data and column layouts which may be copied, customised or renamed.

The layouts in the Document Manager are universal to all your jobs in Candy. Any change which you make to a document will be reflected in all jobs.
3.5 Changing comments to section headings

Section headings

In a Candy Bill you can create a hierarchy of headings, allowing you to navigate the Bill easier by opening and closing sections in it and also to generate summary pages in reports.

All non-Bill items imported from external file will have been marked as comments. We can convert many of these to meaningful headings to improve the readability of the Bill.

Do this:

Open document 1.2 Pricing bill and change the first comment of each page to a Level 1 heading by typing the number 1 in the Level column “L” (the first column). As the level changes, the line colour will change to the colour for that level – as defined in the System settings.

Notice that both pages of our bill are shown. The Candy bill can be displayed in a multi-page mode (like this), or a single page mode, where only one page at a time is visible.

Do this:

To make things simpler in the next exercises, from the Bill document menu, click View > Multi-page bill to remove the tick and get the one-page-at-a-time mode. Now close the Bill document.
Chapter 4. Defining Trades & Resource types

4.1 Introduction - Trades
Bill items are priced using Price Codes. Price codes are the fundamental pricing mechanism in Candy. Price code represents an item of work and is priced to reflect its unit rate.

Every Price code must have a Trade code and this must be the first character of the code. The code is up to 8 characters in length and the first character identifies the Trade to which it belongs.

For example:
- **E203 Excavate column bases** - the "E" in the code indicates that this Price code is in the Excavation trade.

Where Trade codes are used:
- Trade totals display - Summary of the job by Trade into resource types.
- Trade mark-up - Different mark-up can be applied to each trade.
- Trade spread sheet - An analysis of the job pricing arranged by Price code showing the rates split into resource types.
- Subcontract adjudicator - Trades can be used to populate subcontract adjudication documents.

The order of the trades in the Trade definitions document dictates the order in trade related report. The vertical order of the trades on the Trade definitions document can be changed with the **Ctrl+Left-arrow** and **Ctrl+Right-arrow** keys to ‘bubble’ trade definitions up and down.

The Price code List is sorted alphabetically by Trade.

4.2 Introduction – Resource Types
Simple resources are used to price worksheets for Price codes and Complex resource. *(Complex resource discussed in detail later)*

Each Simple resource must belong to one of the nine Resource Types, such as Labour, Material, Equipment, etc.

Simple resources are usually created on the Resource List - they can also be created from a worksheet. Once a resource exists it can be used on both Price code and Complex resource worksheets.
4.3 **Trade Definitions**

**Do this:**
The Trade codes can be defined in the definitions menu. Access the definitions menu by selecting **Main > Definitions & Settings** or click on the blue hammer in the Estimating Toolbar.

Select **1.1 Trades**. Define the remainder of the trades by entering an Alphabetic letter as a trade code and a description. A maximum of 52 Trades may be defined.

4.4 **Resource type definitions**

**Do this:**
Click **Main > Definitions and Settings** and choose **1.2 Resource Types**.
Type in the following resource types: (Up to 9 resource types can be defined).
Chapter 5. Pricing the Bill Items

The Bill items can be priced using plug rates, split rates, or worksheets. This chapter will cover pricing in Plug and Split rates. The pricing type and other item information are shown in the Attributes column. Let’s add this column to the Bill document.

Do this:
Open the Estimating Document Manager again (Documents > Bill documents), choose 1.2 Pricing Bill and then click the Customise button to change the column layout.

The column pick list
This type of dialog below is called a pick list. You can add columns from the left-hand Available list to the right-hand Selected list.

Notice that the Available columns are grouped into headings.

Double clicking on a heading opens or closes it.

Open section 2 Bill Items. Choose column 2.9 Attributes and use the arrows to move the column to the Selected list.

The column order can be changed with the and arrows. Move the Attributes column to below the Units column and click OK to store the new column layout.
5.1 **Plug Rate Pricing**
Plug rate pricing is done by simply plugging in a rate in the **Net Rate** column for each item.

In the Document manager, open **1.2 Pricing Bill**. Note the **U** in the new Attributes column shows that all the bill items are Unpriced.

Price item “A **Clear Site**” by entering **10.00** in the Nett Rate column.

Every bill item will require a Trade Code when pricing.

Now you can allocate the Earthworks trade to the **Clear site** bill item by selecting Earthworks and confirm.
Note that **PT** is displayed in the Attributes column indicating that the Item now has a Plug rate and a Trade mark-up. (Mark-up currently = 0 % – *Mark-up will be done later*)

Double click on the Attributes column to display the explanation of the attributes.

### 5.2 Split rate pricing

Split Rate pricing must be done in a Split Bill of Quantities document which shows the Net split rate columns. Open the document manager again and select **New Document > 1.5 Split Rate Pricing** to add this document to the document manager.
Now go to the document manager again and open **1.5 Split Bill of Quantities**.

Note that the document displays the Net Split Rate columns.

