



# User Manual

ARGUS EstateMaster DF Lite 7.20

November-2019

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**Part**





# 1 Introduction

ARGUS EstateMaster DF Lite is a cash flow model designed for property development feasibility analysis. It calculates investment returns including residual land value, development profit, internal rate of return and net present value based on a comprehensive set of inputs.

The Program can be used to:

- Financially appraise property development and test project feasibility;
- Estimate residual land value for acquisition purposes based on hypothetical development; and
- Estimate the value of land for the purpose of disposal.

ARGUS EstateMaster DF Lite is also suitable, or adaptable, for:

- Full financial feasibility of multi-staged developments or single-staged developments;
- Cost Benefit analysis;
- Valuation tool to calculate a site's residual value based on a hypothetical development; and
- Post-project evaluation.

## 1.1 Program Integrity

Every effort has been made to provide a quality product that is simple, flexible and detailed in its analysis.

The ARGUS EstateMaster DF Lite program has been sealed to safeguard the integrity of the program and formulae. If the seal is broken the validity of the formulae and program calculations cannot be guaranteed any more. Therefore, we recommend that the authors be notified of any problems rather than the user attempting to rectify the problem by removing the protection facility.

To this end any modifications to the ARGUS EstateMaster DF Lite program are prohibited without the express written approval of the authors EstateMaster Pty Ltd.

Also, we cannot guarantee that the program is or will remain error free for every possible input permutation. To retain the integrity of the programs we recommend you audit the models on a regular basis with manual reality checks on the output results.

Furthermore the program assumes certain tax assumptions such as rates of stamp duty. These may change in time and it is important for the user to keep abreast of such changes and know how they effect the model's assumptions.

## 1.2 System Requirements

To install and operate ARGUS EstateMaster DF Lite efficiently, the following is recommended:

- A 64bit PC with a Quad Core CPU (Intel Core i5 / i7) and a clock speed of at least 2.8Ghz (or equivalent).
- Microsoft Windows 8.1 or later -or- Windows Server 2012 or later
- Microsoft .Net Framework 4.6 or higher.
- 8Gb RAM or higher.
- Internet connection (for downloading files and activating licences).

Note to Apple Mac Users: ARGUS EstateMaster DF Lite can only run on Mac's via a Windows Virtualization tool such as VMWare or Parallels.

**Part**

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## 2 Introduction to Development Feasibility Analysis

### 2.1 Development Margin

Before the widespread use of personal computers the traditional approach to development analysis was to:

- Estimate the total development cost for a project in current dollars (non inflated) including interest on 100% borrowings;
- Estimate the sale prices (less selling costs) based on comparable sales or income capitalisation expressed in current dollars;
- Calculate the net profit by subtracting total development cost from revenue; and
- Calculate the development margin by dividing profit by total development cost:

$$\text{Development Margin} = \frac{\text{Net Profit} * 100\%}{\text{Total Development Cost}}$$

Through experience, a 15% to 30% development margin was considered adequate for a project to be viable, although this would vary according to the level of project, financial and market risk.

### 2.2 Time Value of Money

The traditional development method of project appraisal however was recognised to be flawed when one or more of the following factors were involved:

- Inflation and above inflation escalations occurred with costs and sale values;
- Project periods extended beyond two or more years;
- Other medium term investments competed for funds; and
- Costs and sales were staged giving variable cash flow exposures.

The analytical drawback is due to the fact that the traditional approach does not account for the time value of money. Usually, a dollar today is more valuable than a dollar next year. Future cash flows should therefore be reduced (discounted) in value to reflect their current (present) value.

To demonstrate the time value of money, consider the case in which an individual receives a sum of \$1,000 and invests it at a return of 10% per annum compounded in Government Bonds. The \$1,000 will grow to \$1,100 at the end of year 1 and \$1,210 at the end of year 2 and so on. It is assumed that this 10% return represents the best use for the funds at a risk free rate. In this example, the investor should value \$1,100 in a years time or \$1,210 in two years time as equivalent to \$1,000 now (ie. its present value). The reduction of future dollars to its equivalent value in money today is known as discounting. Discounting is the reciprocal of compounding and is expressed in the following formula:

$$PV = \frac{FV}{(1+i)^n}$$

Where:

PV = Present Value;

FV = Future Value (predicted amount);

i = Discount Rate per period of time; and

n = number of periods.

### 2.3 Discounted Cash Flow Analysis

Discounted Cash Flow (DCF) analysis takes into account the time value of money in a much more detailed way than the developer's profit margin by considering the timing of all costs and incomes.

The first requirement of discounted cash flow analysis is to create a tabulation of money and time with cash flow items along one axis and time on the other axis. In other words the same cash items used in the traditional approach (except interest on finance), are tabulated against equal time periods (months, quarters or years) and the values of those cash items are recorded in the time period forecasted. Interest is excluded because it is incorporated in the discount rate as demonstrated above.

The value of all the cash items are then totalled for each time period (with cost items being negative and revenue items being positive) resulting in a net cash flow range through time. This range of net cash flows is discounted to present value. The resultant net present value (NPV) measures the difference between the discounted revenues and the discounted costs. This is the first and perhaps the most important performance indicator. A positive NPV implies the present value of incomes exceeds the present value of costs and the project is therefore feasible.

The other primary indicator is the internal rate of return (IRR). This is the discount rate at which the net present value equals zero. Possibly a better way to understand its meaning is to express it as the maximum interest rate that can be charged to a fully funded project before the project would show a net loss.

## 2.4 Performance Indicators

### Development Margin

Is used as a reflection of profitability and is the percentage return of net profit over total development cost calculated in the following way:

$$\text{Development Margin} = \frac{\text{Net Profit} * 100\%}{\text{Total Development Cost}}$$

Where:

Net Profit = Total Revenue less Total Development Cost; and

Total Development Cost includes all finance and interest charges, land holding and selling costs.

### Net Present Value

Is the sum of the present values of all project cash inflows and outflows over the life of the project. A positive NPV infers an Internal Rate of Return (IRR) greater than the discount rate. Interest on borrowings and interest received on re-investment of surplus funds and equity is ignored since this is incorporated in the discount rate. The formula is:

$$\text{NPV} = \sum_{n=t}^{n=0} \left[ \frac{\text{FV}}{(1 + i)^n} \right]$$

Where:

PV = Present Value;

FV = Future Value (predicted amount);

i = Discount Rate per period of time; and

n = number of periods.

## Internal Rate of Return (IRR)

Is the discount rate at which the sum of the discounted negative cash flows equals the discounted positive cash flows, i.e. the discount rate at which the NPV equals zero. Simplistically the IRR represents the ACTUAL RETURN on funds invested. Interest on borrowings is ignored since this is incorporated in the discount rate.

## 2.5 Discount Rate

Discount Rate (or Target IRR) is simplistically the DESIRED RETURN on funds invested. For discounted cash flow analysis the discount rate is the rate at which future cash flows are discounted to present value. For a development to be feasible the discounted value of future cash flows (Net Present Value) must be greater than zero. A feasible project will have an internal rate of return (FORECAST RETURN) greater than the discount rate (DESIRED RETURN).

A simple and popular method for choosing a discount rate in discounted cash flow analysis is an "Opportunity Cost of Capital" rate, which is given, in the following formula:

Discount Rate = Inflation + Risk Free Rate of Return (Cost of Capital) + Risk Premium

The risk free rate of return or cost of capital reflects the opportunity cost in not proceeding with the development. It may be defined by the current 5-10 year Government Bond rate. Note this includes an expectation of long-term inflation. If a zero inflation model is adopted then a medium term market forecast of inflation should be subtracted from the Government Bond rate to calculate the real risk free rate of return.

### Risk Premium

Risk Premium is the level of discounting over and above the risk free rate (or cost of capital), which reflects the level of risk in the project.

### Weighted Average Cost of Capital

A more sophisticated method of calculating the discount rate is the WACC which is the weighted required rate of return on debt and equity funding. The formula is as follows:

$$\text{WACC} = \frac{D}{(D+E)} * R_D + \frac{E}{(D+E)} * R_E * (1-T_R)$$

Where:

D = Total Debt

E = Total Equity

$R_D$  = Cost of Debt (risk free rate of return plus debt premium based on the credit rating of the company); and

$R_E$  = Cost of Equity (required return on equity)

$T_R$  = Corporate Tax Rate

A popular method of calculating the required return on equity is the capital asset pricing model (CAPM). The formula is:

$$R_E = R_F + \beta * (R_M - R_F)$$

Where:

$R_E$  = expected return on equity;

$R_F$  = risk free rate of return (10 year Commonwealth Bond rate);

$\beta$  = sensitivity of an investment's return to the return on the hypothetical market portfolio of shares;

$R_M$  = expected nominal return on the market portfolio (approximated by the yield on the market portfolio of common equity shares); and

$(R_M - R_F)$  = the market risk premium, or additional return demand by investors for holding risky assets.

## 2.6 Risk Assessment

Risk is usually dealt with in several ways:

- Incorporating a risk premium in the discount rate. This is based on the concept that developers and investors expect higher returns for more risky projects.
- Use of sensitivity testing whereby different low, medium and high values for risky variables are incorporated to test the effects on the performance indicators.
- Application of Scenario Analysis, which records the results from a combination of variations.
- Application of Probability Analysis to produce a probability distribution of outcomes.

The second method has an advantage over the first method since combinations of different values for different risky variables can provide a range of outcomes. However neither method provides a consideration of the probability of those outcomes. Monte Carlo method assigns probability distributions to the risky variables but because of its complexity and limitations this method is not often used in the property development industry.

## 2.7 Residual Land Values

There are two different methods of calculating Residual Land Values in ARGUS EstateMaster DF Lite:

1. Calculated on the target development margin
2. Calculated on the target IRR (discount rate).

Given that the two methods are based on different principals and methods of calculation, they will most likely result in different values for the same development project. Sometimes the difference is minor, and a common practice would be to round the result for the indicative land value. However, the following question arises when the differences are quite significant – Which RLV do we use? The question is critical, not only for land acquisition purposes, but also for valuations.

### RLV on Target Development Margin

The RLV on the Target Development Margin is the maximum price for the land that the developer would pay to make the calculated development margin equal the target hurdle rate. The target hurdle rate is essentially the developer's required return for the project, also referred to as a 'Profit and Risk Factor'. The Development Margin has been the traditional method of development feasibility analysis in the past and is beneficial for short term projects. However it does have its shortcomings – it does not account for the time value of money and its results can be misleading for projects that extended beyond two or more years. Two projects may have the same net profit, but due to differences in the timing of cash inflows and outflows, one project may be realising its profit earlier than the other. Therefore, if you take into account the old adage "a bird in the hand is worth two in the bush", then even though the projects have the same profit, a prudent developer/investor would choose the project that achieves its profit earlier.

### RLV on Target IRR (Discount Rate)

The RLV on the Discount Rate (Target IRR) is the maximum price for the land that the developer would pay to make the calculated IRR equal the target hurdle rate or their Net Present Value (NPV) equal zero. Unlike the Development Margin, the IRR takes into account the dimension of time in its calculation and is used to differentiate projects of different cash flow exposures. It is more effective for longer term projects of more than 2 years, as it can be quite sensitive to small movements in time for short term projects. By adopting a suitable discount rate (Target IRR), the cash inflows and outflows are

discounted to determine their present value and then added together to form a Net Present Value for ease of comparison between other projects of dissimilar timings.

### Hurdle Rates

After taking into consideration the duration of the project to determine which RLV calculation to adopt, another important factor is the actual hurdle rate that is applied for the Target Development Margin and Target IRR. These targets must be accurate and realistic, in particular the Target IRR which is sensitive to not only costs and revenues, but also time. Quite simply, if a higher return is required (and thus a higher hurdle rate is adopted), the RLV function will indicate that you would have to pay less for the land to achieve that target, and vice versa. Failure to adopt the correct hurdle rate, could result in miscalculation of the land value and subsequently an incorrect land acquisition cost.

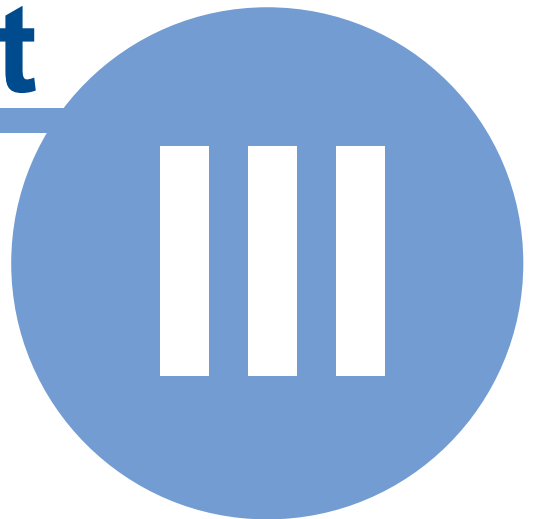
So in summary, things to consider when adopting a RLV:

- The RLV based on the Development Margin is suitable for projects of approximately 2 years or less.
- The RLV based on the IRR/NPV is suitable for longer term projects of approximately 2 years or more.
- Ensure that accurate hurdle rates are applied.
- If applying the RLV on IRR/NPV, ensure that the correct annual to rest period conversion is applied.



# Part

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## 3 Starting the Application

### 3.1 The Application Launchpad

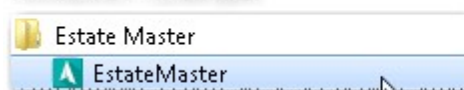
The entire ARGUS EstateMaster software suite now operates from a central launcher that is loaded from a single shortcut within Windows:

- Once loaded, you can select your installed applications, and it will display a list of files recently opened and saved by the user.
- There are also shortcuts to our extensive Sample File Library, Operations Manual and Training Courses Booking page on our website.
- For those applications not yet installed on the machine, there is information to learn more about them and even links to downloading a free trial .
- Live web content at the bottom also displays frequently updated update alerts, important news and other items of interest, such as the release of new training courses or tutorial videos.

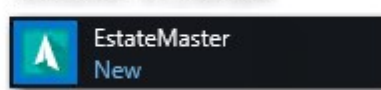
#### Starting ARGUS EstateMaster

1. In Windows go to the [Start] → [Programs] → [EstateMaster] → and click on 'EstateMaster'

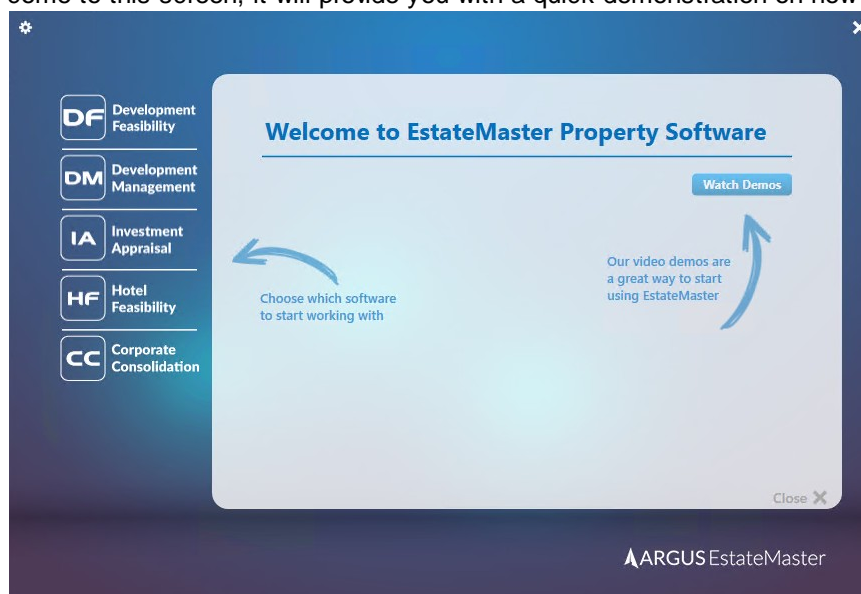
Windows 7 Example



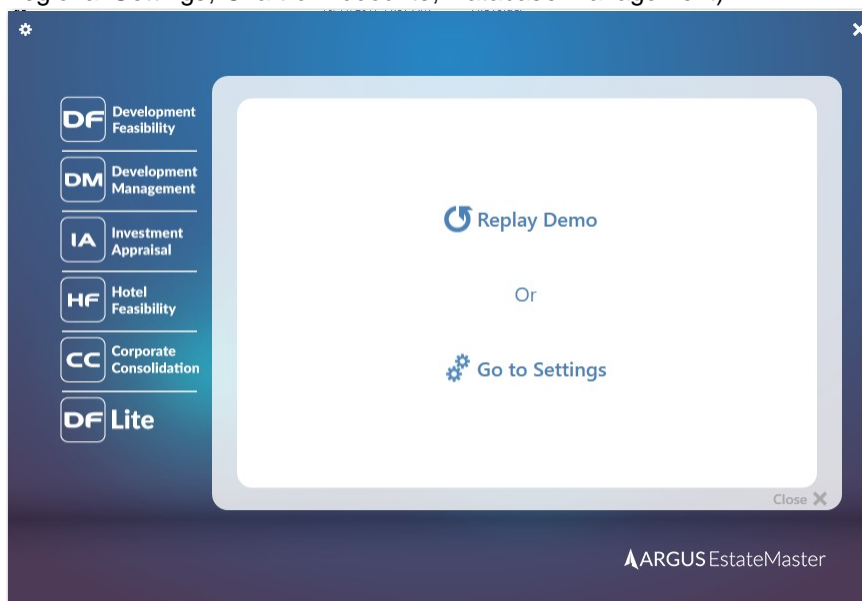
Windows 10 Example



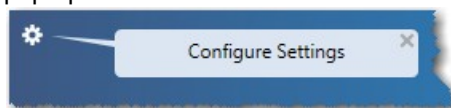
2. The ARGUS EstateMaster Application Launchpad will appear. If this is the first time you have come to this screen, it will provide you with a quick demonstration on how it works.



3. At the end of the demonstration, it will prompt you to replay the demo or go to the Settings (e.g. Regional Settings, Chart of Accounts, Database Management).



4. If you elect to do neither and press the [Close X] at the bottom right:
  - a. The demo will not appear again for that user (it will appear for other users that start the Application Launchpad on that machine)
  - b. A small pop-up reminder will appear to configure your settings. This will stop appearing either once the regional settings are set, or the user presses [X] in the pop-up.



## 3.2 Regional Settings

The Regional Settings wizard is a helpful tool to control common settings across all products in the ARGUS EstateMaster suite, including currency, taxation, stamp duty / land transfer taxes, etc. Once set, any new ARGUS EstateMaster file started will adopt these settings, saving you time in configuring files for your region. It is only compatible for the following versions:

- DF/DF Lite/DM: ver 6.10 and above.
- IA: ver 3.33 and above.
- HF: ver 2.10 and above.

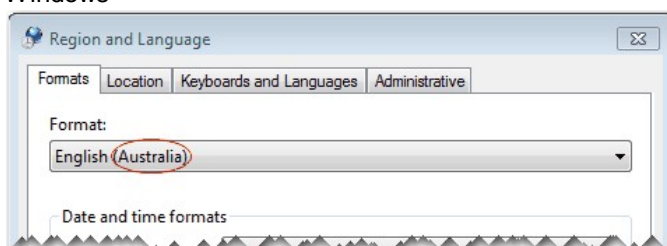
To set the Regional Settings:

1. Either click on the [Go to Settings] link at the end of the initial Application Launchpad demo, or click on the gear icon at the top-left of the Application Launchpad.



2. Using the 'Country' drop-down list, select the country/region where your projects will be *mainly* located in. If you work on projects in many countries/regions, just choose the most common one (you can edit these settings on a file-by-file basis later)

**Note:** The country setting automatically defaults to the 'Region and Language' Format setting in Windows



3. Default settings will be loaded for that country, and you can adjust/override them if required. At any point in time, you can reset any manual overrides back to their defaults by pressing the [Reset] button.
4. Once the settings have been defined, press [OK], and it will save them on the active machine.
5. From that point onwards, any *\*new\** file started in any ARGUS EstateMaster application on that machine will adopt these settings. It will not apply these settings when:
  - a. An existing file is 'Opened'
  - b. A template is opened from the 'New File from Template' option (settings applied within the Template take precedence)
6. Once a new file is started, you are able to adjust any of these settings on a file-by-file basis, just by go to the application's Preferences and changing the related setting there.

## Sharing Regional Settings with other Users

Since these settings are machine-specific, you may want to share these settings with other ARGUS EstateMaster users in your organisation. To do so:

1. Ensure you have set and saved the settings you desire. It is advised you start an ARGUS EstateMaster application to ensure the settings are behaving as desired.

2. Close the Welcome screen.
3. Browse to the following directory on the machine: "C:\Program Files\Estate Master" (or "C:\Program Files (x86)\Estate Master" on a 64-bit OS)
4. Copy the file *RegionalSettings.ini*
5. Send it to other ARGUS EstateMaster users, with the instruction to place it in the same folder on their machine (overwrite any existing file if it exists)

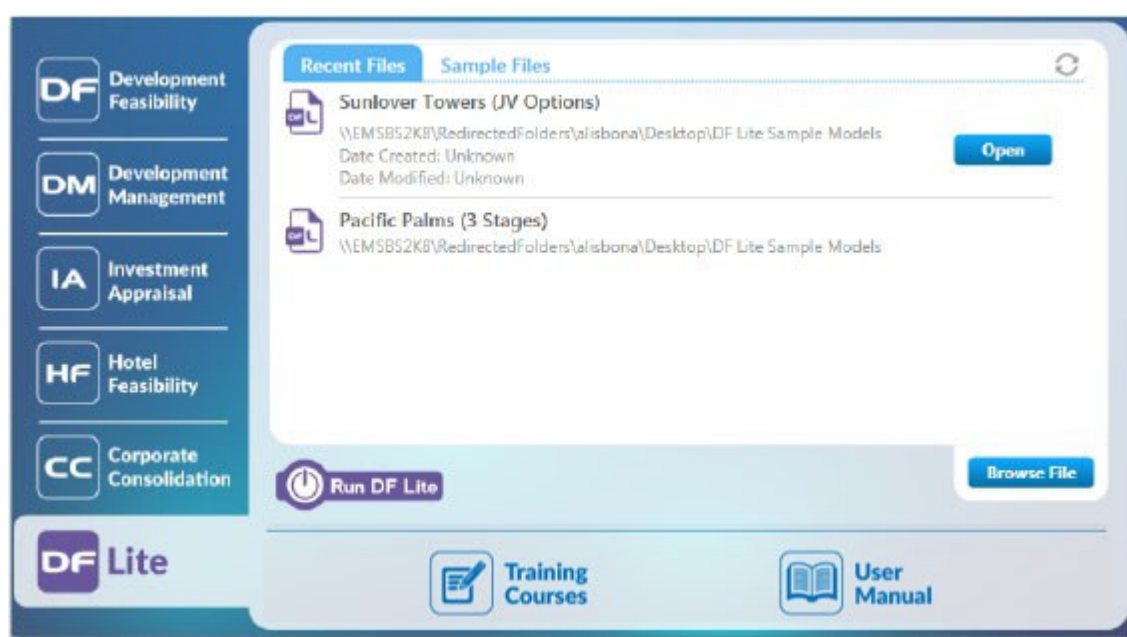
### 3.3 Product Tabs

The tabs for each EstateMaster product will display different information, depending on whether it is installed on the active machine or not. To customise the experience for each user, each time the Application Launchpad is started, it will always revert to the last tab selected by that user on that machine.

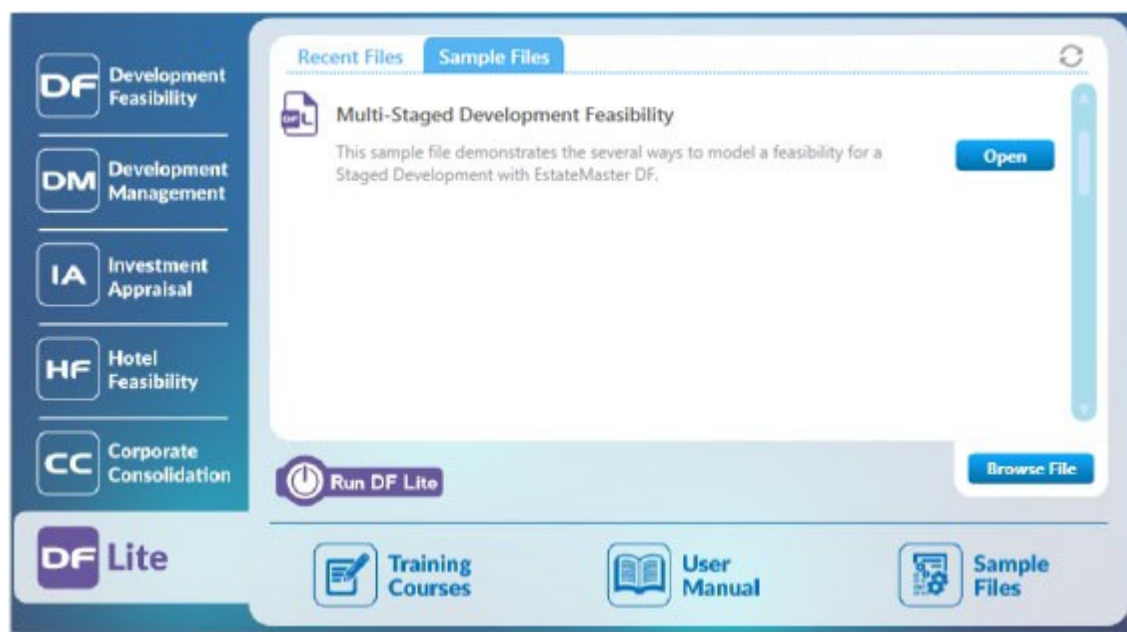
#### Software is Installed

When the software is installed on the active machine, the following will be displayed on the product tab:

- A list of 'Recent Files' opened or saved by the active user (a list is stored for each user on the machine). To open one of these files, either double-click on it, or select it to expand the file details and then click the [Open] button.
- A list of 'Sample Files' provided by EstateMaster to demonstrate the use of the software in different scenarios. These are automatically sourced from our online Sample Files Library, so an internet connection is required for them to appear on the Application Launchpad and always be up-to-date with the latest samples.
- A [Browse] button to manually search for and open an ARGUS EstateMaster DF Lite file .
- A [Run] button to start the ARGUS EstateMaster DF Lite application with a blank new file.
- Links to view the Training Course online booking site and open the User Manual (PDF).



Recent Files List



Sample Files List

### Software is not Installed

When the software is not installed on the active machine, the ARGUS EstateMaster DF Lite is not shown.




**Part**

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**IV**

## 4 Navigation





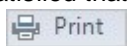
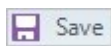
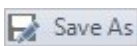
### 4.1 Quick Start

1. Run the ARGUS EstateMaster DF Lite program from the ARGUS EstateMaster [Application Launchpad](#).
2. Open an existing ARGUS EstateMaster DF Lite data file  (\*.emdf) using the [File] → [Open] command , or start inputting data to create a new data file.
3. Enter preliminary data into 'Intro' sheet, such as Project Name, Address, etc. Please note that many of the fields on this sheet are mandatory, and you will not be able to save a file if they haven't been entered.
4. Set [Preferences](#) by running the 'Preferences' function  from the [Ribbon Menu](#) (or by pressing [F12]).
5. Navigate around the program by selecting the relevant worksheet tabs.



6. Enter data into input cells with a font colour of **blue** or **purple**. Fixed cells (non input) have a **black** font colour. The worksheets are locked, so the program will only allow you to enter data into the relevant input cells.

Input Cells
<p><b>Blue Font Cells:</b> Cells with blue font are the main input cells in the program.</p> <p><b>Green Font Cells:</b> Cells with green font relate to presales and are not relevant if you are not taking presales into account.</p> <p><b>Purple Font Cells:</b> Cells with purple font relate to inputs that are entered via a list selector. When selecting the cell, a drop-down arrow will appear. Click the arrow and a list of options for that input cell will be displayed.</p>

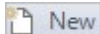
7. Check for any data input issues, such as input cells with red backgrounds  or error warnings . This indicates that the wrong type of data has been entered (e.g. text in a number field) or the value is not allowed (e.g. a negative value in a positive-only field). Run on the [Validate](#) function  on the [Ribbon Menu](#) to check for other issues, such as Circular References.
8. When data input is complete, you may run the Residual Land Value Analysis or Sensitivity Analysis by clicking on the  button on the relevant worksheets.
9. When you are satisfied that the information has been entered correctly you may select the [Printing Options](#)  on the [Ribbon Menu](#) to print the reports.
10. Save your changes using the [File] → [Save/Save As] command   on the [Ribbon Menu](#).

### 4.2 Opening and Closing Files

#### Opening a New ARGUS EstateMaster DF Lite Data File



1. Click [Run] in the ARGUS EstateMaster DF Lite tab of the Application Launchpad.

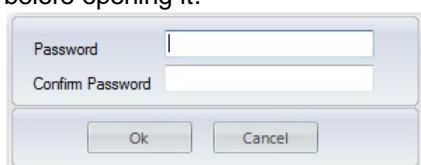


2. Use the [New] command  to load a new blank workbook window.

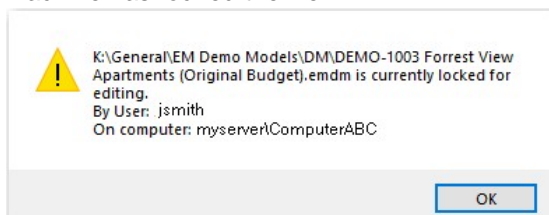
Note: You can open up to 4 new workbook windows in the ARGUS EstateMaster DF Lite application.

## Opening an Existing ARGUS EstateMaster DF Lite Data File

1. Open an existing ARGUS EstateMaster DF Lite data file ( \*.emdf) either by:
  - a) Double-click a file in the 'Recent Files' list or click [Browse] to find another file, in the ARGUS EstateMaster DF Lite tab of the Application Launchpad.
  - b) Using the [Open] command  to browse to and open the file.
  - c) Browsing Windows Explorer and double-clicking on a data file  to open it.
2. If the file was previously saved with a password, then it will prompt you to enter the password before opening it.



3. If the file is open by another user, a message will be displayed indicating which user on which machine has locked the file.



Note: You can open up to 4 new workbook windows in the ARGUS EstateMaster DF Lite application.

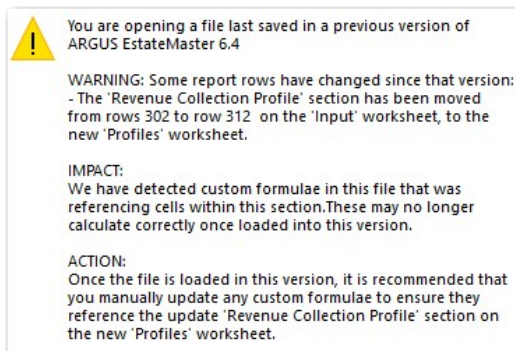
### Opening Previous Versions (6.6 and above)

As part of software upgrades, the base ARGUS EstateMaster DF Lite template may sometimes incorporate the following changes:

- Rows inserted or deleted.
- Columns inserted or deleted.
- Input fields moved (moved on the same worksheet tab, or a different one).
- Input fields 'split' into multiple input fields.
- Worksheets inserted, renamed or deleted.

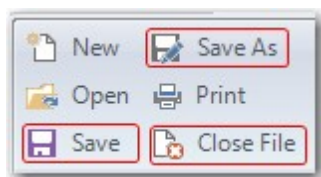
These changes to the template may impact on the integrity of any custom formulae that the you have entered into input fields or custom worksheets (inserted or externally linked) in previous version data files. To minimise the impact of such upgrades, during the file 'Open' process, the ARGUS EstateMaster DF Lite application will attempt to update your custom formulae to reflect such changes.

If for some reason, the application is unable to automatically update your custom formulae, a warning such as this may appear, prompting you to manually update the file after it has opened.

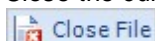


### Saving and Closing an ARGUS EstateMaster DF Lite Data File

1. After using the program, save the file if required by one of many different buttons on the Toolbar.



2. Please note that some of the fields on the 'Intro' and 'Input' sheets are mandatory, and you will not be able to save a file if they haven't been entered.
3. If you have elected to save files with a password in the [application settings](#), then it will prompt you to enter the password and confirm it before saving.
4. Close the currently active ARGUS EstateMaster DF Lite file by using the [Close File] command



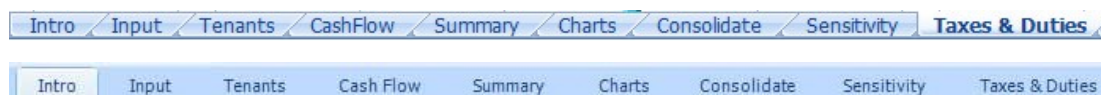
### Exiting from ARGUS EstateMaster DF Lite

1. When finished, close the application either by:
  - a) clicking on [X] in the top right corner of the application window,
  - b) double clicking the ARGUS EstateMaster DF Lite icon in the top left corner or

- c) selecting [Exit] from the Application Menu.

## 4.3 Navigation

The ARGUS EstateMaster DF Lite program is subdivided into a series of worksheets. To navigate around the ARGUS EstateMaster DF Lite program, click on the relevant worksheet tabs (below or above workbook area).



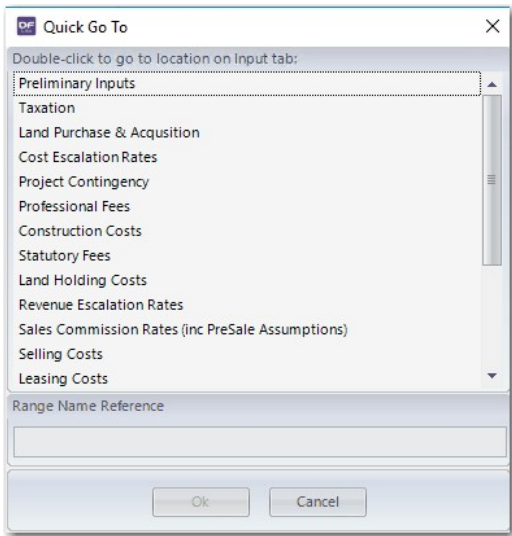
<b>Intro</b>	Introduction page. Enter project name and other details.
<b>Input</b>	Primary data input sheet. This is where the majority of assumptions regarding costs and revenues are entered. The Gantt chart for viewing project timeline is also generated on this sheet.
<b>Tenants</b>	Tenancy Schedule input sheet: rents, leasing costs and incentives, capitalisation rates, etc.
<b>Cash Flow</b>	Contains the detailed cash flow outputs. This is where optional manual cash flow inputs can also be entered.
<b>Summary</b>	The development financial summary sheets for the developer.
<b>Charts</b>	Project cash flow charts for the developer and charts for the Consolidation of Stages or Comparison of Options.
<b>Consolidate</b>	Consolidates or compares up to 8 different stages or options that have been stored.
<b>Sensitivity</b>	The tables and charts from the Sensitivity Analysis.
<b>Taxes &amp; Duties</b>	The adjustable stamp duty and lax tax calculation tables.

### Quick Go To


To assist with navigating to specific input and reporting areas of the ARGUS EstateMaster DF Lite program, a Quick Go To navigation tool is provided via the F5 keyboard shortcut.

The Quick Go To dialog will allow you to:

- Go to one of the defined input or reporting areas that exist in the active tab, just by double-clicking an item in the list, or selecting it and pressing [OK]
- Go to a defined range name in the application, by entering its name in the 'Range Name Reference' field, and press [OK]. This is helpful if you wish to navigate to a range (visible ones only) that is being referenced in a formula.



**Navigating to Related Input Assumptions from Reports**

When reviewing some reports in ARGUS EstateMaster DF Lite, you may want to quickly revert to the input assumptions related to an output or set of outputs on the report. To do so, simply click on the  arrow next to the related report output, and you will be taken to the specific worksheet tab and input section / input field.



## 4.4 Keyboard Shortcuts

The following are some keyboard shortcuts to assist in navigation, data entry and working with cells and worksheets.