Price Item B by entering **2.00** in Labour Split Rate column.
If Candy asks for the Trade allocation, choose **Earthworks** and confirm.

...and enter **8.00** in Plant Split Rate column.

Go back to the document manager and open **1.2 Pricing Bill**.

Note the **ST** in the Attributes column indicating that the Item has a **Split** rate and a **Trade** mark-up.
Chapter 6. Pricing using Worksheets

Pricing using plug rate and split rate is not recommended because it only generates financial information for the job. Pricing using Worksheets is the ideal method because we price from first principles using resources. Candy can then be used to its full potential to generate both financial and engineering information.

6.1 Price Codes

An explanation of Price Codes

The Price Code's **function** is to deal the unit price of a bill item. To rate a bill item, a Price Code is entered against it and the bill item adopts the rate from the Price Code (however it was generated, by plug rate, split rates or worksheet).

The Price **Code** can be up to 8 alpha-numeric characters in length. The first character of the Price Code must start with a Trade Code letter and the rest of the code is entirely up to you.

Note that the Price Code has its own **Description**. The description of the bill item is totally independent of the Price Code description. This means that two items in the bill, with different descriptions, can be priced using the same Price Code. Conversely, two items in the Bill with the same description can be priced using different Price Code and therefore have different rates.

**Do this:**

Open Bill document **1.2 Pricing Bill**.

This layout contains columns relating to the Price Code.

The Price Code for the first priced items was automatically created by Candy.

**Example:**

The Bill item **Clear site** on page 1 has a Price Code E00004 with a rate of **10.00**. By allocating the same Price Code to any other bill items will price them using the Price Code rate, effectively speeding up the pricing process.
6.2 **Trade code allocation**

Pricing using Worksheets is made a lot easier if we first allocate Trade codes to the relevant bill items.

**Do this:**

In item C’s Trade code field, right-click and select *Allocate Trade Codes*.

Select *Earthworks* and confirm.

Now let’s allocate Trade code E to all of the excavation bill items on Page 1.

In the Trade code column header, click the first item and shift-click the last item of page 1.

This selects all the records of page 1.

Now right-click in the Trade code column header and choose *Allocate Trade codes* from the menu.

Select *Earthworks* and confirm.
The Earthworks Trade code has been allocated to page 1’s items.

Using the same method, allocate trade code **M** to the metal works bill items on Page 2.
6.3  *Pricing using Worksheets*

Having allocated Trade codes we can price items easier using worksheets. We will price item 1/C. The worksheet allows for resource-based pricing.

The worksheet may contain up to 200 calculations.

**Explanation of Simple Resources**

For resource-based pricing, we need to create some resources. We have already defined some Resource Types, which categorise simple resources. For example, Labour resources fall into the L resource type, material resources, such as stone, fall under the M type. Sand is a simple resource, whereas concrete is not, because it is made up of sand, stone, and cement.

**Do this:**

Place the bar cursor on Page 1 / item C and click the **Worksheet** button at the bottom of the document.
Create a resource within a Worksheet

_Do this:_
Create a resource by right-clicking on a blank line in the worksheet. Choose _Edit/New resource_ from the menu.

Enter the details for the new resource in the Resource Input dialog as shown below.

Click _OK_.

The resource description and rate is now displayed on the worksheet. The resource is 5.25/hr and the bill item is per m3. Enter the calculation “9hrs/day/1.5m3/day” (the answer is 6).

Note the calculation is entered on the worksheet the way you would write on paper (free format).

6.4 Changing the Store Worksheet mode
The Store worksheet button action can be changed to perform a few different functions.

You can change the way the worksheet is stored by selecting the up arrow next to the Store button.

For this course we will use the option “Store & return to document”. After selecting the store method, store the worksheet by clicking on Store Worksheet.
Note that **WT** is displayed in the **Attributes** column indicating that the Item has a **Worksheet** and a **Trade** mark-up.
Create a resource directly on the Resource List

**Do this:**

Click on the Resource List icon $\text{R}$ to display the Resource List.

Resource Code **200 Unskilled Labour (all in)** was added when pricing Item C.

Go to a blank line and enter a new resource called “**Charge hand**”.

Now price **page 1 Item D** using a worksheet.
Insert an existing resource in the Resource list using the right-click menu

**Do this:**

Open the Resource List by right-clicking on a blank line in the worksheet.

Choose *Resource list* on the menu.

Select resource *200 Unskilled Labour (all in)* and confirm.

Add resource *210 Charge hand* using the same method.

The worksheet now contains the resources, but no calculation for the rate.

Now enter the following calculations against each resource in the worksheet.

The worksheet contains two calculations. To display the total of both calculations, place an equal sign “=” on a new line against the left margin and press enter.

Notice the total for these calculations at the end of the line. Note the total rate is also displayed on the top right-hand corner.

Click *Store worksheet*.
...and item 1/D is now priced using a worksheet.