### Files

<b>Ctrl + N</b>	Start a new file
<b>Ctrl + O</b>	Open an existing data file
<b>Ctrl + S</b>	Save the current model to a data file
<b>Ctrl + W</b>	Close the application
<b>Ctrl + P</b>	Load the printing menu

### Navigation

<b>Page Down / Page Up</b>	Move one screen down / one screen up in a worksheet
<b>Tab / Shift+Tab</b>	Move one cell to the right / to the left in a worksheet
<b>Ctrl+Arrow Keys</b>	Move to the edge of next data region (cells that contains data)
<b>Home</b>	Move to the beginning of a row in a worksheet
<b>Ctrl+Home</b>	Move to the beginning of a worksheet
<b>End</b>	Move to the end of a row in a worksheet
<b>Ctrl+End</b>	Move to the last cell with content on a worksheet
<b>Ctrl+f</b>	Display the Find and Replace dialog box
<b>F5</b>	Display the 'Go To' dialog box to navigate to defined range names

### Working with Cells

<b>Shift+Space</b>	Select the entire row
<b>Ctrl+Space</b>	Select the entire column
<b>Shift+Arrow Keys</b>	Extend the selection by one cell
<b>Ctrl+Shift+Arrow Key</b>	Extend the selection to the last cell with content in row or column
<b>Shift+Page Down / Shift+Page Up</b>	Extend the selection down one screen /up one screen
<b>Shift+Home</b>	Extend the selection to the beginning of the row
<b>Ctrl+Shift+Home</b>	Extend the selection to the beginning of the worksheet
<b>Ctrl+Shift+End</b>	Extend the selection to the last used cell on the worksheet (lower-right corner)

### Insert and Edit Data

<b>Ctrl+z</b>	Undo last action (on the active worksheet)
<b>Ctrl+y</b>	Redo last action (on the active worksheet)
<b>Ctrl-c</b>	Copy contents of selected cells
<b>Ctrl+x</b>	Cut contents of selected cells (custom worksheets only)
<b>Ctrl-v</b>	<ul style="list-style-type: none"> <li>On standard worksheets: Paste 'Values' from clipboard into selected cell</li> <li>On custom worksheets: Paste 'Formulae and Formatting' from clipboard into selected cell</li> </ul>
<b>F2</b>	Edit the active cell with cursor at end of the line
<b>Alt+Enter</b>	Start a new line in the same cell
<b>Enter</b>	Complete a cell entry and move down in the selection
<b>Shift+Enter</b>	Complete a cell entry and move up in the selection
<b>Tab / Shift+Tab</b>	Complete a cell entry and move to the right / to the left in the selection
<b>Ctrl+d</b>	Fill complete cell down (copy above cell)
<b>Ctrl+r</b>	Fill complete cell to the right (copy cell from the left)

### Formatting (Custom Worksheets only)

<b>Ctrl+b</b>	Apply or remove bold formatting
<b>Ctrl+i</b>	Apply or remove italic formatting
<b>Ctrl+u</b>	Apply or remove an underline

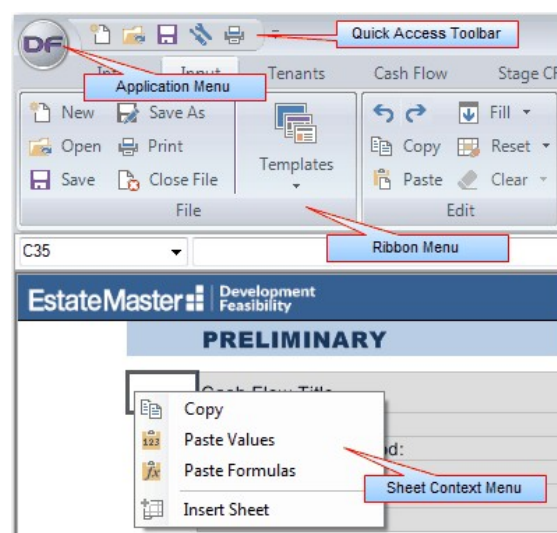
## Other

<b>F1</b>	Load the ARGUS EstateMaster DF Lite Help File
<b>F12</b>	Load the ARGUS EstateMaster DF Lite Preferences Form

## 4.5 Menus and Toolbars

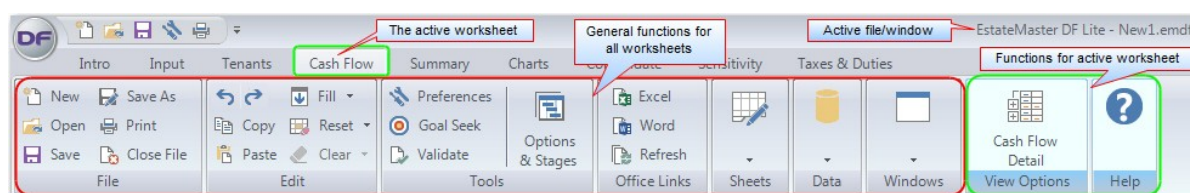
There are 4 main menus and toolbars in the ARGUS EstateMaster DF Lite application for the user:

1. The Ribbon Menu
2. The Quick Access Toolbar
3. The Application Menu
4. Sheet Context Menus



### 4.5.1 Ribbon Menu

The Ribbon Menu is located at the top of the application window and provides the user with the functions available in the program, and in particular, the functions related to specific sheets.



The Ribbon Menu has 2 definable parts:

1. Functions that apply to all worksheets:
  - These are common functions that can be used on all worksheet and are replicated on all worksheet tabs.
  - If any of these functions are greyed-out (disabled), then they are not applicable to the active worksheet.
2. Functions that apply to the currently selected worksheet:
  - These appear when a different tab/worksheet is selected.
  - They are identified by an aqua coloured menu button.

## File Menu

<b>New</b>	Opens a ARGUS EstateMaster DF Lite blank workbook in a new window..
<b>Open</b>	Prompts the user to opens an existing ARGUS EstateMaster DF Lite data file (*.emdff) in a new window.
<b>Save</b>	Saves the current ARGUS EstateMaster DF Lite model to a data file.
<b>Save As</b>	Saves the current ARGUS EstateMaster DF Lite model to a data file with a new file name.
<b>Print</b>	Loads the ARGUS EstateMaster DF Lite Print Menu to allow the user to select what reports to print.
<b>Close File</b>	Closes the current ARGUS EstateMaster DF Lite model window.

## Edit Menu

<b>Undo</b>	Undo the last action.
<b>Redo</b>	Redo the last action.
<b>Copy</b>	Copy the select range to the clipboard.
<b>Paste</b>	Pastes the contents of the clipboard into the selected range. When the active sheet is standard sheet, then only values are pasted.
<b>Fill</b>	There are 3 options in this menu: <ol style="list-style-type: none"> <li>1. Fill Down: Copies the top cell of a selected range downwards.</li> <li>2. Fill Right: Copies the left cell of a selected range rightwards.</li> <li>3. Fill Series: Fills a series in a selected range based on a particular sequence of data.</li> </ol>
<b>Reset</b>	This will clear all the inputs in the standard worksheets to the default. It will not remove user-inserted worksheets.  In addition, it allows the user to reset to default or manual variations in interest rates, drawdowns or repayments and variable discount rate inputs made on the Cash Flow sheet.
<b>Clear *</b>	There are 3 options in this menu: <ol style="list-style-type: none"> <li>1. Clear All: Clears cell contents and formatting from the select range of cells.</li> <li>2. Clear Formats: Clears cell formatting only from the select range of cells.</li> <li>3. Clear Contents: Clears cell contents only from the select range of cells.</li> </ol>

\* These options are only available in user-inserted custom w orksheets.

## Tools Menu

<b>Preferences</b>	Opens the form for the user to select their data <a href="#">Preferences</a> . These should be set before any data is entered but can be changed at any time.
<b>Goal Seek</b>	This is an analysis feature that finds the value for a selected cell that would produce a given result from a calculation. Refer to ' <a href="#">Goal Seek</a> ' section for more information.
<b>Validate</b>	Runs the Data Validation process to check for data integrity issues (e.g. such as Circular References) caused by user's inputs.

**Options & Stages** Runs the [Store/Recall function](#). Store the current set of inputs as one of the available 'options/stages' in the program for comparison or consolidation purposes. Recall one of the 'options/stages' in the program back into the main input sheet for editing.

## Office Links Menu

**Excel** Loads the dialog where you can create and edit links to external Excel files.

**Word** Loads the dialog where you can create and edit links to external Word files.

**Refresh** Updates the values for all linked Excel and Word files.

## Sheets Menu

**Add** Add a custom worksheet to the workbook.

**Rename** Rename the currently selected custom worksheet.

**Delete** Delete the currently selected custom worksheet.

**Move** Rearrange the order of the custom worksheets.

**Hide/Unhide** Change the visibility of the custom worksheets.

**Tab Colour** Change the tab colour of the custom worksheets from the default.

**Protect / Unprotect** Protect or unprotect the selected worksheet. When protecting, you will be prompted to enter in a password. If this is left blank, the the worksheet will still be protected, but with no password.)

## Data Menu

**Export to Excel** [Export the entire file to Excel](#), either as a standalone file or appended to an existing file.

## Windows Menu

**Zoom** Allows the user to set the zoom of the worksheets with the following options:


- **Default Zoom (Active Sheet):** Resets the active sheet to the default zoom. The 'default zoom' is determined by the monitor size and resolution settings of the PC/Server running the application.
- **Default Zoom (All Sheets):** Resets all worksheets to their default zoom.
- **Custom Zoom:** Allows the user to set their own zoom for the active worksheet. These settings are saved to the PC/Server that the ARGUS EstateMaster DF Lite is installed on and will apply to all users running the application from that PC/Server.

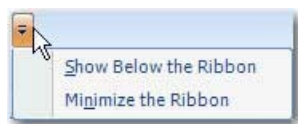
**Cascade / Tile / Minimize** Allows the user to change the layout of the windows.

**File Listing** Displays a list of ARGUS EstateMaster DF Lite files that are currently open and the user can switch to.



## Customising the Ribbon Menu

- **To minimise the Ribbon:** Click on the arrow icon  and select [Minimize the Ribbon], or double click on any of the menu tabs.



Once the Ribbon is minimised, it will only pop up when one of the tabs is selected, then hide again when deselected.

### 4.5.2 Quick Access Toolbar

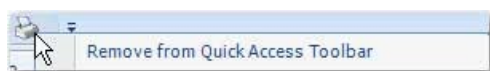
The Quick Access Toolbar is located in the top-left corner of the application window and provides the user with shortcuts to the various functions available in the program.



By default, there are 5 functions that can be operated from this toolbar, however any button on the Ribbon menu can be added to it.

## Customising the Quick Access Toolbar

- **To remove an item from the Toolbar:** Right click the icon and select [Remove from Quick Access Toolbar]



- **To add an item to the Toolbar:** Right click the icon in the Ribbon and select [Add to Quick Access Toolbar]



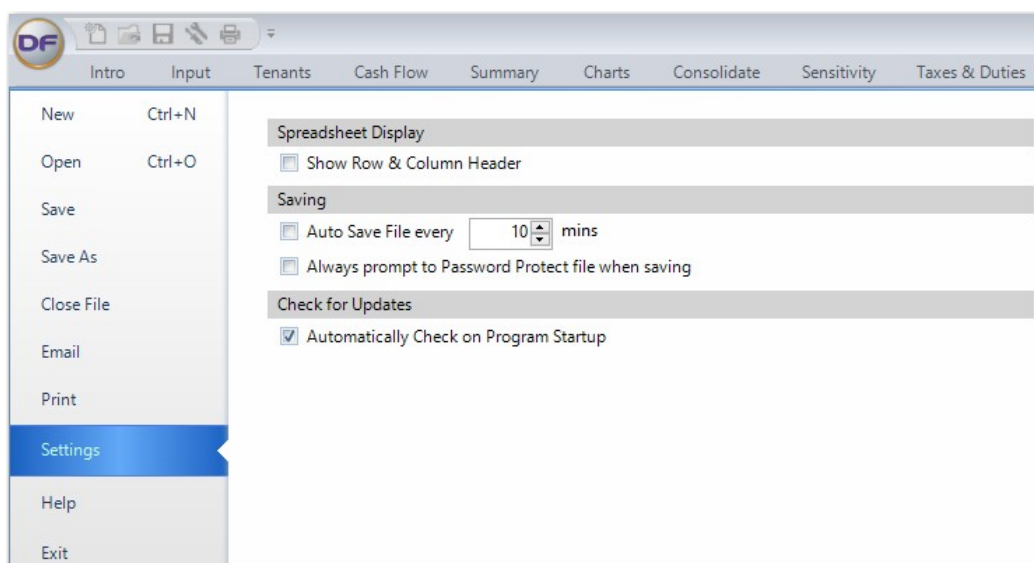
- **To move the Toolbar below or above the Ribbon:** Click on the arrow icon  and select [Show Below/Above the Ribbon]



### 4.5.3 Application Menu

The Application Menu is located in the top-left corner of the application window (indicated by the ARGUS EstateMaster DF Lite icon) and provides the user with access to the various File functions available in the program, as well as the application settings and the Help features.

## Settings



**Spreadsheet Display** Hide or show the row and column headers on the standard worksheets. For custom worksheets, you can use the [context menu](#) to toggle the row and column headers on each one.

## Saving

### Auto Save

Set the software to automatically save the active file every X minutes (minimum 5mins).

- If there are multiple ARGUS EstateMaster DF Lite files open in the application, the auto-save only applies to the file that is currently active.
- If the user is performing a time-consuming task in the application (which coincides with a scheduled auto-save), the auto-save in that instance may be skipped.

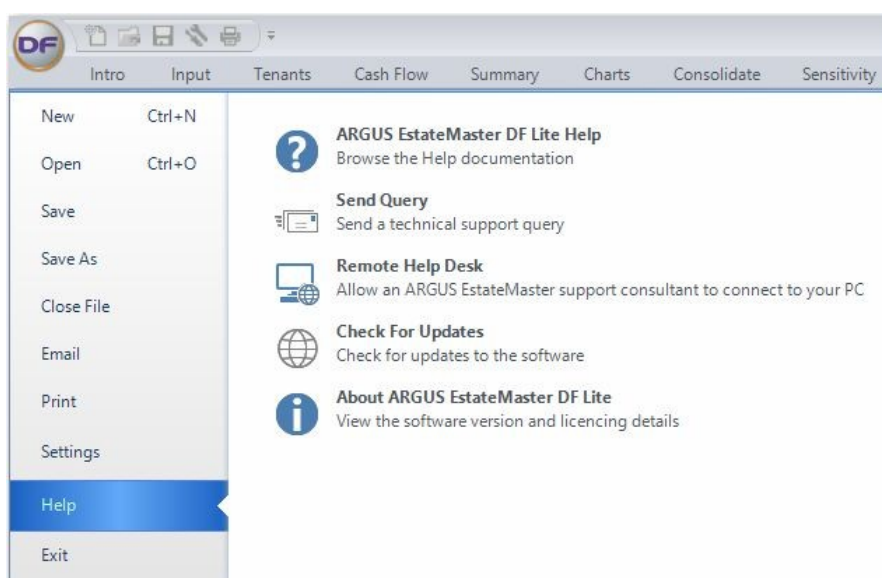
### Save with Password

Select this option to always prompt the user to password protect data files when saving.

## Check for Updates

Set the software to automatically check for updates over the internet every time it is started or not.

## Help



**ARGUS EstateMaster DF Lite Help** Opens the ARGUS EstateMaster DF Lite Help program.

**Send Query** Send a technical support query via email/internet

**Remote Help Desk** Allow an ARGUS EstateMaster Support Officer to remotely connect to your PC/Server for troubleshooting and assistance. You must contact an ARGUS EstateMaster Support Officer before attempting any connection (Powered by TeamViewer).

**Check for Updates** Check the latest version of the software online (requires internet connection).

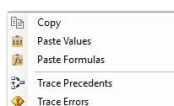
**About ARGUS EstateMaster DF Lite** Allows the user to view the current licence details and re-register an existing licence. It also lists what 'Integration Modules' are enabled for the current licence.

#### 4.5.4 Sheet Context Menus

Context Menus pop up when clicking an item on the worksheet area, offering a list of options which vary depending on the item selected. These menus are invoked with a right-click of a mouse.

##### Standard Sheets

The context menu on the Standard sheets is invoked by right-clicking a cell, row or column.



**Copy** Copies the currently selected range of cells to the clipboard.

**Paste Values** Pastes the content of the clipboard (values only, not formulas or formatting) in the currently selected range.

**Paste Formulas** Pastes the content of the clipboard (formulas only, no formatting) in the currently selected range.

**Insert Comment** Prompts the user to enter a comment in the active cell. It is only enabled when certain cells are selected. Refer to [Inputting Data](#) for more information about Cell Comments.

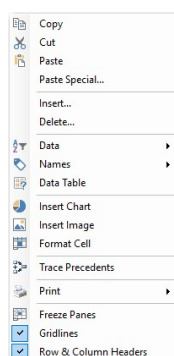
**Trace Precedents** Traces cells/ranges that provide data to the formula (precedents) of the active cell. It is only enabled if the active cell contains a formula. Refer to [Formula Auditing](#) for more information about Tracing Precedents.

**Trace Errors** Traces the potential source of an error in a formula. It is only enabled if the active cell contains a formula which equates to an error. Refer to

[Formula Auditing](#) for more information about Tracing Errors.

## User Inserted Sheets

The context menu on the User Inserted sheets is invoked by right-clicking a cell, row or column.



### Copy

Copies the currently selected range of cells to the clipboard.

### Cut

Cuts the currently selected range of cells to the clipboard.

### Paste

Pastes the content of the clipboard in the currently selected range. When the active sheet is a standard sheet, then only values are pasted.

### Paste Special

Allows the user to select what content from the clipboard (values, formatting, comments, etc) to paste in the currently selected range.

### Insert ...

Inserts a column or row next to the currently selected range.

### Delete ...

Deletes the currently selected column or row.

### Data

**Sort Ascending/Descending:** Sorts the selected cells vertically. If there are multiple columns selected in the range, the user will be prompted to select which column to sort by.

**Apply Auto-Filter:** Applies an auto-filter to the selected range. If an Auto-Filter already exists on the active sheet, then a 'Remove Filter' option will be available.

**Group/Ungroup:** Group selected data by rows and columns using 'outlines'.

**Clear Outline:** Clears all the outlines (groupings) on the active worksheet.

### Names

**Define:** Define a local range name for the currently selected cells.

**Edit:** Edit or delete existing range names on the user-inserted sheet.

### Data Table

Insert a one-variable or two-variable data table that evaluates changing variables in a single formula. It is used for developing simple 'what-if' scenarios. It is set up similar to how Data Tables are configured in Microsoft Excel ([online tutorial](#))

Note: When a Data Table is inserted, it will calculate in 'Semi Automatic' mode to ensure that all other background calculations are not adversely impacted. This means that a Data Table will not automatically calculate if a dependent variable changes; any time you require the results in the Data Table to be updated/refresh, you will need to press the F9 button.

### Insert Chart

Insert a chart on the worksheet.

### Insert Image

Insert an image (\*.jpg, \*.jpeg or \*.bmp) on the worksheet.

### Format Cell

Change the format of the currently selected range, including number format, font, borders, colour, conditional formats, etc.

### Trace Precedents

Traces cells/ranges that provide data to the formula (precedents) of the active cell. It is only enabled if the active cell contains a formula. Refer to [Formula Auditing](#) for more information about Tracing Precedents.

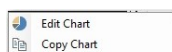
### Trace Errors

Traces the potential source of an error in a formula. It is only enabled if the active cell contains a formula which equates to an error. Refer to [Formula Auditing](#) for more information about Tracing Errors.

<b>Print</b>	<p><b>Set Print Area:</b> Define what part of the worksheet to print by setting the currently selected range as the 'Print</p> <p><b>Page Setup:</b> Change the settings for how the page is to be printed, such as orientation, zoom, margins, headers, footers, etc.</p> <p><b>Print:</b> Print the active user-inserted sheet.</p>
<b>Freeze / Unfreeze Panes</b>	Freeze panes at the selected row, column or cell, or unfreeze (clear) panes on the active sheet.
<b>Gridlines</b>	Toggle the gridlines on the active sheet.
<b>Row &amp; Column Headers</b>	Toggle the row and column headers on the active sheet.

## Charts

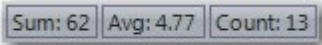
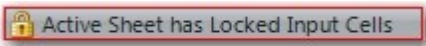
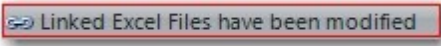
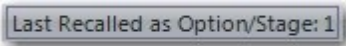
If you are right-clicking on any Chart, either on a Standard or custom sheet, you will be given the following options:



<b>Edit Chart</b>	(Charts on custom sheets only) To edit the chart settings, including the source data, chart type, format, etc, either double click the chart or right-click on it and select 'Edit Chart' to load the Chart Explorer dialog.
<b>Copy Chart</b>	Copies the selected chart to the clipboard as an image, so it can be pasted in other documents.

## 4.6 Status Bar

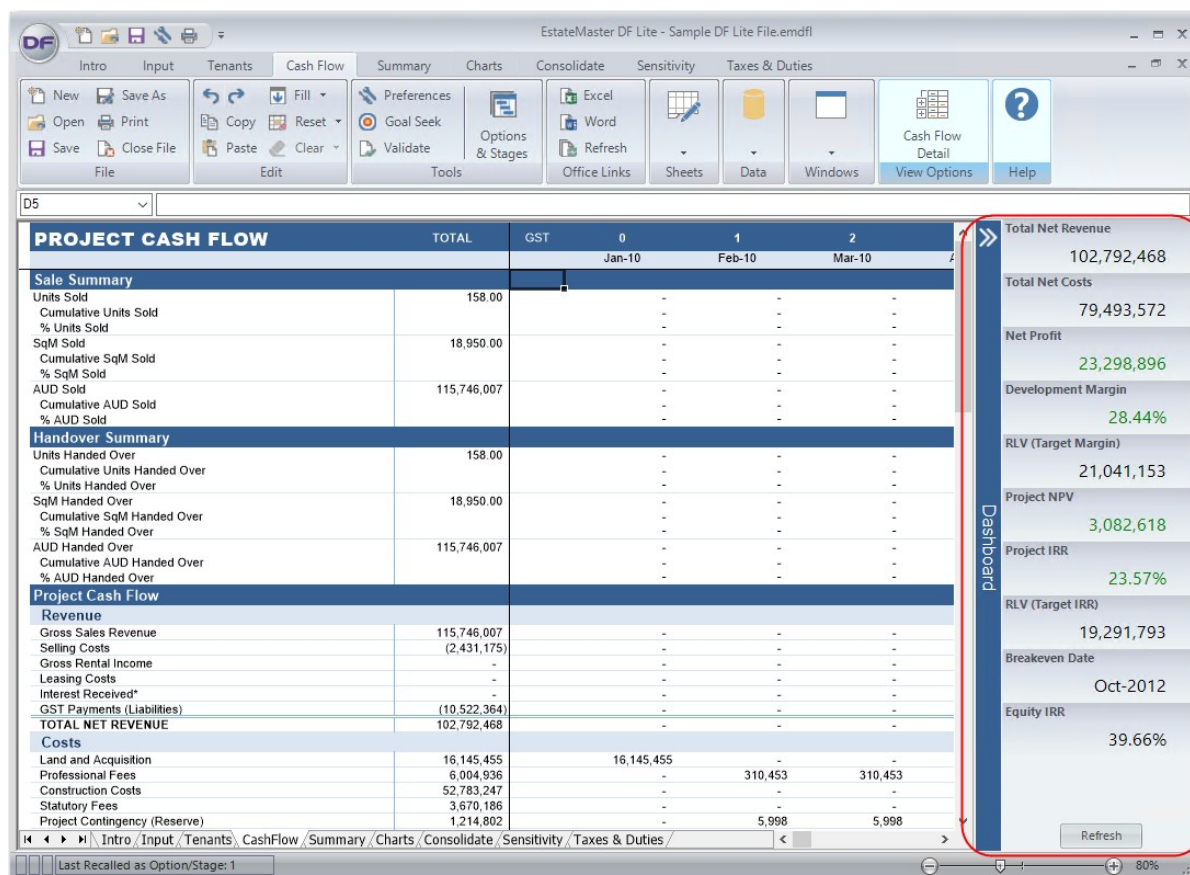
The Status Bar is located at the bottom of the application. It has the following definable parts:

1. **Statistics:** This part of the status bar provides a Sum, Average and Count of the currently selected cells (excludes text formatted cells). These update instantly.  

2. **Locked Cells Warning:** This part of the status bar provides a warning if any input cells on the currently active worksheet are locked via the ['Protection' Preferences](#). By clicking this button, it will load the Preferences so the user can see which input ranges have been locked.  

3. **Linked Excel Files Warning:** This part of the status bar provides a warning if an external Excel file that has 'incoming' links has been modified since the last 'refresh'. By clicking this button, it will refresh all the links.  

4. **Options/Stages Status:** This part of the status bar alerts the user what the last Option/Stage was either recalled or stored as.  


## 4.7 Dashboard

The dashboard, located on the right-side of the application in a collapsible panel, provides a summary of the key performance indicators of the Cash Flow, including Net Profit, Development Margin, NPV, IRR and Residual Land Values.

The results will automatically update when opening files, or switching between windows. Any other time, they can be updated by clicking on the left [Refresh] button.




## Thresholds

Some of the KPIs have thresholds, where the result will be displayed in:

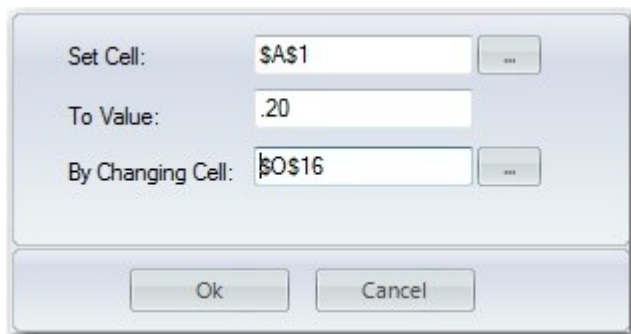
- red font if it is **below** the threshold,
- green font if it is **above** the threshold.

KPI	Threshold
Net Profit	0
Development Margin	<a href="#">Target Margin</a>
Project NPV	0
NPV of Future Cash flows	0
Project IRR	<a href="#">Target IRR (Discount Rate)</a>

## 4.8 Goal Seek

Goal Seek is sometimes called what-if analysis. When you know the desired result of a single formula but not the input value the formula needs to determine the result, you can use the Goal Seek feature available by clicking  Goal Seek on the [Ribbon Menu](#) menu.

When goal seeking, the program varies the value in one specific cell until a formula that's dependent on that cell returns the result you want.



The Goal Seek dialog box is shown with the following fields:

- Set Cell:** \$A\$1
- To Value:** .20
- By Changing Cell:** \$O\$16

Buttons: Ok, Cancel

- **Set Cell:** The cell that contains the formula that you want to settle/resolve. That cell must always contain a formula or a function, not a value.
- **To Value:** The value you want the formula (in the Set Cell) to change to.
- **By Changing Cell:** The part of the formula that you wish to change. That cell must contain a value only, not a formula or function.

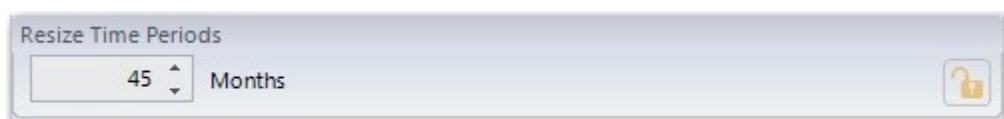
## 4.9 Resizing the Model

The ARGUS EstateMaster DF Lite model can be resized in two areas:


1. Adding more time periods (45 to 120)
2. Adding more cost and revenue rows (max 20).

### Resize Time Periods

Resizing the time periods is controlled via the the [Preferences](#).



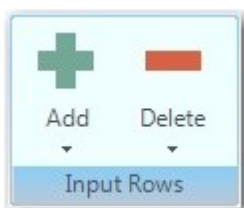
The Resize Time Periods dialog box shows a spinner control set to 45 and the unit 'Months'. There is a lock icon on the right.

1. Go the [Ribbon Menu](#) and click on  Preferences or just press F12.
2. Go to the 'Cash Flow Periods' tab.
3. Expand or reduce the number of time periods. Only add what you need as it will impact on the size of the file.
4. Click on OK and it will make the appropriate changes to the file.

### Resize Cost/Revenue Rows

Resizing the input rows is controlled via the the [Ribbon Menu](#) when the Input or Tenancy sheet is selected.





### Inserting Rows:

1. Click on the Input Rows 'Add' button, and select from the list which section you would like to add rows to.
2. The program will then prompt how many rows you would like to insert.
3. Click OK to the number, and the model will then resize, adding rows to the end of the section (above the last row).

### Deleting Rows:

1. Click on the Input Rows 'Delete' button, and select from the list which section you would like to add rows to.
2. Click OK, and the model will then delete the rows from the end of the section (above the last row - the last row does not get deleted).
3. If these rows have any data in them, it will delete these rows, so please check before deleting them.


## 4.10 Data Validation

A function has been provided that can run a validation check against the input data, checking for the following types issues:

1. **Circular References**, possibly caused by user-inserted formulas (Note: This test requires MS Excel to be installed on the machine).

The validation process will run across all standard ARGUS EstateMaster DF Lite worksheets, as well user custom worksheets inserted by the user.

### Running the Validation

By pressing the Run on the  button on the Ribbon Menu, the validation process is executed. If any issues are detected, the following Data Validator form will be displayed.

Data Validator						
	Issue	Sheet	Range	Cell Formula	Cell Value	Extra Info
!	Circular Reference	Stage Summary	E45	= 'Stage CF!E2770	N/A	Timed Out (Took >
!	Circular Reference	Input	AE106	= IF (AND (TYPE (K106)=2,L106=0,COUNTIF (MilestoneItems_RowID,IF (X106,Y106,K1	3	
!	Circular Reference	Input	L106	=Projectend	3	
!	Circular Reference	CashFlow	G325	=G322-G324	-60606.0606060606	
!	Circular Reference	CashFlow	G322	=G182-G321	-60606.0606060606	
!	Circular Reference	CashFlow	G321	= G 3 2 0 + G 3 0 8 + G 2 9 3 + G 2 9 1 + G 2 7 9 + G 2 6 7 + G 2 5 5 + G 2 3 8 + G 2 1 6 + G 1 9 8 + G 1 8 4 + G 3 0	60606.0606060606	
!	Circular Reference	CashFlow	G320	= -Calc!AB543	-6060.60606060606	
<div>Revalidate</div> <div>Close</div>						

<b>Issue</b>	Describes the type of issue detected (e.g. circular reference, etc)
<b>Sheet / Range</b>	The worksheet and the cell/range address that the issue has been found on.
<b>Cell Formula</b>	The formula in the related cell.
<b>Cell Value</b>	The calculated value in the related cell.
<b>State</b>	Describes the current state of that sheet/range (e.g. is it visible or hidden)
<b>Extra Information</b>	Additional information about the issue, such as: <ul style="list-style-type: none"> <li>• If the related cell/range is <b>hidden</b>, either by being located in a hidden column, row or worksheet, or hidden from view by a frozen pane (and therefore cannot be navigated to)</li> <li>• If the related cell formula is <b>referencing an external Excel file</b> (i.e. using the <a href="#">Excel Links</a> feature), it will display the path to that file.</li> <li>• If there were any <b>errors</b> encountered while checking for Circular References, such as a Timeout or other issues related to Excel.</li> </ul>

## Circular Reference Detection Timeout

When the validation process attempts to detect any circular reference issues, it may take a while to trace the formulas on a worksheet to identify where the circular reference occurs. By default, if it knows there is a circular reference on a worksheet, but cannot find the cell where it is located in, it will timeout after 60 seconds.

Issue	Sheet	Range	Cell Value	Extra Info
Circular Reference	Stage Summary	E45	Timed Out (Took > 60secs to find all issues)	Timed Out (Took > 60secs to find all issues)
Circular Reference	Input	AE106	3	
Circular Reference	Input	J106	3	

This timeout setting can be manually changed by editing the value for the `CircularReferenceTimeout` configuration (measured in seconds) found in the **EstateMasterDFL.exe.config** file, located in the folder where the ARGUS EstateMaster DF Lite application is installed.

## Fixing Issues

To attempt to fix issues in the list, double-click a row and it will navigate you to the related sheet/range. Attempt to fix each issue while the list is displayed, and then then press [Revalidate] button to run the checks again. If all issues have been rectified, the list will be cleared.

There are certain limitations where you cannot navigate to a cell/range:

- If it is hidden (i.e. located in a hidden column, row or worksheet, or hidden from view by a frozen pane)
- If it is located in an external Excel file.

## Finding the Source of Circular Reference Issues

The results in the Data Validator list are an indication of where issues are located within the file. However, in relation to Circular Reference issues, each Range indicated in the list *may* not necessarily be the **cause** of the issue, but just be within the 'loop' of a circular reference. It is therefore recommended that you navigate to each Range in the list related to Circular References, and assess whether the formula in that range could possibly cause the issue.

The following are examples of Ranges that will most likely not be the cause of the circular reference, and therefore can be skipped:

- If the Range is a standard (and therefore locked) ARGUS EstateMaster DF Lite calculation cell.
- If the location of the Range is in a hidden row or column that has not been intentionally hidden by the user via a software setting (e.g. via Cash Flow View Options).

The following are examples of Ranges that have a higher probability of being the cause of the circular reference (because they contain formulas created by the user), and therefore should be closely examined:

- If the Range is standard input field (i.e. blue, purple or green font inputs) that contains a formula entered by the user.
- If the Range is a formula cell located on a custom worksheet.

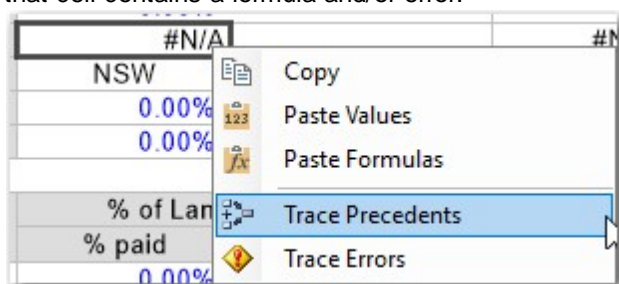
Any easy way to determine if a Range is the cause of a circular reference, is to simply replace the formula in the cell with a value, and click the [Revalidate] button; if that was the cause of the issue, then no issues will be reported. However if circular reference issues still persist, you will need to repeat the process until no further issues are found. You will then need to determine whether you wish to create a modified formula that avoids a circular reference, or just keep a 'value' in the cell.

## 4.11 Formula Auditing

The following tools are available in ARGUS EstateMaster DF Lite to help you audit formulas, be it the default ones in the application, or custom ones that the user creates:

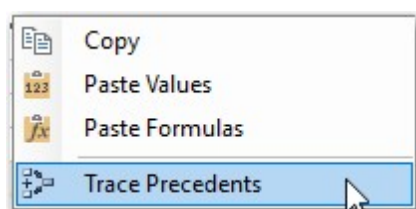
- **Trace Precedents:** This function displays the relationships between a formula and the cells that provide data to it (i.e. its precedents). It is a useful tool for checking formulas for accuracy or finding the source of an error.
- **Trace Errors:** This function displays the source(s) of an error in the formula.

The above tools are available in the [Sheet Context Menus](#) when you right-click a cell, and are enabled if that cell contains a formula and/or error.



### 4.11.1 Trace Precedents

When any cell containing formula is selected (default application formula, or user-inserted custom formula), a 'Trace Precedents' option will appear in the right-click Context Menu.



By selecting 'Trace Precedents', the following form will be displayed:

Trace Formula Precedents				
Sheet	Range	Cell Formula	Cell Value	Extra Info
Summary	\$K\$124	=SUMIF(\$E\$122:\$I\$122,K\$122,\$E124:\$I124)	77247511.3777	
Summary	\$J\$124	=SUMIF(\$E\$122:\$I\$122,J\$122,\$E124:\$I124)	0	
Input	Import_1452	0	0	
Summary	\$K\$129	=IF(K130=0,"N.A.",-IF(Import_S9=1,K\$130/\$A\$26*term,-((-K\$130/\$A\$26+1)^term-1)))	0.0001110745148581	
Input	EnableFinancials	FALSE	False	*Row Hidden*
Financials	\$D\$155	=IF(C154=0,0,C156/C154)	0	*Pane Hidden*

### Sheet

The worksheet where the precedent cell/range is located.

### Range

The precedent cell address, or range name.

- If the formula being traced contains a multi-cell Named Range (i.e. a defined name for a group of cells), then every individual cell within that Named Range will be listed separately, and the Named Range it belongs to will be indicated in the 'Extra Info' column.

=IF(Input!\$A244,SUMPRODUCT(-Import_259*Input!\$C244),CashFlow!\$C\$94:\$C\$113)+SUMPRODUCT(-(Calc!\$D\$334:\$D\$343=Input!\$C244),Calc!\$C\$94:\$C\$113)				
Sheet	Range	Cell Formula	Cell Value	Extra Info
Input	R313	0		Range Name: Import_259
Input	R314	C		Range Name: Import_259
Input	R315	0		Range Name: Import_259
Input	R316	RS		Range Name: Import_259
Input	R317	RS		Range Name: Import_259
Input	R318	0		Range Name: Import_259

### Cell Formula

The formula in the precedent cell/range.

- If the cell has a hard-coded value, and not a formula, then the value of that cell will be displayed.

### Cell Value

The calculated/inputted value in the precedent cell/range.

### Extra Info

Additional information about the precedent, such as:

- If the related cell/range is **hidden**, either by being located in a hidden column, row or worksheet, or hidden from view by a frozen pane (and therefore cannot be navigated to)
- If the related cell/range is **part of a multi-cell Named Range**, it will display that Named Range.
- If the related cell formula is **referencing an external Excel file** (i.e. using the [Excel Links](#) feature), it will display the path to that file.

## Navigating to a Precedent

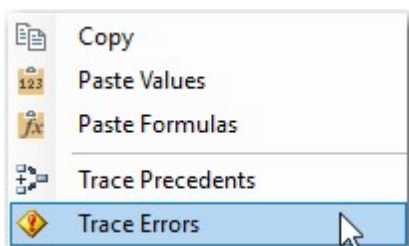
To navigate to a precedent cell/range, just double-click it in the list provided in the form, and the related cell/range will be activated in the background.