<table>
<thead>
<tr>
<th>L Item</th>
<th>Bill description</th>
<th>Unit</th>
<th>Attr</th>
<th>Bill qty</th>
<th>Rate</th>
<th>Amount</th>
<th>T</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Clear site</td>
<td>m²</td>
<td>PT</td>
<td>2,000</td>
<td>10.00</td>
<td>20,000.00</td>
<td>E</td>
<td>E00004</td>
<td>Clear site</td>
</tr>
<tr>
<td>B</td>
<td>Remove top soil 150mm thick</td>
<td>m²</td>
<td>ST</td>
<td>300</td>
<td>10.00</td>
<td>3,000.00</td>
<td>E</td>
<td>E00005</td>
<td>Remove top soil 150mm thick</td>
</tr>
<tr>
<td>C</td>
<td>Excavate bases 0 - 2 m deep</td>
<td>m³</td>
<td>WT</td>
<td>100</td>
<td>31.50</td>
<td>3,150.00</td>
<td>E</td>
<td>E00006</td>
<td>Excavate bases 0 - 2 m deep</td>
</tr>
<tr>
<td>D</td>
<td>Excavate foundations 0 - 2 m deep</td>
<td>m³</td>
<td>WT</td>
<td>200</td>
<td>54.00</td>
<td>10,800.00</td>
<td>E</td>
<td>E00007</td>
<td>Excavate foundations 0 - 2 m deep</td>
</tr>
<tr>
<td>E</td>
<td>Excavate for Pit or Sump</td>
<td>m³</td>
<td>U</td>
<td>150</td>
<td></td>
<td>Not priced</td>
<td>E</td>
<td>E</td>
<td>Not priced</td>
</tr>
<tr>
<td>F</td>
<td>Excavate for retaining wall footings</td>
<td>m³</td>
<td>U</td>
<td>300</td>
<td></td>
<td>Not priced</td>
<td>E</td>
<td>E</td>
<td>Not priced</td>
</tr>
<tr>
<td>G</td>
<td>Excavate for foundations 4 - 6 m deep</td>
<td>m³</td>
<td>U</td>
<td>800</td>
<td></td>
<td>Not priced</td>
<td>E</td>
<td>E</td>
<td>Not priced</td>
</tr>
<tr>
<td>H</td>
<td>Excavate for foundations 6 - 8 m deep</td>
<td>m³</td>
<td>U</td>
<td>500</td>
<td></td>
<td>Not priced</td>
<td>E</td>
<td>E</td>
<td>Not priced</td>
</tr>
</tbody>
</table>

Totals for page 1: $36,950.00
**Complex Resources**

**Explanation of Complex Resources**

It would be tedious to have to bring the Unskilled Labour and Charge Hand and to combine them every time you priced an Excavation item in the Bill of Quantities. Similarly, pricing concrete, it would be tedious to have to combine the sand, stone and cement in the correct portions for each bill item.

Candy allows you to combine these **Simple Resources** and create a **Complex Resource**. When you have an excavation item to price, you bring the excavation team complex resource into the worksheet; similarly, when you have a concrete item to price you bring the concrete complex resource into the worksheet for the bill item.

Higher level complex resources can be made from other complex and simple resources. Level 9 is a very basic complex resource which can be made of only Simple resources, a Level 8 resource can be made of level 9 and Simple resources, a Level 7 resource can be made of Level 8, Level 9 and Simple resources, and so on in a hierarchy of Complex Resources.

This diagram shows the principle of the hierarchy of Complex Resources:

![Complex Resource Hierarchy Diagram](image)

A Complex Resource is created by assigning a level number between 1 and 9 in the Resource List type column.
Do this:

Enter the new complex resource **220 Hand Exc. team (1C + 2L)** in the resource list.

Changing the complex resource code’s background colours

To highlight the complex resources in the resource list, you can change the background colour of the code. Select **Main > Definitions & Settings > 6.2 Item and attribute colours**.

Complex resources must be priced using a worksheet. With your cursor on the **220 Hand Exc. team (1C + 2L)**, click on **Complex worksheet**.
Insert a resource into a worksheet by typing in the resource code.

**Do this:**
Type in the resource code **200** against the left margin of the worksheet and press **Enter**. Do the same to insert resource code **210**. Enter the following calculations to calculate the daily cost of the Hand Exc. Team.

You can also change the way the complex worksheet is stored by selecting the up arrow next to the Store button. For this course we will use the option “**Store & back to document**”

Remember to store the worksheet by clicking **Store complex**.

Now the Resource List shows two Simple Labour resources and one Level 9 Complex Resource.
Insert a resource into a worksheet using the Drag & Drop method

**Do this:**
Open the Worksheet for the bill item 1/E “Excavate for Pit or Sump”. To make it easier to perform these operations, move the Bill, Worksheet and Resource Lists into the positions as displayed below.

Now click on the anchor in the Worksheet title bar to make the worksheet always appear in the same position and size.