There are certain limitations where you cannot navigate to a cell/range:

- If it is hidden (i.e. located in a hidden column, row or worksheet, or hidden from view by a frozen pane).
- If it is located in an external Excel file.

### 4.11.2 Trace Errors

When any cell containing an erroneous formula is selected (default application formula, or user-inserted custom formula), a 'Trace Errors' option will appear in the right-click Context Menu.



By selecting 'Trace Errors', it will trace the precedents of the selected formula and attempt to find the source of the error. If it cannot find any errors with the direct precedents, it will then search through the next level of precedents, and so on, until it finds the possible source.

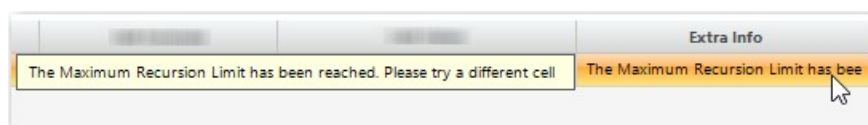
If it successfully finds the source of the errors, the following form will be then displayed:

Trace Error					?	×
Sheet	Range	Cell Formula	Cell Value	Extra Info		
Input	F106	=1/0	#DIV/0!			
Calc	AA577	=MAX(HLOOKUP(1,AA573:C1576,ROWS(AA573:AA576),FALSE),IF(Import_760.0,Input!AD386),IF(Import_768.0,	#N/A	*Sheet Hidden*		

<b>Sheet</b>	The worksheet where the erroneous cell/range is located.
<b>Range</b>	The erroneous cell/range address, or range name.
<b>Cell Formula</b>	The formula in the erroneous cell/range.
<b>Cell Value</b>	The calculated/inputted value in the erroneous cell/range (if it is a single-cell range)
<b>Extra Info</b>	<p>Additional information about the erroneous cell/range, such as:</p> <ul style="list-style-type: none"><li>• If the related cell/range is <b>hidden</b>, either by being located in a hidden column, row or worksheet, or hidden from view by a frozen pane (and therefore cannot be navigated to)</li><li>• If the related cell formula is <b>referencing an external Excel file</b> (i.e. using the <a href="#">Excel Links</a> feature), it will display the path to that file.</li></ul>

## Unable to find the Error

If it cannot find the possible source of the error within 100 levels of precedents (an acceptable level before application performance may be affected), it will stop attempting to trace the error and show this message in the form.



If this occurs, it is recommended to try tracing the error on different erroneous formulas cells on different worksheets, in particular ones where data entry is conducted.

## Navigating to an Error

To navigate to a error cell/range, just double-click it in the list provided in the form, and the related cell/range will be activated in the background.

There are certain limitations where you cannot navigate to a cell/range:

- If it is hidden (i.e. located in a hidden column, row or worksheet, or hidden from view by a frozen pane)
- If it is located in an external Excel file.

## Fixing Errors

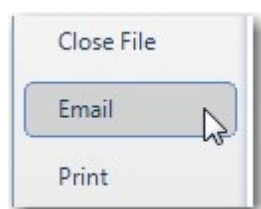
To attempt to fix an error, navigate to each erroneous cell/range displayed in the list and modify it's formula until it no longer generates an error (e.g. #DIV/0!, #REF!, #VALUE!, etc). Once those issues have been resolved, go back to the original cell that was selected and check if it is still calculating an error:

- If it doesn't, then the formula(s) that were modified were the only cause of the error.
- If it does, then there could be other cells along the precedent chain that may be contributing to the error. Therefore, just run the 'Trace Error' on the same cell again, and review/fix the new results it will display. Repeat the process until the original cell no longer is displaying an error.

## 4.12 Emailing Files

The program has inbuilt emailing functionality to allow you to email files without having to save them and then attach them manually to an email message. No other email software (such as Outlook, Lotus Notes, etc) is required, only an internet connection and valid SMTP (Simple Mail Transfer Protocol) settings.

The email function is found in the [Application Menu](#).



When 'Email' is clicked, it may first prompt you to save your file (if there have been any changes to your file since the last save). Once the file is saved, it will load a form where the user can enter the following information (\* denotes mandatory fields):

- **TO\*** email address(s): You can enter multiple email address in this field, separated by a ';' semi-colon (e.g john@email.com; pete@email.com)

- **FROM\*** email address. Only one email address can be entered here. This is also the email address that the recipient can reply to.
- **SUBJECT\*** of the email.
- **MESSAGE** text for the body of the email.

You will notice that the data file is already attached to the email message.

Before any files can be emailed through this feature, the SMTP settings must be configured. This is done by clicking on the 'Settings' button and entering in the following information:

- **SMTP Server:** Your SMTP server name (e.g. smtp.yourISP.com)
- **Port:** The TCP (Transmission Control Protocol) port that the SMTP server uses. This is usually port 25.
- **Encrypted Connection:** Select this if your SMTP server name uses a SSL (Secure Sockets Layer) connection.
- **Use Default Credentials:** Specifies whether the default user credentials should be used to access the SMTP mail server. If it is not selected, then the you must enter in a username and password.
- **Username:** The user name to use for authentication to the SMTP mail server.
- **Password:** The password to use for authentication to the SMTP mail server.

Please note:

- These settings are application and machine specific, therefore you will need to configure them for each ARGUS EstateMaster application installed on a PC/Server, and each PC/Server that has the software installed.
- If you do not know your SMTP settings, please consult your IT Administrators or your Internet Service Provider.

Once these settings have been configured, the software is ready to email files. When the 'Send' button is clicked, it will validate the email address(s) and the SMTP settings you have entered.

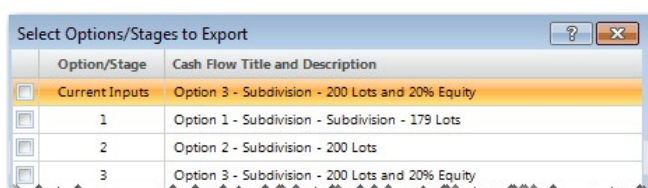
- If the email was successfully sent, a message will appear to inform you.
- If there was any error in trying to send the file, a message like this may appear: If you receive an error, please consult your IT Administrator to verify that the SMTP settings have been entered correctly or to use an alternative SMTP server.

## 4.13 Exporting to Excel

Since ARGUS EstateMaster DF Lite is built on a spreadsheet user interface, you can export the entire file to Excel, allowing you use that file and its data in any way you require. To export the file, go to the [Ribbon Menu](#) and click on [Data] → [Export to Excel]

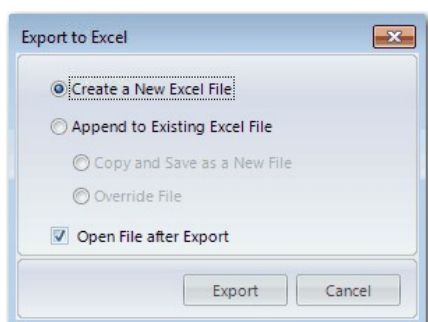
### Selecting Stored Options/Stages

If there are stored Options/Stages in the file, you will be given the option to select which specific Options/Stages, as well as the current set of inputs, to export to Excel.



- If only **one item is selected in the list**, you will be given the option to either:
  - Export it as a New Excel File, or
  - Append it to an Existing Excel File
- If **more than one item is selected in the list**:
  - Each set of data (either the Current Inputs or the selected Options/Stages), will be automatically exported to a new Excel file.
  - The Current Inputs (if selected) will adopt the base file name provided by you (e.g. MyFile.xlsx).
  - The selected Options/Stages will have "\_OptStg\_<option/stage number>" appended to the base file name provided by you (MyFile\_OptStg\_1.xlsx).

### Export Options



#### Create a New Excel File

When an ARGUS EstateMaster DF Lite file is exported to a new Excel file:

- You will be promoted to save the file in Excel 2007+ compatible format (\*.xlsx or \*.xlsm).



- The file is exported as values only and contain no formulas (except on custom add-on worksheets, where custom formulas are kept intact), so changing inputs in an exported file will not impact on the results.

### Append to Existing Excel File

When an ARGUS EstateMaster DF Lite file is appended to an existing Excel file:

- You will be given the option to copy the existing Excel file and save it as a new one (useful when working with templates), or override the file being selected.
- You will be prompted to select which Excel 2007+ compatible file (\*.xlsx or \*.xlsm) to append the ARGUS EstateMaster DF Lite worksheets to.
- The ARGUS EstateMaster DF Lite worksheets are exported as values only and contain no formulas (including on custom add-on worksheets)
- Some features that are not completely supported by this spreadsheet interface used by ARGUS EstateMaster DF Lite may be stripped from the selected Excel file after appending to it, and saving it. These features include, but not limited to, items such as:
  - Form/ActiveX Controls
  - Pivot Tables & Charts
  - Cell Comments
  - Cell Gradients
  - Excel 2007-style Tables and Structured References
  - OLE objects (Camera, Embedded Documents, etc)
  - Shape fill effects and shadows
  - Worksheet Protection Access Options

### Command Line Automation

ARGUS EstateMaster DF Lite supports exporting to Excel via the Windows command line, using the **ExportFile** command.

The command utilises the following switches and parameters:

Switch and Parameter	Required	Description	Example
<b>/F:</b> <i>DataFile</i>	✓	<ul style="list-style-type: none"> <li>• The path to the ARGUS EstateMaster DF Lite data file (emdf1) to export.</li> <li>• <u>Note:</u> If the path contains spaces, it should be enclosed in double quotes.</li> </ul>	/F: "C:\MyData\SampleFile.emdf1"
<b>/P:</b> <i>Password</i>		<ul style="list-style-type: none"> <li>• The password required to open the data file (if applicable)</li> <li>• <u>Note:</u> If the password contains spaces, it should be enclosed in double quotes.</li> </ul>	/P "password1"
<b>/E:</b> <i>ExcelFile</i>		<ul style="list-style-type: none"> <li>• The path of the output Excel file (*.xlsx)</li> <li>• If this switch is not used, the Excel file will be given the same file name and saved to the same directory as the selected data file.</li> </ul>	/E: "C:\Users\Guest\Desktop\SampleFile.xlsx"
<b>/O:</b> <i>OptionStage</i>		<ul style="list-style-type: none"> <li>• The selected Option/Stage number to export (e.g. "2" for Option/Stage 2).</li> </ul>	/O "2" or

Switch and Parameter	Required	Description	Example
		<ul style="list-style-type: none"> <li>If used, must be a value between 1 and 2</li> <li>If this switch is not used, it will export the current data that was live in the file, last time it was saved.</li> </ul>	/O "Option2"

#### Example

- Exporting the current set of data for a file with no password:

```
C:\Program Files\Estate Master\DFLite7\EstateMasterDFLite.exe
ExportFile /F: "C:\MyData\SampleFile.emdfl" /E: "C:\Users\Guest\Desktop\SampleFile.xlsx"
```

- Exporting the current set of data for a file a password:

```
C:\Program Files\Estate Master\DFLite7\EstateMasterDFLite.exe
ExportFile /F: "C:\MyData\SampleFile.emdfl" /E: "C:\Users\Guest\Desktop\SampleFile.xlsx" /P "password1"
```

- Exporting Option/Stage 2 for a file with no password:

```
C:\Program Files\Estate Master\DFLite7\EstateMasterDFLite.exe
ExportFile /F: "C:\MyData\SampleFile.emdfl" /E: "C:\Users\Guest\Desktop\SampleFile.xlsx" /O 2
```

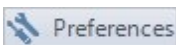
**Part**

---



## 5 Preferences



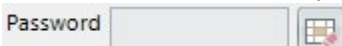
The program allows flexibility by the way of user preferences. These are operated by:

1. Clicking on [Preferences]  on the [Ribbon Menu](#) or [Quick Access Toolbar](#),
2. Pressing the [F12] key.

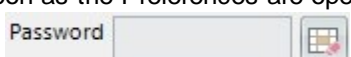


### Locking Preferences

Each preference can be individually set and locked with password protection, allowing the user to standardise settings and minimise the risk of incorrectly changing them.

#### To Lock a Preference

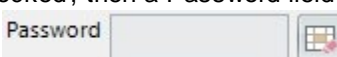

1. Set the preference and then click on the  button located to the right of it.
2. It will then be shown as 'locked'  and the selected preference will then be disabled.
3. A Password field will be displayed at the bottom on the Preferences form.  

4. The user must enter in a password before they can click 'OK' and save their changes.

#### To unlock a Preference

1. As soon as the Preferences are open, a Password field will be displayed at the bottom on the form.  

2. The user must enter in a password before they can unlock any Preference.
3. Go to the preference and then click on the  button located to the right of it.
4. It will then be shown as 'unlocked'  and the selected preference can then be changed by the user.

#### To Reset the Password

Once a password has been used to lock the Preferences, the same password will remain with that file and will be used for any future locking/unlocking until it is reset by the user. To reset the password:

1. As soon as the Preferences are open, if any Preferences were 'locked', then a Password field with a 'Reset' button will be displayed at the bottom on the form 
2. Enter in the current password and click on the  button.
3. The current password on the Preferences will then be cleared, and a new password must be then set.

### Printing an Assumptions Report

To check what preferences and settings have been defined in the model, an Assumptions Report is available to be printed in the [Print Menu](#).

## 5.1 General

### 5.1.1 Regional Settings

Currency  
Australian Dollar (\$ - AUD)

Taxation Format  
GST (Goods & Services Tax)

Stamp Duty (Tax on Transfer of Land/Property)  
NIL Based On: Land inc. GST

Input Number Format  
0

#### Currency

Set the currency format. This is important if the ARGUS EstateMaster CC software is used to consolidate cash flows that are based on different currencies.

#### Taxation Format

Set the taxation format to be used in the model:

VAT (Europe)  
GST (Australia and NZ)  
Sales Tax (USA)  
Nil Tax (Other)

- **GST (Goods and Services):** A consumption (as opposed to income) tax levied on the purchases of goods and services. GST can be applied to all costs and revenues in the program
- **VAT (Value Added Tax):** Similar to GST, however there is no option to adopt the Margin Scheme when this option is applied.
- **Sales Tax:** This is a tax applied to end sales only. No tax is applied to costs in the program when this option is selected.

If 'Nil Tax' is selected, then the tax inputs are hidden.

#### Stamp Duty

Stamp duty is automated based upon the location you select, and whether it is calculated on the land price including or excluding tax. The rates used to calculate duties can be changed in the 'Taxes & Duties' sheet.

#### Input Number Formats

Select the number of decimal places for the input cells.

0  
0.0  
0.00

## 5.1.2 Cash Flow Periods

### Cash Flow Rest Period

Nominate the rest periods for the cash flow. This option will determine how the Start and Span dates are to be entered and how the cash flow will be displayed.

Changing the rest period after you have started a model will not affect any existing values for Start and Span dates for individual cost and revenue items.

For example, say you change 'Monthly' rests to 'Quarterly' rests - a cost item that started Month 4 and spanned 3 months will now start Quarter 4 and span 3 quarters, so it will need to be manually updated by the user to start Quarter 1 and span 1 quarter.

### Resize Time Periods

Increase or decrease the number of timer periods in the model to suit user preference (45 to 120).

### Financial Year End Month

Select what month is to represent the end of Financial Year. This is used for the setting of Escalation Tables and for Financial reporting.

## 5.1.3 Spreadsheet Display

### Input Sheets and Report Sheets to Display

Select the worksheets which are to be displayed. Deselect to hide worksheets that you are not working on or do not intend to display making navigation around the workbook a little easier. Hiding sheets does not impede in the operation of the program

## 5.1.4 Disclaimer

Disclaimer on Title Page

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Donec quam felis, ultricies nec, pellentesque eu, pretium quis, sem. Nulla consequat massa quis enim. Donec pede justo, fringilla vel, aliquet nec, vulputate eget, arcu. In enim justo, rhoncus ut, imperdiet a, venenatis vitae, justo. Nullam dictum felis eu pede mollis pretium. Integer tincidunt. Cras dapibus. Vivamus elementum semper nisi. Aenean vulputate eleifend tellus. Aenean leo ligula, porttitor eu, consequat vitae, eleifend ac, enim. Aliquam lorem ante, dapibus in, viverra quis, feugiat a, tellus. Phasellus viverra nulla ut metus varius laoreet. Quisque rutrum. Aenean imperdiet. Etiam ultricies nisi vel augue. Curabitur ullamcorper ultricies nisi. Nam eget dui. Etiam rhoncus. Maecenas tempus, tellus eget condimentum rhoncus, sem quam semper libero, sit amet adipiscing sem neque sed ipsum. Nam quam nunc, blandit vel, luctus pulvinar, hendrerit id, lorem. Maecenas nec odio et ante tincidunt tempus. Donec vitae sapien ut libero venenatis faucibus. Nullam quis ante. Etiam sit amet orci eget eros faucibus tincidunt. Duis leo. Sed fringilla mauris sit amet nibh. Donec sodales sagittis magna. Sed consequat, leo eget bibendum sodales, augue velit cursus nunc,

Max 2500 characters

### Disclaimer on Title Page

Enter the text, if applicable, for any disclaimer to be displayed on the Title page.

## 5.1.5 Logos

Corporate Logo

Image Preview

Property Logo

Image Preview

## Corporate Logo and Property Photo

Insert your own corporate logo on the report sheets and Title Page and insert a photo/image of the subject property/project on the Intro tab and Title Page

- Only jpeg and bmp files can be inserted.
- There are no file/image size restrictions.
- The program will automatically downscale the image if it is too large to fit in the allocated area.
- If the image is smaller than the allocated, it will not be upscaled to avoid distortion.

## 5.1.6 Protection

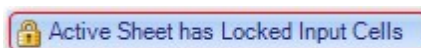


### Insert/Delete Input Rows

Enable the user to insert/delete rows on the Cash Flow sheet.

### Input Cell Protection

This allows you to Lock various input cells throughout the program. Once this is done, the input cell will change to a 'black' font and a warning will appear on the [status bar](#) to indicate the active sheet has locked input cells.



**Warning on Status Bar - clicking this warning will load the Preferences**

This is helpful if you wish to standardise the inputs and create a template.



## 5.2 Calculations

### 5.2.1 Escalation

#### Escalation Method

Select how the escalation on Costs and Revenue (exc Rent Review Escalation) in the model operates.

Escalation can either be applied on a:

- **Period Compounded Escalation** basis

For example, if 5% is entered in for a particular year in the escalation table, this then equates to approx 0.41% per month (if using monthly rest periods), and each cost/revenue occurring in each month for that year, is escalated by 0.41% compounded.

- **Annual Stepped Escalation** basis (e.g. 5% per month if using monthly rest periods).

For example, if 5% is entered in for a particular year in the escalation table, then each cost/revenue occurring in each period for that year, is escalated by 5%.

The Escalation tables on the Input can also be set up in one of two ways:

- **Cash Flow Period Years:** This option is where the model assumes that the annual escalation rates are defined by the Project Start Date month, and starts on that date.

For example, if Date of First Period (Project Start) is Jan-2007, then Escalation Table starts from Jan-2007.

- **Based on Financial Years:** This option is where the model assumes that the annual escalation rates are defined by the Financial Year End month, and commences from the start of the Financial Year that the project is starting in.

For example, if Date of First Period (Project Start) is Jan-2007 and Financial Year End is June, then Escalation Table starts from Jul-2006.

## 5.2.2 Project Costs

### Development Management Fee

The Development Management Fee can be expressed as a percentage of:

- **Gross Sales Revenue:** Includes items included in the [Sales](#) input section and Capitalised Sales from the [Tenants](#) section. Is inclusive of any GST/VAT/Sales Tax if applicable.
- **Net Sale Revenue:** Gross Sales less Selling Costs
- **Project Costs including Land**
- **Project Costs excluding Land**

Project Costs exclude: Selling Costs (except PreSale Commissions reported as a Project Cost), Leasing Costs, Finance Costs (inc Interest and Fees) and GST/VAT if applicable.

### Sales Commissions

Sales Commissions can be expressed as a percentage of:

- **Gross Sales Values (inclusive of Tax):** Sales Price including GST/VAT/Sales Tax
- **Net Sales Values (exclusive of Tax):** Sales Price excluding GST/VAT/Sales Tax

### Reporting Pre-Sale Commissions as Project Cost

Tick the checkbox if you wish to report all Pre-Sale Commissions (those incurred at time of Exchange) as a Project Costs (as opposed to a negative Revenue). This will impact how the Development Margin is reported, and where other cost items are a % of Project Costs.

## 5.2.3 Revenue Collection Profile

### Sales Revenue Collection Profile

This option allows you to decide how the instalment milestones for the [Sales Revenue Collection Profile](#) are defined. They can either be base on:

- **Specific Time Periods in Cash Flow:** Where you can define a time period (e.g Month 6, Month, 12, etc) to indicate when revenue is collected.
- **Periods after Date of Exchange:** A certain number of months after the Date of Exchange for each sale item.

Profile Code	1
Months after Date of Exchange	
2	5.00%
4	5.00%
6	10.00%
8	10.00%
10	10.00%
0	

If Sales Revenue Collection Profiles are not required, there is an option to 'disable' it.

Based on specific Months in Cash Flow
Based on Months after Date of Exchange
Disable

## 5.2.4 Hurdle Rates

Discount Rates Annual to Rest Period Conversion  
per annum Nominal

IRR and NPV Calculation  
includes financing costs but excludes interest and corp tax.

Development Margin Calculations  
on total development costs (inc selling costs).

Gross or Net Profit Performance  
Based on Net Development Profit (After Profit Share)

### Discount Rate Conversion

This enables you to select the method of conversion from the annual discount rate (that is entered by the user) to the periodic discount rate (monthly, quarterly or half yearly depending upon the rest period you selected). The difference is given in the following formulae:

Nominal Conversion	$D/T$
Effective Conversion	$[(D + 1)^{1/T}] - 1$

Where:

D = is the annual discount rate.

T = The number of rest periods per annum (i.e Monthly = 12, Quarterly = 4, etc)

### Note:

- It is imperative that a universal usage for the conversion of the discount rate be adopted for all evaluations.
- The first formula simply divides the annual discount rate by 12 while the second formula is the effective conversion and takes into account the compounding on a monthly, quarterly, half yearly basis depending on the cash flow being modelled.
- This only affects the NPV and IRR calculation - not the development margin.

### IRR and NPV Calculation

Nominate if Finance Costs or Interest Charges are to be included in the calculation of the Project IRR and NPV.

excludes all financing costs, interest
includes financing costs but excludes interest
includes all financing costs and interest

- **Financing Costs** = Cost defined in the 'Financing Costs' section and Fees (e.g Application, Line and Standby) associated for each loan.
- **Interest** = Interest charged on equity or the loan facilities.

The options that **include interest** are generally not recommended as discounting an after interest cash flow is a form of double-counting interest cost.

## Development Margin Calculation

Nominate what forms the basis of calculating the Development Margin.

on total development costs (inc selling and leasing costs).
on total development costs (inc selling costs).
on total development costs (net of selling and leasing costs).
on total revenue (net of GST).
on total sales proceeds (net of selling costs and GST).

The following defines the exact components of the Summary Report that are used in the calculation of each option:

- **Development Costs (inc Selling and Leasing Costs)** = 'Total Costs' *plus* 'Selling Costs' and 'Purchasers Costs'
- **Development Costs (inc Selling Costs)** = 'Total Costs' (exc GST/VAT reclaims on any Leasing Costs) *plus* 'Selling Costs' and 'Purchasers Costs'
- **Development Costs (net of Selling and Leasing Costs)** = 'Total Costs' (exc GST/VAT reclaims on any 'Selling and Leasing Costs')
- **Total Revenue net of GST/VAT/Sales Tax** = 'Total Sales Revenue' *plus* 'Rental Income' *plus* 'Interest Received' *plus* 'Other Income' *less* 'GST/VAT/Sales Tax Paid'
- **Total Sales Proceeds (net of Selling Costs and GST/VAT/Sales Tax)** = 'Net Sales Proceeds' *less* 'GST/VAT/Sales Tax Paid' on Sales only (not Rental or Other Income)

## Gross or Net Profit Performance

Determines how any Profit Share that is paid to other parties (Land Owner or Lenders) are treated in the calculation of various performance indicators.

Based on Gross Development Profit (Before Profit Share)
Based on Net Development Profit (After Profit Share)

This will impact the calculations for Development Margin, NPV, IRR, Residual Land Values, Sensitivity and Probability Analysis.

## 5.3 Taxation

### 5.3.1 Tax Type

#### Tax Rate Type

Indicate whether the GST/VAT scheme is based on a single or multiple tax rate structure.

- If **Single Rate** is selected, then the user will have the option to enter 1 tax rate in the Input sheet, and then nominate a 'Y' (Yes), or 'N' (No) for each cost and revenue item, if that tax rate is to be applied to it or not
- If **Multiple Rate** is selected, then the user will have the option to enter up to 3 different tax rates in the Input sheet, and then nominate a 'A or Y' (first rate), 'B' (second rate), 'C' (third rate) or 'N' (No) for each cost and revenue item, if that tax rate is to be applied to it or not

Goods and Services Tax				
Goods and Services Tax Rate	10.00%			
		A or Y	B	C
Goods and Services Tax Rate	10.00%	10.00%	12.50%	20.00%
				N
				0.00%

#### Tax Liability Calculation Type

Choose whether the model calculates the GST/VAT liability automatically or via a manual input by the user.

- **AUTO - General Tax Rule:** The program automatically calculates the GST/VAT liabilities and credits depending on what the user entered into the GST/VAT cell for each cost and revenue line item.
- **Margin Scheme with Valuation (GST Model Only):** The user is prompted to enter the margin value for the calculation of GST liability. The program will then automatically calculate the GST liabilities and credits depending on what the user entered into the GST cell for each cost and revenue line item.
- **Margin Scheme with % Cost Completed 1-7-2000:** Based on the user's inputs in the cost sections, the model will determine by default the % of costs that have been incurred before 1-7-2000. It then applies the Margin Scheme with Valuation calculation to determine input credits and liabilities.

- **Manual Input of Liability:** The program automatically calculates the GST/VAT credits depending on what the user entered into the GST/VAT cell for each cost line item, but the user must manually input the lump sum liability with start and span dates.

## 5.3.2 Cost and Revenue Inputs

Cost and Revenue Tax Input Method

Enter Project Costs	Inclusive of GST	
Enter Rents and Leasing Costs	Inclusive of GST	
Enter Sales Revenue	Inclusive of Tax (If applicable)	

### Cost and Revenue Input Method

Select how costs and revenues are to be entered in the model.

- If **Exclusive of Tax** is selected, then the model will assume that amounts entered in the inputs **exclude** tax and if a GST/VAT rate is applied to that item then it will automatically add the tax amount to the item in the cash flow and reclaim tax credits or pay tax liabilities appropriately.

If 'Net of Tax' is selected for cost inputs, then an 'Add Tax' option is available for each cost line item.

Base Rate / Unit	Add GST	Total Current Costs (exc GST)	Total Current Costs (inc GST)
100,000	Y	100,000	110,000

Once the user enters in the net cost (e.g. 100,000) and nominates to Add Tax ('Y'), the total cost will then be 110,000 (assuming the tax rate is 10%)  
The user can also enter 'N' if no tax is to be added.

- If **Inclusive of Tax** is selected, then the model will assume that amounts entered in the inputs **include** tax and if a GST/VAT rate is applied to that item then it will reclaim tax credits or pay tax liabilities appropriately.

If 'Inclusive of Tax' is selected for cost inputs, then an 'Tax Included' option is available for each cost line item.

Base Rate / Unit	GST Included	Total Current Costs (exc GST)	Total Current Costs (inc GST)
110,000	Y	100,000	110,000

Once the user enters in the gross cost (e.g. 110,000) and nominates that Tax is Included ('Y'), the net cost will then be 100,000 (assuming the tax rate is 10%)  
The user can enter 'N' if no tax is included in the base.



### 5.3.3 Liabilities and Reclaims

Developer's Tax Payment and Reclaim Frequency	
Liability Payment	Paid in the Same Month
Land Purchase Input Credits	Reclaim All After Final Land Settlement
Other Costs Input Credits	Reclaimed in the Same Month

#### Tax Payment and Reclaim Frequency

These options allow the user to nominate the delay between expenditure of costs and the reimbursement of the GST/VAT credits and the delay between receipt of revenues and the payment of the GST/VAT liabilities for the Developer.

Paid in the Same Month
Paid ONE Month Later
Paid TWO Months Later
Paid every 2 months from January
Paid every 2 months from February
Paid Quarterly from January
Paid Quarterly from February
Paid Quarterly from March

#### Tax Liability Frequency

In addition to different timings (i.e monthly, quarterly, etc), the tax credit reclaims have two other distinct options:

- **Offset Against Liability at Sale:** No credits are reclaimed until sales occur.
- **Calculated but not Reclaimed:** The tax paid on costs is shown on the Summary report as a separate line item, but is not effectively reclaimed by the developer.

A separate option is also available to determine the GST/VAT reclaim frequency for the land cost.

Reclaim All After First Land Payment
Reclaim All After Final Land Settlement
Reclaim Proportionally with Land Payments

## 5.4 Financing

### 5.4.1 Global Settings

Interest Rates Annual to Rest Period Conversion	
per annum Nominal	
Total Debt Loan Ratio Calculation Method	
% of Land Purchase Price.	
Loan Ratios Display Option	
Cash Flow Reports	Based on Cumulative Loan Drawdowns
Summary Report	<input checked="" type="checkbox"/> Include Capitalised Interest and Fees
Profit Share Payments	
Paid progressively as project makes a profit.	

**Interest Rate Conversion** This is to do with the method for converting all the in the model interest rates from their annual rate to the selected rest period (months, quarters, half years or years) for all interest payable and receivable.

Nominal Conversion	$D/T$
Effective Conversion	$[(D + 1)^{1/T}] - 1$

Where:

D = is the annual interest rate.

T = The number of rest periods per annum (i.e Monthly = 12, Quarterly = 4, Half Yearly = 2)

Note:

- It is imperative that a universal usage for the conversion of the interest rate be adopted for all evaluations.
- The first formula simply divides the annual interest rate by 12 while the second formula is the effective conversion and takes into account the compounding on a monthly, quarterly, half yearly basis depending on the cash flow being modelled.

**Total Debt Loan Ratio Calculation Method** Indicate the denominator for the loan ratio calculation for the total debt overdraft. This is only used to show the Loan Ratio on the Reports.

RETURNS ON FUNDS INVESTED	
	Total Debt
Loan to Value Ratio	3.72%
Loan Ratio	95.57%
	of Land Purchase Price

Summary Total Debt Loan Ratio

**Loan Ratios Display** This options allows you to set how the Loan Ratios are displayed on the following reports:

- **Cash Flow Report:** Set the Loan Ratio to be calculated on either cumulative loan drawdowns, or on the current loan balance (which may include capitalised interest and fees)
- **Summary Report:** Set the Loan Ratio to be calculated on total funds invested, either including or excluding capitalised interest and fees.



Loan 4 - Lender Name				
Drawdown	(1,000,000)	-	-	-
Loan Interest Rate (%/ann)	5.00%	5.00%	5.00%	5.00%
Interest Charged	-	(4,167)	(4,184)	(4,201)
Application and Line Fees	-	-	-	-
Interest Paid by Equity	-	-	-	-
Loan Repayment	-	-	-	-
Interest and Fees	-	-	-	-
Principal	-	-	-	-
Loan Balance	(1,000,000)	(1,004,167)	(1,008,351)	(1,012,552)
% of Land Purchase Price	90.91%	90.91%	90.91%	90.91%
Loan 4 Cash Flow	(1,000,000)	-	-	-

Cash Flow Loan Ratio

RETURNS ON FUNDS INVESTED		Loan 4
		Lender Name
Funds Invested (Cash Outlay)		8,415,007
% of Total Funds Invested		100.00%
Payback Date		Jun-12
Month of Payback		Month 41
IRR on Funds Invested		5.00%
Equity to Debt Ratio		N.A.
Loan to Value Ratio		3.72%
Loan Ratio		95.57%
		% of Land Purchase Price.

Summary Loan Ratio

**Profit Share** If there are any profit share payments to the Land Owner then this options allows you to  
**Payment** select when the profit share is paid out:

- **Paid in full at project end:** The model waits till the end of the project before any profit share payments are distributed.
- **Paid Progressively:** As soon as the project makes a profit (are debts are repaid), then any profit share payments will be distributed progressively. This option will only work if the option for '[Equity Repayment](#)' is set to 'repay when available' as well, otherwise it will default to paying it at the end of the project.

Paid in full at project end.
Paid progressively as project makes a profit.

## 5.4.2 Hard Costs

Hard Costs

☒ Land Purchase Price
☒ Statutory Fees

☒ Land Acquisition Costs
☒ Land Holding Costs

☒ Project Contingency

☒ Professional Fees

☒ Construction Costs






☒ Exclude Tax from Hard Costs

### Hard Costs

Select which project costs are classified as 'Hard Costs' for the purpose of loan ratios or facility limits that are based on 'Total Hard Costs' (as below).

If the tax component (GST/VAT) of the selected hard costs are to be excluded from amount, then make sure the last check box is ticked.

### 5.4.3 Equity

Facility Limit Calculation Method	Fixed Amount	
Equity Injection Method	Injected in total upfront.	
Equity Ratio Calculation Method	% of Land Purchase Price.	
Equity Repayment Method	Repaid at project end.	
Outstanding Debt at Project End	<input checked="" type="checkbox"/> Equity to pay any outstanding debt at project end.	

#### Facility Limit

Nominate the limit of funds injected into the cash flow. This amount excludes interest and fees. The limit can either be based on a:

- Fixed amount.
- Ratio of project costs or revenues (unless otherwise stated, these are inclusive of any tax).

#### Equity Injection Method

Indicate how the Equity is injected into the project:

- Fully upfront at project commencement.
- Progressively injected when required.

#### Interest Payment Method

Indicate how the interest charged on the funds is paid:

- **Accrued not Capitalised (Simple Interest):** Where interest is only calculated on the equity drawn down and not on any interest.
- **Capitalised (Compound Interest):** Where interest is calculated on the loan balance that includes any capitalised interest.

#### Equity Ratio Calculation Method

Indicate the denominator for the ratio calculation for equity cash flow. This is only used to show the Loan Ratio on the Reports.

#### Equity Repayment Method

Nominate when the equity is repaid back to the project:

- **At Project End:** Where any excess funds are deposited into the surplus cash account until such period.
- **When Available (retain cash for future costs):** Where equity is repaid progressively as it is realised. The cash flow may retain funds in the surplus cash account if it identifies future costs that may need to be funded.
- **When Available (do not retain cash for future costs):** Where equity is repaid progressively as it is realised. Any future costs that may need to be funded are ignored and no cash is retained to fund these.

Any manual equity repayment adjustments in the cash flow table will override the preferences.

#### Outstanding Debts at Project End

You can elect to have equity pay any outstanding debts at the end of the project, rather than leave them unpaid.

### 5.4.4 Senior Loan

#### Facility Limit Calculation Method

Nominate the limit of funds injected into the cash flow. This amount excludes interest and fees.

- **No Limit - Use as an Overdraft Facility:** This is a line of credit facility and there is no limit on the borrowed amount. No facility limit is required and the input is disabled.
- **Set Fixed Limit - Use Equity as the Overdraft Facility:** A facility limit can be set on the Senior Loan as a fixed amount, and then any additional funding is sourced from Equity.

#### Interest Payment Method

Indicate how the interest charged on the funds is paid:

- **Paid for by equity:** Where interest is paid by equity as soon as it is charged, either from the surplus cash account (if funds are available) or from additional equity injections.
- **Accrued not Capitalised (Simple Interest):** Where interest is only calculated on the drawn downs and not on any interest.
- **Capitalised (Compound Interest):** Where interest is calculated on the loan balance that includes any capitalised interest.

The interest rate can be manually varied for different periods in the cash flow tables.

#### Loan Ratio Calculation Method

Indicate the denominators for the loan ratio calculation for each loan. This is only used to show the Loan Ratio on the Reports.

**Part**

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**VI**

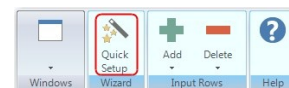
## 6 Input Assumptions

### 6.1 Quick Setup Wizard

The Quick Setup Wizard is a useful tool to enable the user to build a feasibility in a matter of minutes via a series of guided screens.

There are many default assumptions that the wizard uses (you can review these in the final screen of the wizard), but once the wizard is completed, all the inputs and preferences in the ARGUS EstateMaster DF Lite program can be altered as required by the user.

To initiate the Quick Setup Wizard, go to the Input sheet, and click on the 'Quick Setup' button in the Ribbon menu.



#### 6.1.1 Step 1 - Introduction

- Provide a brief introduction to the development, such as where it is located and who are the key stakeholders in it.