Click and hold down the mouse button on the row selector bar for the Hand Exc Team (1G + 2L), in the Resource List and drag & drop the resource onto the worksheet.

Now enter the following calculation to calculate the rate per m3.
Click **Store worksheet**
**Copying Worksheets using the drag & drop method**

The next item 1/F has the same rate as item 1/E but a different price code is required. The worksheet can be copied from Item 1/E into Item 1/F using the drag and drop method.

**Do this:**

Open the Worksheet for the bill item 1/F *Excavate for retaining wall footings.*

From the bill document click on the record selector bar for bill item 1/E *Excavate for pit or sump* and drag it into the worksheet for *Excavate for retaining wall footings*.

The worksheet calculations for Bill Item 1/E is copied into item 1/F worksheet. There is no need to input the complex resource or the production as this information was copied from the previous Bill item 1/E.

Click **Store worksheet**
**Pricing Items 1/H and 1/G**

On page 1 the last 2 items are deep excavations and therefore will require an Excavator. Create a new complex resource for an Excavator including the diesel and use it to price the bill items.

**Do this:**

Open the resource list and create Simple Resources for the Excavator and Diesel. Remember the Simple Resources must be categorised into the correct Resource Type, i.e. Excavator into Plant (P) and Diesel into Material (M).

Now create the Complex Resource for Excavator (Wet). Remember that the Complex Resource must have a Level number between 1 and 9 in the Resource Type column.

Price the Complex Resource “CAT 215 Excavator (Wet)” using the following resources and calculations:

Use any one of these methods above to insert resources into the worksheets:
Price Item 1/G using a worksheet

Now Item 1/G can be priced from first principles using the complex resource Excavator (wet) and 3 Unskilled Labourers.

**Do this:**

Open the worksheet for item 1/G to price it using the following resources and calculations.
Copy worksheets using the Insert a w/s button

Item 1/H is similar to Item 1/G, the only difference is the excavation depth. To save time we can copy the worksheet information from Item 1/G into Item 1/H.

Open the worksheet for Item 1/H. Click Insert a w/s.

Use the “spinner” up and down arrows to scroll through the available Price Codes.

When Price Code E00010 “Excavate for foundations 4 – 6 m deep” appears, click OK to copy the worksheet information.

Adjust the production to 400m3/day to compensate for the deeper excavation and then store the worksheet.

All the items on page 1 should now be priced and the page total should be “69,172.94”. Press Calculate to calculate & display the Excavation heading amount.
Chapter 7. Worksheet Tools and Shortcuts

Various tools and shortcuts in the worksheets have been developed to speed up the pricing process.

We will use item 1/H to demonstrate the various worksheet tools.

7.1 Applied Factor

Do this:

With your cursor on Item 1/H, click Worksheet.

Note that many lines of the worksheet share a common production of 400m3/day, rather than entering the production on each calculation line; we can introduce an applied factor.

Use the hash sign # to introduce an applied factor.

Do this:

Place the cursor on the top line of the worksheet and insert a line by pressing Ctrl+Insert.

Now type a # sign, delete the production from the following 2 calculation lines and then enter on a new calculation /=400m3/day.

...and press Enter.
The words “APPLIED FACTOR” appear. The result remains the same at 6.54.

7.2 Local Variables
Local variables are defined and used on a worksheet using the square brackets “[ ]”.

Do this:
Use Ctrl+Insert to insert a few blank lines at the top of the worksheet. Enter the following variables.

Now press enter on the production calculation line and a message confirming the calculated value will appear.

Click OK
Calculations are detailed by starting a calculation line with a question mark “?”.  
To display the calculated value of production on the worksheet type the following “?[PROD]” and press Enter.

Now delete the 400 m³ production on the applied factor line and replace it with [PROD].

7.3 Comments
Worksheets can be documented by leaving one blank space on the left of the worksheet followed by the relevant comment.

Add +15% to the applied factor line and then type a comment “15% for over break”.

Click [Store worksheet]
Chapter 8. Subcontractor Adjudicator

8.1 Introduction

The metalwork items on page 2 will be subcontracted.

The Subcontract Adjudicator will be used to adjudicate and select the most competitive subcontractor.

The rates of up to twelve subcontractors can be allocated to a range of bill items representing a package of work. The quotes can be compared and adjudicated. The cost (net) or selling rates of the selected subcontractor can then be exported to the bill.

A more comprehensive explanation on the functionality of the subcontractor adjudicator can be found in the course notes available for licenced users from their local distributors. (Refer page 7)

This explanation will include subcontractor discounts, adding lump sums, etc.

You can use split rate entry to complete the exercise in this quick start guide.
Chapter 9. Trade Totals Display & Resource Analysis

Now we can reap the rewards of our hard work. On screen analysis like a Trade summary and a resource analysis can be viewed by the click of a button.

9.1 Trade Totals Display

*Do this:*

The job total by trade can be displayed by clicking the icon or selecting **Finalisation > Trade totals display.**

Select the **Bill Quantity**

Select **Net rates**

The Trade Total Display is shown.

The subcontractor Nett Amount of **90223.10** is the same total as calculated in the subcontract adjudicator for Metalwork when we displayed the Subcontract adjudicator results.
### 9.2 Resource Analysis

Resource analysis can be displayed on screen using one of the resource documents which displays the Bill Quantity Usage & Bill Quantity Usage value columns.

**Do this:**

Open resource document **1.4 Utilisation and value – billed quantity** from the resource document manager.

Click **Calculate** to recalculate the Usage.

The resource usage calculation rules reminder will be displayed.

Note currently the calculation is only done up to two decimal points, and allowable wastage is included (handled later during the course).
The bill usage columns is relative to the unit of the resource, i.e. 4598.31 hours of unskilled labour at 5.25/hr or a total allowable of 24141.14 to spend on this resource, similarly, there are 491.56 litres of diesel allowed on the job.

Changing rates in the resource list will substitute the adjustments through all worksheets and update the Net rate for each bill item.
Chapter 10. Mark Up

Up to now we have been working out the Net rate for each bill item. Mark up can now be added to our job to calculate the Gross Rate.

In other words the gross rate is calculated \((\text{Net} + \text{Applied Mark-up} = \text{Gross})\)

Mark up can be added in various ways:

- Mark up all Trades
- Trade Mark up
- Individual Mark up

10.1 Mark up All Trades

Mark up the whole job by 10% using the Mark-up All Trades facility.

Do this:

Open Estimating Bill document 1.6 Mark-up Bill (under the Estimating bills tab in the document manager)

Right-click in the Mark up column and choose General mark-up utilities > Mark up ALL trades.

Enter a 10% mark up for all Trades and confirm.

Remember to calculate the bill for the updated heading amount totals.
10.2 **Trade Mark up**
Mark up can be applied to Trades using the Trade Mark facility. Apply 5% mark up to the Metalwork Trade.

**Do this:**
Right-click in the Mark Up column and choose *General mark-up utilities > Trade mark-up.*

Adjust the Metalwork Mark Up to **5%**

10.3 **Individual Mark up**
Return to the Bill and adjust the mark up for item 1/A to **20%** Mark up.

Click **Yes** to confirm the change.

The Mark up type column now indicates what type of mark-up has been applied.
The Metalwork items on page 2 have a 5% trade mark up.

### 10.4 Trade Totals Display

Do a trade totals based on the **Gross rate**

Use the shortcuts on the toolbar this time.

The Gross amount is displayed with the net split amounts for Labour, Plant, etc. The last column represents total mark-up amount.
10.5 Report Manager

All reporting in Candy is done through the Report Manager. A selection of pre-defined reports is available, any of which may be adapted to suit your specific requirements.

The Report Manager consists of two tabs.

- **Job Reports**: These reports are only available to the current Job, and they are included as part of the Job backup.
- **Global Reports**: These reports are available to all the jobs on your computer, so they are NOT backed up with Jobs.

Click on the **Reports > Estimating Report Manager**, (or ![print button]), to open the Report Manager.

Try printing the following reports and select the various options to see the available reporting formats.

- **Bill of Quantities > BOQ - Page totals - Gross**
- **Worksheet reports > Worksheets in Bill Order**
- **Resource Analysis reports > Bill resource Analysis**
- **Analysis reports > Value Analysis**
- **Check and Review Reports > Pricing Check**
Chapter 11. Post Tender Control

You have established that: Net Rate + Applied Mark Up = Gross Rate

There is a third rate available in Candy called Selling Rate. This is an independent rate in that changes made to the Net Rate and Applied Mark-up will not affect the selling rate. This is the rate that you used to “sell” your tender to the client.

11.1 Selling Rate

Do this:

Click on the Candy button to return to the Job Manager and select the Waste water treatment works job.


Select 1.7 Selling bill of quantities and confirm.

This document layout is added to the Document Manager.
Now open this document **1.7 Selling bill of quantities**

Note the selling rate column on the right side of the document. Having priced a job and applied mark up, selling rates can be established by copying the Gross rate.

Right-click on the selling rate column header and select **Copy selling rates from gross**.

Check the option to **lock selling rates after copy** and click OK… and confirm the message.
Chapter 12. Value Engineering or Re-modelling

The site team can now re-visit each of the worksheets. They can adjust the productions to what they believe will be achieved on site.

Alternatively, they may not even use the resources the estimator originally envisaged using and must therefore adjust the worksheets to reflect how they intend on completing the job. They may obtain cheaper resource and sub contract rates.

We will use an example to demonstrate this.

First do a Trade Totals Display on Net at 3.00/Ltr of Diesel. Notice the net total amount as well as the material total amount before we make changes.

Let’s assume the site team will purchase diesel for 2.50/Litre instead of 3.00/Litre.