This information will be saved to the 'Intro' worksheet. ↓

ESTATE MASTER Project Introduction			
Project Name	Whitesands Apartments		
Street Address	123 Sunny Road		
City/Suburb	Smithfield	Zip/Post Code	1234
State/County	NSW	Country	Australia
Account Code	Account Code	Project Number	0-0000
Prepared By	ABC Valuations Pty Ltd	Developer	XYZ Developments Pty Ltd
Prepared For	Star Finance Banking Corp		

## 6.1.2 Step 2 - Project Details

**Estate Master DF Lite Quick Setup Wizard**

**EstateMaster**

Step 2 of 15: Project Details

Project Type: Residential

Brief Description of Project: 20 Apartments and Retail Ground Floor Shops

Project Size: 20.00 Units, 2,500.00 GFA - Gross Floor Area

Site Area: 1,000.00 SqM

Project Start: 10/Sep/12

Buttons: Cancel, Back, Next

- Give a description of the development, including what type of project it is (e.g Residential, Commercial, etc), its size in terms of area and quantity of units/lots/dwellings and its site area.
- Also nominate when the Project Start date is, which is the first time period of the Cash Flow.

This information will be saved to the 'Preliminary' section of the 'Input' worksheet. ↓

Preliminary				
Cash Flow Title	Whitesands Apartments		Description of Option/Stage	20 Apartments and Retail Ground Floor Shops
Date of First Period:	Sep-2012			
Cash Flow Rest Period:	Monthly			
Enter Project Size (a)	20.0	Apartments		
Enter Project Size (b)	2,500.0	GFA		
Enter Site Area	1,000.0	SqM	Floor Space Ratio	0 :1
	Type	Residential		
	Status	Under Review		

### 6.1.3 Step 3 - Taxation and Currency

**Estate Master DF Lite Quick Setup Wizard**

**EstateMaster**

Step 3 of 15:  
Taxation and Currency

Currency: Australian Dollar (\$ - AUD)

Taxation Format: GST (Goods & Services Tax)

Default Tax Rate: 10.00 %

Liability Calculation Method: AUTO - General Tax Rule

Buttons: Cancel, Back, Next

- Set some of the key Regional Settings such as Currency and Taxation Format.
- If a Taxation Format is not 'Nil', it will also prompt you to set a Tax Rate and a Liability Calculation Method.

This information will be saved to the 'Preferences' and the 'GST/VAT' section of the 'Input' worksheet. ↓

**Estate Master DF Lite Preferences**

**General**

Regional Settings: Australian Dollar (\$ - AUD)

Cash Flow Periods

Spreadsheet Display

Disclaimer

Logos

Protection

Taxation Format: GST (Australia and NZ)

Stamp Duty: NSW Based On: Land inc. GST

**Estate Master DF Lite Preferences**

**Taxation**

Tax Rate Type: GST (Goods and Services Tax) Single Rate

Tax Liability Calculation Type: AUTO - General Tax Rule

**Goods and Services Tax**

Goods and Services Tax Rate: 10.00%



## 6.1.4 Step 4 - Land Acquisition

**Estate Master DF Lite Quick Setup Wizard**

**Land Purchase**

Land Purchase Price: 1,500,000

Upfront Deposit: 10.00 %

Land Purchase Settlement: 3 Months after Deposit

Land Purchase Price is: Inclusive of GST

**Other Acquisition Costs**

Region for Stamp Duty: NSW

Other Acquisition Costs: 5.00 % and/or 1,500 Paid pro rata with Land

Other Acquisition Costs are: Inclusive of GST

Step 4 of 15: Land Acquisition

Cancel Back Next

### Land Purchase

- Enter in a gross purchase price for the land (the proposed payment from the Developer to the Land Owner), or the estimated land value.
- You can also nominate an optional upfront deposit amount and the number of months after the deposit when settlement occurs.
- If Taxation is set to either GST or VAT, you must also nominate if the Land Purchase Price entered needs to have tax added to it, already includes tax, or is tax exempt.

### Other Acquisition Costs

- Select a region to automatically calculate Stamp Duty on the Land Purchase Price. By default, it is paid at the same month as the Land Purchase Settlement.
- Enter in other acquisition costs as a percentage of the estimated land value or as a lump sum, such as legal fees, survey costs, etc. By default, they will be paid pro rata with the deposit payment (if applicable) and the settlement.
- If Taxation is set to either GST or VAT, you must also nominate if the Acquisition Costs entered need to have tax added to them, already include tax, or are tax exempt.

This information will be saved to the 'Land Purchase & Acquisition Costs' section of the 'Input' worksheet. ↓



Land Purchase Price			1,500,000	
	% of Land Purchase Price		% AND/OR	
	% paid	Amount	Lump Amount	
Deposit in Trust Account <sup>1</sup>	10.00%	150,000	-	
Payment 1	0.00%	-	-	
Payment 2	0.00%	-	-	
Payment 3	0.00%	-	-	
Payment 4	0.00%	-	-	
Settlement (Balance)	90.00%		1,350,000	
Stamp Duty <sup>1</sup>	NSW		67,990	
Interest on Deposit in Trust Account	0.00%	Interest from deposit shared between parties		
Profit Share to Land Owner	0.00%	Paid progressively as project makes a profit.		
Other Acquisition Costs (to be entered inclusive of GST)			% AND/OR	
	% paid	Amount	Lump Amount	
Other Acquisition Costs	5.00%	68,182	1,500	
.	0.00%	-	-	

Month Start	Month Span	Cash Flow Period	GST Included on Land Price?	Y
0	1	Sep-12 - Sep-12	Reclaim All After Final Land Settlement	
0	-	-		
0	-	-		
0	-	-		
0	-	-		
3	1	Dec-12 - Dec-12		
3	1	Dec-12 - Dec-12	(Stamp Duty calculated on Land Value of 1,500,000 in	

Month Start	Month Span	Cash Flow Period	GST Included
L	-	Sep-12 - Dec-12	Y
0	-	-	Y

## 6.1.5 Step 5 - Escalation Rates

Estate Master DF Lite Quick Setup Wizard

**EstateMaster**

☐ Ignore Escalation (Inflation) for this Project

Cost Escalation Rate  % p.a.

Revenue Escalation Rate  % p.a.

Step 5 of 15: Escalation Rates

Cancel Back Next

- Nominate if you wish to ignore escalation for all costs and revenues in the feasibility (i.e. you want to run a non-inflated model) by checking this tickbox.
- If escalation is enabled, it will prompt you to enter in a default escalation rate for all costs and revenues. By default, this fixed rate will be applied for all years in the Project life.
- You will be given the option to toggle escalation on or off for individual costs and revenues in the following steps in the wizard.

This information will be saved to the 'Cost Escalation' and 'Sales and Rental Revenue Escalation' sections of the 'Input' worksheet. ↓

Cost Escalation										
Escalation Rates (Monthly Compounded Escalation) based on Cashflow Period Years commencing										
	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Sep-20	Sep-21
Professional Fees	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Construction Costs	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Statutory Fees	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Land Holding Costs	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Selling and Leasing Costs	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Finance Costs	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

Sales and Rental Revenue Escalation											
Escalation Rates (Monthly Compounded Escalation) based on Cashflow Period Years commencing											
Code	Category	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17	Sep-18	Sep-19	Sep-20	Sep-21
APT	Apartments	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
RET	Retail Shops	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
RS3	Residential - 3 Bedroom Units	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
RDD	Detached Dwellings Lots	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%

- Enter in Professional Fees as a percentage of construction costs for items such as architect, engineer, surveyor and other consultants.
- You also have the option to enter in a Development Management Fee, and select what it is a percentage of.
- Any other fees can also be entered as a lump sum amount.
- By default, all these fees will be paid pro rata with the construction cost payments.
- If Taxation is set to either GST or VAT, you must also nominate if the Professional Fees entered need to have tax added to them, already include tax, or are tax exempt.
- If Escalation is enabled, you must also nominate whether the costs entered should be escalated at the nominated rates, or if escalated should be ignored for them.

[illegible]

- Enter in the Construction Cost for the development on either a lump sum or rate per enter/lot/dwelling basis. The 'Per x' option will be based on the quantity entered in the for units/lots/dwellings in 'Step 2 Project Details'
- Nominate when construction is forecasted to commence on the project after the land purchase has been settled and how many months it will take.
- By default, Construction Costs are apportioned over this period on an even-spread basis, unless 'Apply S-Curve' is selected, where a basic s-curve payment profile is applied.
- Apply a contingency percentage on Construction Costs. This is apportioned pro-rata with other construction costs.
- If Taxation is set to either GST or VAT, you must also nominate if the Construction Costs entered need to have tax added to them, already include tax, or are tax exempt.
- If Escalation is enabled, you must also nominate whether the costs entered should be escalated at the nominated rates, or if escalated should be ignored for them.

[illegible]

- Enter in Statutory Fees for the development on either a lump sum or rate per unit basis. The 'Per x' value will be based on the quantity entered in the for units/lots/dwellings in 'Step 2 Project Details'
- Nominate the date the statutory fees are payable for the development.
- If Taxation is set to either GST or VAT, you must also nominate if the Statutory Fees entered need to have tax added to them, already include tax, or are tax exempt.
- If Escalation is enabled, you must also nominate whether the costs entered should be escalated at the nominated rates, or if escalated should be ignored for them.

This information will be saved to the 'Statutory Fees' section of the 'Input' worksheet. ↓

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## 6.1.9 Step 9 - Land Holding Costs

**Estate Master DF Lite Quick Setup Wizard**

**EstateMaster**

Step 9 of 15:  
Land Holding Costs

Council Rates: 1,500 p.a. Paid: Quarterly

Land Tax: 5,000 p.a. Paid: Yearly

Other Holding Costs: 1,200 p.a. Paid: Quarterly

All Land Holding Costs: GST Exempt and Non-Escalated

Cancel Back Next

- Enter in any Council Rates, Land Tax and Other Holding Costs that are payable for the development per annum.
- You can then elect how this annual cost is paid throughout the year (e.g per month, per quarter, etc)
- If Taxation is set to either GST or VAT, you must also nominate if the Land Holding Costs entered need to have tax added to them, already include tax, or are tax exempt.
- If Escalation is enabled, you must also nominate whether the costs entered should be escalated at the nominated rates, or if escalated should be ignored for them.

This information will be saved to the 'Land Holding Costs' section of the 'Input' worksheet. ↓

Land Holding Costs								
Costs to be entered Inclusive of GST								
Description	No. Units	Base Rate /unit/term	Term <sup>1</sup>	Escalate (E,R,N)	Month Start	Month Span <sup>2</sup>	Cash Flow Period	GST Included
Local Government Fees / Council Rates	1	375	Q	N	3	DS	Dec-12 - Apr-15	N
Land Tax	1	5,000	Y	N	3	DS	Dec-12 - Apr-15	N
Land Holding Costs	1	300	Q	N	3	DS	Dec-12 - Apr-15	N
.	-	-	M	-	0	-	-	Y

## 6.1.10 Step 10 - Sales Revenues

**Estate Master DF Lite Quick Setup Wizard**

**Sales**

SqM

Use	Description	Qty	Avg Area	Avg Price	% Pre Sold	GST
Apartment	1 Bedroom	5	70	450,000	30	Included
Apartment	2 Bedroom	10	95	675,000	0	Included
Apartment	3 Bedroom	5	125	890,000	0	Included

PreSale Commencement: 2 Months after Land Purchase

PreSale Deposits: 10.00 %

Settlement Lead Time: 2 Months after Construction Completion

Sales Rate: Units per Month

Step 10 of 15: Sales Revenues

Cancel Back Next

- A grid is displayed where the user can enter in Sales Revenue. Additional rows can be added by clicking on the button, or deleted by clicking on the button.
  - Select a relevant Land Use Category and enter a description for each group of Sales.
  - Enter the quantity of stock and average area to be sold in each group. In relation to area, ensure you select the unit of measurement that the area of the sales are entered in.
  - Enter the average sales price for each group.
  - Nominate the percentage of stock that is pre-sold in each group.
  - If Taxation is set to either GST/VAT/Sales Tax, you must also nominate if the Sales Revenues entered need to have tax added to them, already include tax, or are tax exempt.
- Nominate when the pre-selling campaign should commence after the land has been acquired. By default, pre-sales will continue to occur until the month before settlement, as defined by the 'Settlement Lead Time'. During the pre-selling period, the developer does not receive any revenue from the sales, only deposits are collected and held in trust.
- Nominate the default deposit (percentage of the end sale price) to be paid for pre-sales. By default, this same percentage will be applied to each Land Use.
- Nominate when Settlements for the Sales should start to occur after construction has been completed.
- Nominate the average rate of sale for the settlements. This will determine the Settlement 'Span' on the Input sheet. By default, all stock that is pre-sold will settle within one month.

This information will be saved to the 'Sales' section of the 'Input' worksheet. ↓



## Sales

Sales Revenue to be entered inclusive of GST

Description	No. Units	Total Area SqM	Current Sale Price	Sales Calc Method	Pre-Sale Month Start	Exchanges Month Span	Month Start	Settlements Month Span	Cash Flow Period	GST Included	Land Use Code
Apartments - 1 Bedroom	4	280	450,000	Per Unit	0	-	21	2	Jun-14 - Jul-14	Y	APT
Apartments - 2 Bedroom	10	950	675,000	Per Unit	0	-	21	4	Jun-14 - Sep-14	Y	APT
Apartments - 3 Bedroom	5	625	890,000	Per Unit	0	-	21	2	Jun-14 - Jul-14	Y	APT
PreSales - Apartments - 1 Bedroom	1	70	450,000	Per Unit	5	16	21	1	Jun-14 - Jun-14	Y	APT
.	-	-	-	Per Unit	0	-	0	-	-	Y	-

## 6.1.11 Step 11 - Rental Revenues

**EstateMaster DF Lite Quick Setup Wizard**

**Tenants**

☐ Ignore Rental Income for this Project

Use	Description	Area	Net Rent P.A.	Cap Rate %	GST
* Retail Shops	Ground Floor Shops	120	95,000	7	Exempt

Leasing Lead Time: 1 Months after Construction Completion

Average Rental Increase: 3.50 % p.a.

Investment Period: 12 Months (sold at end of period)

Step 11 of 15: Rental Revenues

Buttons: Cancel, Back, Next

- If no Rental Income is to be included in the project, check the 'Ignore Rental Income' checkbox.
- A grid is displayed where the use can enter in Rental Revenue. Additional rows can be added by clicking on the button, or deleted by clicking on the button.
  - Select a relevant Land Use Category and enter a description for each tenancy.
  - Enter the net lettable area for each tenancy.
  - Enter the average net rent per annum for each tenancy.
  - Enter a capitalisation rate when if the terminal capitalised value needs to be taken into account. This will capitalise the net rental income.
  - If Taxation is set to either GST/VAT/Sales Tax, you must also nominate if the Rental Revenues entered need to have tax added to them, already include tax, or are tax exempt.
- Nominate the number of months the leases commence start after construction has completed.
- Enter the annual rent review escalation rate. The escalation commences 1 year after the first Lease Start Date and is only re-applied on an annual basis. By default, this rate is applied for every year.
- Nominate the leasing period where rental income will be received. To have no rental income and only a capitalised sale, leave this as zero.

This information will be saved to the 'Tenants' worksheet. ↓

Rental Income & Capitalised Sales	Rental Income and Leasing Costs to be entered				
Description	Land Use Code	Total Area SqM	Current Rent /SqM/annum	Lease Month Start	Lease Month Span
Ground Floor Shops	RET	120	792	20	12
.	-	-	-	0	-

Rental Review Escalation Rates by Year (Commence 1 year after Lease Start)										Letting Fee		
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10 +	% of Gross Rent	% paid at PreCommit	Total Amount
3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	5.00%	0.00%	5,152
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

GST Included on Costs	GST Included on Rents	Residual Cap. Rate	Pre-Sale Exchange Month	Settlement Month	Leasing Up Period Months Vacant	Discount Rate	Purchaser's Costs	GST Included on Sales *
Y	N	7.00%	-	-	-	0.00%	0.00%	N
Y	Y	0.00%	-	-	-	0.00%	0.00%	Y

## 6.1.12 Step 12 - Selling and Leasing Costs

**EstateMaster DF Lite Quick Setup Wizard**

**Selling Costs**

- Sales Commission Rate: 2.00 % of gross sales
- Other Preselling Costs: 0.00 % and/or 1,500 per Presale
- Other Settlement Costs: 1.50 % and/or 0 per Sale

**Leasing Costs**

- Letting Fees: 5.00 % of gross rent
- Other Leasing Costs: 2.00 % and/or 0 per Letting

All Selling/Leasing Costs: Inclusive of GST and Escalated

Step 12 of 15: Selling and Leasing Costs

Buttons: Cancel, Back, Next

### Selling Costs

- Nominate the default sales commission (percentage of the gross end sale price) to be paid on each sale. By default, this same percentage will be applied to each Land Use and is payable on Settlement.
- Enter in costs for the pre-selling campaign for items such as advertising, marketing, legal fees, etc, either as a percentage of total gross sales, or a fixed amount per pre-sale. By default, they will be paid pro rata with pre-sales.
- Enter in settlement costs for items such as advertising, marketing, legal fees, etc, either as a percentage of total gross sales, or a fixed amount per stock item that is settled. By default, they will be paid pro rata with settlements.



This information will be saved to the 'Selling and Leasing Costs' and 'Sales Revenue' sections of the 'Input' worksheet. ↓

Selling and Leasing Costs			
Sales Commission (To be entered Inclusive of GST)	Sales Comm <sup>1</sup>	% of Comm. Pre-sales <sup>2</sup>	Deposits (% of Price) <sup>3</sup>
Apartments	2.00%	0.00%	10.00%
Retail Shops	2.00%	0.00%	10.00%
Residential - 3 Bedroom Units	2.00%	0.00%	10.00%
Detached Dwellings Lots	2.00%	0.00%	10.00%

Other Selling Costs To be entered Inclusive of GST	% of Gross Sales	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)	Month Start	Month Span	Cash Flow Period	GST Included
PreSale Costs	0.00%	1	1,500	R	E	-	Feb-13 - May-14	Y
Settlement Costs	1.50%	-	-	R	S	-	Jun-14 - Apr-15	Y
.	0.00%	-	-	-	0	-	-	Y

## Leasing Costs

- If Rental Revenue is not included in this development project, this section will be hidden.
- Enter in letting fees for each tenancy as a percentage of gross annual rent. They are payable at the commencement of the lease.
- Enter in leasing costs for items such as advertising, marketing, legal fees, etc, either as a percentage of total gross rental income, or a fixed amount per tenancy. By default, they will be paid pro rata with rental income.