12.1 Resource List

Open Resource document 1.4 Utilisation and value – bill quantity

Adjust the diesel rate accordingly and click Calculate

Note that the Diesel allowable decreases from 1474.69 to 1228.91, representing a buying saving of 245.78.
Now do a Trade Totals Display on Net at **2.50/Ltr** of Diesel.

![Trade Totals Display](image)

Original Net Amount – New Net Amount = (277,174.18 – 276,928.40) = 245.78 Saving

Original Material Net Amount – New Material Net Amount = (109,939.69 – 109,693.91) = 245.78 Saving

### 12.2 Bill of Quantities – Net vs. Gross vs. Selling

Now return to the Estimating bills in the document manager and open the document **2.1 Net vs. Gross vs. Selling** in the document manager.

**Do this:**

Open document **2.1 Net vs. Gross vs. Selling**

![Bill of Quantities](image)

Notice that the Net and Gross rates for Items G and H have reduced as these items use the cheaper diesel in their make-up.

Notice the Selling rates remained fixed and the rate difference has increased in relation to the Gross rates.
Chapter 13. Other Candy modules

13.1 Planning
The Planning module is a simple, no-frills, yet powerful critical path networking system designed specifically for the construction industry. It can be used effectively by a novice planner, but has the features and functionality required by experienced and professional planners.

The ability to link the activities with related bill items allows for accurate budget forecast. Combined with the Cashflow module, it assists with analysis and decision making related to project management and project cost control.

A more comprehensive explanation of this functionality can be found in the course notes available for licenced users from their local distributors. (Refer page 7)
13.2 **Link & Forecast**

The Link and Forecast module is a facility for forecasting quantities, values and resources, making use of estimating and valuation information, and the planning time from the program.

Candy has the unique ability to integrate/link the Bill of Quantities and the Program. Items from the Bill of Quantities can be allocated to the activities of a program. Once the link has been established, all the information related the Bill of Quantities can be forecast over time.

A more comprehensive explanation of this functionality can be found in the course notes available for licenced users from their local distributors. (Refer page 7)

13.3 **Cash flow**

Candy Cash Flow models the financial requirements of a construction project so that the cash flow can be optimised.

The lags on payment of invoices to suppliers and subcontractors can be specified, together with predicted escalation on cost and value. Interest rates, retention rules, pre-payments and other factors can be specified to model the cash flow.
13.4 Valuations
Candy Valuations provide continuity between Estimating and the Post Tender commercial control. All the information used to price the tender is immediately available at post-award.

All Post Tender commercial functions can be carried out by site-based staff using the facilities within the Valuations module.

Monthly applications for payment are produced by entering either a cumulative progress quantity or a percentage complete against changed bill items.

Updating the linked Program will provide suggested progress quantities to the bill items each month.

The progress quantity build up can be recorded using measurement sheets. The available progress quantities are Claimed, Paid and Actual, and a number of derived quantities, such as Quantity to Completion, are also provided.
The integration of Estimating/Valuation and Planning enables monthly forecasts of both cost and value to completion to be generated using the unique link between time and money.

A more comprehensive explanation of this functionality can be found in the course notes available for licenced users from their local distributors. (Refer page 7)
13.5 **Subcontract Manager**

Subcontractor progress quantities are controlled through the subcontract bills together with other subcontractor costs, claims, charges, materials on site and variation orders, culminating in Subcontractor valuations and certificates.

It is integrated with the Candy main Bill of Quantities, the Subcontract Adjudicator and Subcontract Liability reporting system.
Cost & Allowable
Link and Forecast can provide a very detailed level and huge amount of information. It is not always possible to generate the cost information to the same level of detail or accuracy.

Candy can summarise bill items and resources into one or more cost codes to produce summaries based on either one or a combination of the cost codes.

The three industry standard approaches to controlling a construction project are catered for, being resource based (with), location (where) and task orientated control (what).

The monthly allowable can be imported into the Cost and Allowable module in order to compare to the monthly costs.

On site, the costs would be collected against the various what, with and where cost codes in each period (when). The costs should be compared back to the allowable for each code on a monthly basis. The costs can be imported from a text file, which should be generated by your company costing system.
Once the Bill of Quantities and the Program have been updated, the remaining allowable can be calculated and spread across the remaining time.

Factors or percentages may be entered against each cost code combination for each reporting period in order to forecast a cost to completion. If a trend is expected to change, future percentage figures may be altered as required.

A more comprehensive explanation of this functionality can be found in the course notes available for licenced users from their local distributors. (Refer page 7)
Chapter 14. Candy User Interface

14.1 Candy menu bar

The Candy screen consists of two basic areas. The Candy menu bar is at the top with the document area below.

Candy button
To select the company and job manager, system settings and to exit the software.

Current Company
Displays the current company you are working in.

Current Job
Displays the current job you are working in.

Software version
Displays the software version installed on the computer.

Application tabs
To select the application, you want to work with.

Application menu
Displays the menus of the application selected.

General menu
Menu for general utilities including telephone list, daily dairies, card games, etc.

Utilities toolbar
Displays general tool buttons for use on all applications.

Application toolbar
Displays tool buttons specific to the application selected. This tool bar changes when a different application tab is selected.

Master
Displays the current master selected. Will display “No Master” if none selected.
14.2 Document navigation

- **Document name**: Displays the name of the document.
- **Split screen buttons**: To display the document either on the top half or bottom half of the screen.
- **Escape**: Escape back to the document manager.
- **Document menus**: Displays the menus available for this document.
- **Document toolbar**: Display tool buttons for larger or smaller screen fonts, line deletion, find & replace, export to Excel and print screen.
- **Select All records button**: Click this button to select all the line records on the screen.
- **Column help**: Displays the help file for the current column.
**Calculation status button**
Displays the current calculation status

**Record selector bar**
The record bar is broken up into record buttons for each activity, which are used for selecting the item record or records

**Bill page indicator**
Displays the current bill page number. Bill page number refers to the number as displayed on the Client’s bill. Can be alphanumeric.

**Document page navigator**
Displays the current document page or sheet.

**Function buttons**
Used to perform common functions such as opening a worksheet, etc.

**Calculation button**
To calculate the Bill after changes were made. A red button indicates that calculation of the program is required. (There is NO auto calculation)

### 14.3 Menus on the documents

The menu functions in Candy are context sensitive, i.e. the relevant functions associated with specific data will be available at the data.

There are four menu selection methods:

- Document menu bar
- Record button right-click menu
- Column right-click menu
- Cell right click menu

**Document menu bar**
Document menus
Each document has a document menu with relevant menu items suited for the type of document.

Dropdown menus
Selecting a menu item will open a dropdown menu with a further set of applicable menus.

Menu help tip
Move the mouse over the help button for a brief explanation of the menu function.

Menu help button
Displays a detailed explanation of the menu function when selected.

Record button right-click menu

Select All records button
To select all records in the program.

Record selector button
To select single records / rows (CTRL+Click to select specific records; SHIFT+Click to select a group of records).

Record right click menu
Once a selection is made, right-click to open the menu with required menu functions.
Column right-click menu

Mouse pointer must be inside the column heading to activate the right-click menu.

Column right-click menu
Displays menu functions applicable to all the highlighted items in the column.

Cell right-click menu

Record cell
Use for data input and/or display for each activity record.

Cell right click menu
Displays menu functions applicable to the highlighted data in the cell.
14.4 Customising the System

The Candy desktop may be configured individually to your requirements. To open and configure the global settings, click on the General menu **Support > System settings** or use the icon on the System tool bar. Once in a job you can right-click on the **Candy button > System settings**.

![System settings](image)

- **Desktop**: Set desktop images and/or calendars to display in the document area.
- **Fonts**: Select the fonts for the screen display. Note report fonts are set when customizing the reports.
- **Interface**: Change the appearance of the Candy screen interface.
- **Document styles**: Set heading colours and styles to display on the screen documents.
- **Folders and paths**: Set the folders and network path for backups and network masters. If Excel is installed on the computer, the executable command can be located here for exporting document information direct into Excel.
- **Number & date formats**: Set number and date styles to display.
- **Keyboard**: Set text input and Enter key direction.
- **Languages**: Set the language file to use (other than English).
- **Job start up**: Set the start tool button document to open immediately when a job is selected.
- **Tool buttons**: Set tool buttons to display in each application toolbar.
- **Macro keys**: Set keyboard shortcuts to activate recorded keystrokes in sequence.
- **ToolBar hotkeys**: Set keyboard short cut commands to activate tool button functions.
14.5 **Keystrokes, Icons and Mouse Functions**

**Mouse Functions**
Note that this table assumes that the mouse buttons are configured for a right-handed user.

<table>
<thead>
<tr>
<th>Mouse action</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left-click</td>
<td>On an Active Document - moves the cursor line to and positions the editing cursor at the mouse pointer. On an Inactive Document - Turns the document Active and acts as above.</td>
</tr>
<tr>
<td>Right-click</td>
<td>On an Active Document calls up the context menu.</td>
</tr>
<tr>
<td>Double Click</td>
<td>Fetch another document, i.e.: Double Click on a Nett Rate calls up the Worksheet.</td>
</tr>
<tr>
<td>Row Record &gt; Left-click</td>
<td>Select a line of data for Dragging and Dropping.</td>
</tr>
<tr>
<td>Row Record &gt; Shift+Left-click</td>
<td>Marks the Start and End of a Range of records for Dragging and Dropping.</td>
</tr>
<tr>
<td>Alt+Left-click</td>
<td>Set an Alternate document.</td>
</tr>
</tbody>
</table>

**Simple Keystrokes**
This is a list of the major Editing and Cursor Movement Keystrokes, with a brief explanation of the function, and the equivalent Icon if available.

<table>
<thead>
<tr>
<th>Keystroke</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shift+Esc(ape)</td>
<td>Returns to the job selector</td>
</tr>
<tr>
<td>Esc(ape)</td>
<td>Returns to the company selector</td>
</tr>
<tr>
<td>Scroll Lock (Ctrl+Tab)</td>
<td>Moves the document currently on top of the pile behind all other documents.</td>
</tr>
<tr>
<td>Ctrl+Insert</td>
<td>Inserts a space at the cursor position</td>
</tr>
<tr>
<td>Ctrl+Del</td>
<td>Deletes the character at the cursor</td>
</tr>
<tr>
<td>Tab</td>
<td>Move the cursor from Field to Field. Shift+Tab jumps backwards.</td>
</tr>
<tr>
<td>Home</td>
<td>Cursor goes to Left Edge of current field.</td>
</tr>
<tr>
<td>Page Up</td>
<td>Cursor to Top line of the Screen, or if already at the top of the screen, scrolls a full screen up.</td>
</tr>
<tr>
<td>Page Down</td>
<td>Cursor to Bottom line of the Screen, or if already at the bottom of the screen, scrolls a full screen down.</td>
</tr>
<tr>
<td>Arrow Left</td>
<td>Move cursor one character to the left.</td>
</tr>
<tr>
<td>Arrow Right</td>
<td>Move cursor one character to the right.</td>
</tr>
<tr>
<td>Arrow Up</td>
<td>Move cursor Up one line.</td>
</tr>
<tr>
<td>Arrow Down</td>
<td>Move cursor Down one line.</td>
</tr>
</tbody>
</table>
Enter normally moves the cursor to the first field of the next line. If the direction for Enter has been set, then the cursor is moved accordingly.

**Combination Keystrokes**
A combination keystroke involves holding down the Ctrl, Alt or Shift key and using another at the same time. These keystrokes will generally perform the same function if used anywhere in the System.

<table>
<thead>
<tr>
<th>Keystroke</th>
<th>Function Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ctrl+Del(ete)</td>
<td>Delete the current Line</td>
</tr>
<tr>
<td>Ctrl+Insert</td>
<td>Insert a Line above the current line</td>
</tr>
<tr>
<td>Ctrl+Page Up</td>
<td>Position the cursor on the very top line of a document</td>
</tr>
<tr>
<td>Ctrl+Page Down</td>
<td>Position the cursor on the very bottom line of a document</td>
</tr>
<tr>
<td>Ctrl+Enter</td>
<td>Split the line at the cursor position</td>
</tr>
<tr>
<td>Ctrl+Backspace</td>
<td>Bring text up from the line below and place it at the cursor position - i.e. un-split</td>
</tr>
<tr>
<td>Ctrl+Left-arrow</td>
<td>Bubble Up - move the current line up</td>
</tr>
<tr>
<td>Ctrl+Right-arrow</td>
<td>Bubble Down - move the current line down</td>
</tr>
<tr>
<td>Ctrl+Up-arrow</td>
<td>Close into a Family, if there is one</td>
</tr>
<tr>
<td>Ctrl+Down-arrow</td>
<td>Open a Family one level</td>
</tr>
<tr>
<td>Shift+Ctrl+Down-arrow</td>
<td>Open All levels in the family</td>
</tr>
<tr>
<td>Ctrl+Space Bar</td>
<td>Open All Families completely</td>
</tr>
<tr>
<td>Shift+Ctrl+Space Bar</td>
<td>Close All Families completely</td>
</tr>
<tr>
<td>Ctrl+R</td>
<td>Pick Up the current Line</td>
</tr>
<tr>
<td>Shift+Ctrl+R (Ctrl+D)</td>
<td>Drop (insert) Lines picked up using Ctrl+R at the current line</td>
</tr>
<tr>
<td>Ctrl+U</td>
<td>Turn current line to UPPERCASE letters</td>
</tr>
<tr>
<td>Ctrl+L</td>
<td>Turn current line to lowercase letters</td>
</tr>
<tr>
<td>Ctrl+T</td>
<td>Turn current word to Proper case</td>
</tr>
<tr>
<td>Ctrl+K</td>
<td>Copy the Field above</td>
</tr>
<tr>
<td>Shift+Ctrl+K</td>
<td>Copy the Word above and position cursor for the next word</td>
</tr>
<tr>
<td>Ctrl+J</td>
<td>Copy the Field above and Jump Down to the line below.</td>
</tr>
<tr>
<td>Ctrl+End</td>
<td>Clear the line from the cursor position to the end of the current field.</td>
</tr>
<tr>
<td>Alt+Del</td>
<td>Close the Top Document</td>
</tr>
<tr>
<td>Shortcut</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Shift+Alt+Del</td>
<td>Close All Documents.</td>
</tr>
<tr>
<td>Ctrl+Z</td>
<td>Usually reinstates the current line. If a mistake is made on a line, Ctrl+Z will re-display the line as it was before the mistake was made. As soon as the cursor is moved off the line, the line is stored and cannot be reinstated.</td>
</tr>
</tbody>
</table>