This information will be saved to the 'Selling and Leasing Costs' section of the 'Input' worksheet and the 'Tenants' worksheet. ↓

Other Leasing Costs To be entered Inclusive of GST	% of Gross Rent	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)	Month Start	Month Span	Cash Flow Period	GST Included
Leasing Costs	2.00%	-	-	R	R	-	May-14 - Apr-15	Y
.	0.00%	-	-	-	0	-	-	Y

Tenancy Schedule				
12000		Rental Income & Capitalised Sales		
Code	Stage	Description	% of Gross Rent	Letting Fee % paid at PreCommit
12001	-	Ground Floor Shops	5.00%	0.00%
12002	-	.	0.00%	0.00%

- If Taxation is set to either GST or VAT, you must also nominate if the Selling/Leasing Costs entered need to have tax added to them, already include tax, or are tax exempt.
- If Escalation is enabled, you must also nominate whether the costs entered should be escalated at the nominated rates, or if escalated should be ignored for them.

### 6.1.13 Step 13 - Financing

**Estate Master DF Lite Quick Setup Wizard**

**Equity**  
Upfront Equity Contribution: 1,000,000

**Debt**  
Interest Rate on Borrowings: 7.50 % p.a. Effective - Capitalised  
Loan Fees: 1,200 p.a.

**Other Costs**  
Upfront Financing Costs: 15,000 GST Exempt

Step 13 of 15: Financing

Buttons: Cancel, Back, Next

- Nominate the amount of developer's equity to inject upfront to fund the development cash flow. If this is left blank, then it will be assumed that the project will be fully debt funded.
- Nominate the interest rate to apply for all debt financing. By default, it will assume that the loan interest is capitalised (compounded) and is on a p.a. Effective basis.
- Enter any Loan Fees on a per annum basis. They are charged per period when interest is due.
- Enter any other financing costs, such as establishment fees, loan application fees, etc. By default they are payable upfront.
- If Taxation is set to either GST or VAT, you must also nominate if the Upfront Financing Costs entered need to have tax added to them, already include tax, or are tax exempt.

This information will be saved to the 'Financing' section of the 'Input' worksheet. ↓

**Financing**

**Equity**

	Fixed Amount	Percentage	
Developer's Equity Contribution Injected in total upfront.	1,000,000	0.00%	Fixed Amount

**Senior Loan**

Description: Lender Name

No Limit (use as overdraft facility)

Interest Rate: 7.50% per annum Nominal - Capitalised (Compounded)

**Fees**

	Amount	Percentage	Month Paid
Application Fee	-	0.00%	0
Line Fee	1,200	0.00%	

**Financing Costs (to be entered Inclusive of GST)**

	No. of Units	Base Rate / Unit	Escalate (E,R,N)	Month Start	Month Span	Cash Flow Period	GST Included
Financing Costs	1	15,000	-	0	1	Sep-12 - Sep-12	N
	-	-	-	0	-	-	Y

### 6.1.14 Step 14 - Hurdle Rates

**Estate Master DF Lite Quick Setup Wizard**

**EstateMaster**

Step 14 of 15:  
Target Rates of Return  
(Hurdle Rates)

Target Development Margin: 25 %  
on total development costs (inc selling costs).

Target IRR (Discount Rate): 20 % p.a. Effective

IRR/NPV based on Cashflow: excludes all financing costs and interest.

Buttons: Cancel, Back, Next

- Set the Developer's Target Development Margin. It is the required profit margin calculated on either total development costs net of selling/leasing costs or including selling/leasing costs, total sales and rental income or on total net sales proceeds.
- Set the Developer's Target IRR (Discount Rate). It can be based on different cash flows depending on whether financing costs or interest charges are to be included. By default, it is a p.a. Effective rate.
- Select the cash flow that the IRR and NPV is calculated on, depending on whether financing costs or interest charges are to be included.

This information will be saved to the 'Project Hurdle Rates' section of the 'Input' worksheet. ↓

Project Hurdle Rates		
Project Discount Rate (target IRR)	20.00%	per annum Nominal, on cash flow that includes financing costs but excludes interest.
Nominate an estimate of IRR	20.00%	per ann.
Developer's Target Dev. Margin	25.00%	on total development costs (inc selling costs).
Developer's Cost of Equity (for WACC)	0.00%	

## 6.1.15 Step 15 - Save and Go to Results




Before saving the inputs in the Wizard to the file, you can review and print out the assumptions used by the Wizard.

It will detail what the assumption are, and how they can be modified in the input worksheets or the Preferences after the Wizard has completed to make your feasibility more cusotmised.

Taxation and Currency	Options to Modify Assumptions via Inputs or Preferences
A Single Tax Rate is assumed.	Multiple tax rates can be used by going to 'Preferences   Taxation   Tax Rate Type' and selecting 'Multiple Rates'
If 'Margin Scheme' is selected for the 'Liability Calculation Method', then the Estimated Land Value is used as the Margin Value for this calculation.	The Margin Value can be manually set on the Input sheet in the 'Value at 1-7-2000 or Acquisition Price' cell.
If Costs and/or Revenues are 'Plus Tax' or 'Inclusive of Tax', the single default tax rate is applied to all those Costs and/or Revenues.	Tax on individual Costs and/or Revenues items can be changed on the Input sheet in the 'GST/VAT' column to either 'N' (tax exempt) or to a manual percentage rate.
All Tax Credits are reclaimed in the same month as the cost is paid.	The reclaim timing can be changed in 'Preferences   Taxation   Liabilities and Reclaims'
All Tax Liabilities are paid in the same month as the revenue is received.	The liability timing can be changed in 'Preferences   Taxation   Liabilities and Reclaims'
Land Acquisition	
Land Purchase only consists of one optional deposit paid upfront and one settlement that is paid at the user defined date.	The Land Purchase can be split into multiple payments by inputting amounts in 'Payment 1', 'Payment 2', etc in the Land Purchase section of the Input sheet.
Stamp Duty is paid at the time of the land sale.	The Stamp Duty assumption can be manually set on the Input sheet in the

## 6.2 Set Preferences

It is recommended that before entering any data in the 'Input' sheet, the user set their preferences. This can be done by:

- Clicking on [Preferences]  on the [Ribbon Menu](#) or [Quick Access Toolbar](#),
- Pressing the [F12] key.

## 6.3 Inputting Data

Enter data into input cells with a font colour of blue or green. Fixed cells (non input) have a black font colour. Since the worksheets are protected and locked, the model will only allow you to enter into the relevant input cells.

Input Cells
<p><b>Blue Font Cells:</b> Cells with blue font are the main input cells in the program.</p> <p><b>Green Font Cells:</b> Cells with green font relate to presales and are not relevant if you are not taking presales into account.</p> <p><b>Purple Font Cells:</b> Cells with purple font relate to inputs that are entered via a list selector. When selecting the cell, a drop-down arrow will appear. Click the arrow and a list of options for that input cell will be displayed.</p>
Start and Span
<p>For every payment and revenue it is necessary to put a start date and span period, or else the program will not add the payment to the cash flow.</p> <ul style="list-style-type: none"> <li>• The <b>Start Date</b> must be a number between zero (0) (which represents the first or current period) or an applicable letter (i.e. "L" for land costs or "C" for Professional Fees).</li> <li>• The <b>Span Period</b> must be greater than but not equal to zero.</li> </ul> <p>The start and span numbers must not add up to more than the maximum time periods in the model - or else you will exceed the program's limits.</p>

## Formatting Cells

When certain input worksheets are activated, a 'Formatting' menu will appear. It allows the user to apply simple formatting such as bold fonts and coloured cells in the 'Code', 'Stage' and 'Description' input cells for each line item.

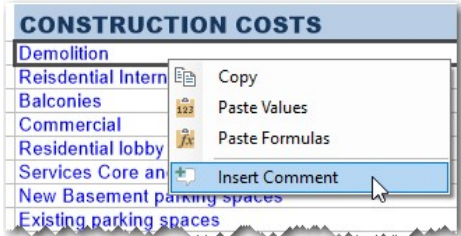
The screenshot displays the ARGUS EstateMaster software interface. At the top, there is a menu bar with options: File, Edit, Tools, Office Links, Sheets, Zoom, Data, and Windows. The 'Formatting' menu is highlighted in the 'Windows' section. Below the menu bar, the 'EstateMaster' logo is visible, along with 'Development Feasibility' and 'MAIN INPUT'. The main window shows a table titled 'CONSTRUCTION COSTS' with columns: Code, Stage, Description, Cost Type, Units, Base Rate / Units, Escalate (E,R,N)1, and S-Curve. The table contains data for two stages: Stage 1 and Stage 2. A red arrow points from the 'Formatting' menu to the 'Description' column of the table. A red bracket highlights the 'Description' column, and a text box below it states 'Can apply basic formatting to these inputs'.

Code	Stage	Description	Cost Type	Units	Base Rate / Units	Escalate (E,R,N)1	S-Curve
-	-	Stage 1	-	-	-	-	-
4002-1	1	Principal Contractor	-	27,915	800	E	S
4003-1	2	Temporary Hoarding	-	1	120,000	E	S
4004-1	3	Bulk Earthworks	-	1	800,000	E	S
4005-1	4	Dewatering	-	1	350,000	E	S
4006-1	5	Shoring & Piling	-	1	800,000	E	S
-	-	Stage 2	-	-	-	-	-
4002-2	2	Principal Contractor	-	32,540	850	E	S
4003-2	3	Temporary Hoarding	-	1	140,000	E	S
4004-2	4	Bulk Earthworks	-	1	800,000	E	S

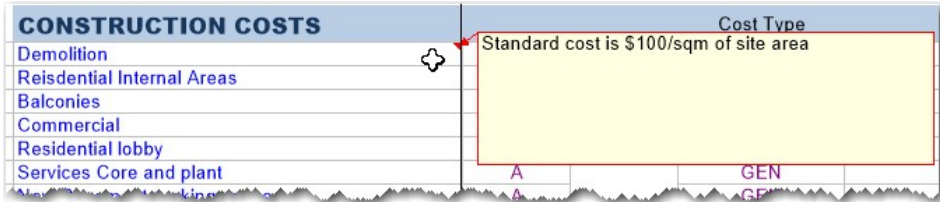
Can apply basic formatting to these inputs

Cell Comments

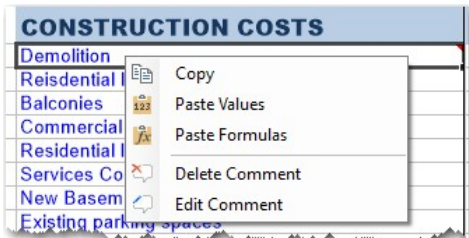
In addition to custom formatting, the 'Code', 'Stage' and 'Description' input cells also support the ability to insert Cell Comments. By right-clicking any of these cells, an 'Insert Comment' button will appear, allowing the user to insert a maximum 255 character comment in that cell.



Once a comment has been inserted, a red indicator will appear in the top-right of the cell, and when it is hovered over, the comment will appear (Please Note: a frozen pane may cause a comment to not or only partially appear).



Any cell that has a comment, will then have an 'Edit' and 'Delete' option available in the right-click menu.





## 6.4 Project Introduction

When you open an ARGUS EstateMaster DF Lite file it will open on the 'Intro' sheet,

Input preliminary information such as the project title, address, etc in the cells shown in blue font. These cells are only text cells and have no impact on the cash flow calculations.

### Mandatory Inputs

There are mandatory input cells on the Introduction Worksheet. The model will not allow you to save the project unless these cells have information inputted into them.

DEVELOPMENT FEASIBILITY LITE Project Introduction	
Project Number	Project Number
Project Name	Project Title
Street Address	Address
City/Suburb	City/Suburb
State/County	State/County
Zip/Post Code	Zip/Post Code
Country	Country
Account Code	Account Code
Prepared By	Report Prepared By
Prepared For	Report Prepared For
Developer	Enter Developer Name

Mandatory Inputs are highlighted in red

- Project Name** (Mandatory) Enter the name of the project that the property belongs to. 'Project' may be interpreted as a 'development project', an 'investment project', a 'valuation project', etc.
- Project Number** (Mandatory) Enter the unique project number related to the project.
- Account Code** (Optional) Enter in the unique reference code that this project belongs to in your accounting system (if applicable).  
It may be the same as the Project Number.
- Street Address, City/Suburb , Zip/Post Code, State/County and Country** (Optional) Enter the physical address of the subject property.
- Prepared By** (Optional) Enter in who this report was prepared by.
- Prepared For** (Optional) Enter in who this report was prepared for.
- Developer** (Optional) Enter the name of the developer.



## 6.5 Preliminary

Cash Flow Title	Option 1		Description of Option/Stage	All Stages
Date of First Period:	Jun-2016			
Cash Flow Rest Period:	Monthly			
Project Size (a)	116,350.00	Sqm		
Project Size (b)	179.00	lots		
Site Area	14.00	Ha	Plot Ratio	0 :1
	Type	Miscellaneous		
	Status	Under Review		

- Cash Flow Title** (Mandatory) Enter the name of the project that the property belongs to. 'Project' may be interpreted as a 'development project', an 'investment project', a 'valuation project', etc.
- Description/Option/Scenario** (Mandatory) Enter the description of the option, scenario or stage of the development.
- Date of First Period** (Mandatory) Enter the date of the first period in the cash flow. The first period is time period Zero (0).
- Cash Flow Rest Period** The cash flow rest period (monthly, quarterly, half-yearly or yearly) is set using the [Preferences](#).
- Enter Project Size** (Optional) Project size relates to the size of the developable area, land area, gross building area, net lettable area, gross floor area or number of lots, dwellings, apartments, etc. You may enter any type of measurement to summarise the development. These do not affect the cash flow and are only used for reporting purposes on the 'Summary' sheet.
- Enter Site Area** (Optional) Enter the land area based on the units of measurement in the list selection (purple font cell).
- Floor Area Ratio** (Optional) Select from the list the appropriate terminology to be used for a floor area ratio and then enter the ratio to calculate a Gross Floor Area from the given Site Area.
- Type** (Optional) Nominate the type of development from the list selection (purple font cell). This is useful for distinguishing different development options.
- Status** (Optional) Nominate the status of the project to identify at what stage of the analysis it is at.

## 6.6 Taxation (GST,VAT,etc)

The options for GST/VAT are set using the Preferences.

### Tax Liability Calculation Method

The program allows for 4 calculation methods:

- **AUTO - General Tax Rule:** The program automatically calculates the GST/VAT liabilities and credits depending on what the user entered into the GST/VAT cell for each cost and revenue line item.
- **Margin Scheme with Valuation (GST Model Only):** The user is prompted to enter the margin value for the calculation of the GST liability. The program will then automatically calculate the GST liabilities and credits depending on what the user entered into the GST cell for each cost and revenue line item.

- **Margin Scheme with % Cost Completed 1-7-2000:** Based on the user's inputs in the cost sections, the model will determine by default the % of costs that have been incurred before 1-7-2000. It then applies the Margin Scheme with Valuation calculation to determine input credits and liabilities.
- **Manual Input of Liability:** The program automatically calculates the GST/VAT credits depending on what the user entered into the GST/VAT cell for each cost line item, but the user must manually input the lump sum liability with start and span dates.

## Tax Rates

The program allows for up to 3 different default GST/VAT rates. In the GST/VAT cell for each line item, the user may enter:

- **A, B or C:** To correspond with the different default rates entered (if Multiple Rate option is selected in the Preferences).
- **Y or N:** Y will implement the rate entered in the GST/VAT rate cell of the Input Sheet and N will be 0%.
- **%:** If a user requires a GST/VAT rate that is not in either A, B or C, then they may enter the rate manually as a percentage in the GST/VAT cell for any line item.

## Timing

The Preferences can also allow the user to nominate the delay between expenditure of costs and the reimbursement of the GST/VAT credits and the delay between receipt of revenues and the payment of the GST/VAT liabilities for the developer, such as:

- Reclaimed/Paid in the same month, 1 month or 2 months later.
- Reclaimed/Paid bi-monthly or quarterly.
- Reclaims offset against the GST/VAT liability at sale.
- Calculated but not reclaimed in the cash flow (input credits only).

	A or Y	B	C	N
Goods and Services Tax Rate	10.00%	12.50%	20.00%	0.00%
Value at 1-7-2000 or Acquisition Price	20,000,000			
Percent of Cost Completed at 1 July 2000	0.0%			
Percentage of Sale Price Withheld by Purchaser	7.00%	Start	Span	%Owner
GST Cost Lump Sum Amount	10,000	12	6	-

### Tax Rate (Optional)

The program allows for up to 3 different default GST/VAT rates. In the GST/VAT cell for each line item, the user may enter:

- **A, B or C:** To correspond with the different default rates entered (if Multiple Rate option is selected in the Preferences).
- **Y or N:** Y will implement the rate entered in the GST/VAT rate cell of the Input Sheet and N will be 0%.
- **%:** If a user requires a GST/VAT rate that is not in either A, B or C, then they may enter the rate manually as a percentage in the GST/VAT cell for any line item.

**Value at 1-7-2000 or  
Acquisition Price** (Optional)

You may enter either a valuation figure or leave the default formula in the cell, which is the maximum of land purchase price or costs spent up to the GST commencement Date (1/7/2000).

This is only relevant if the 'Margin Scheme with Valuation' option is selected in the [Preferences](#).

**Percent of Cost Completed at  
1st July 2000** (Optional)

You may enter either a percentage or leave the default formula in the cell. The default is based on the user's inputs in the cost sections and the % of costs that have been incurred before 1-7-2000. It then applies the Margin Scheme with Valuation calculation to determine input credits and liabilities.

This is only relevant if the 'Margin Scheme with % Cost Completed 1-7-2000' option is selected in the [Preferences](#).

**Percentage of Sale Price  
Withheld by Purchaser** (Optional)

When the Margin Scheme ['Margin Scheme' Tax Liability Calculation Type](#) is adopted, enter the default percentage of the Sale Price that is initially withheld by the Purchaser at settlement.

This will be applied to all Sales line items where 'Y' has been set for the 'Withheld by Purchaser' input.

GST	
Included on Sales	Withheld by Purchaser
Y	Y
Y	Y
Y	N
Y	N

Note: This will not change the total Tax Liability that is calculated on a Margin Scheme basis:

- If the Margin Scheme logic calculates a tax rate that is lower than this default percentage rate (i.e. the purchaser has withheld/remitted a tax amount that is higher than the eventual tax liability on a Sale line item), the developer will receive a credit for the difference.
- If the Margin Scheme logic calculates a tax rate that is higher than this default percentage rate (i.e. the purchaser has withheld/remitted a tax amount that is lower than the eventual tax liability on a Sale line item), the developer will have an additional tax liability for the difference.

**Lump Sum Amount** (Optional)

The program automatically calculates the GST/VAT credits depending on what the user entered into the GST/VAT cell for each cost line item, but the user must manually input the lump sum liability with start and span dates.

This is only relevant if the 'Manual Input of Liability' option is selected in the [Preferences](#).

## 6.7 Land Purchase and Acquisition Costs

Land Purchase Price	20,000,000		
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	% of Land Purchase Price % paid	Amount	AND/OR Lump Amount	Month Start	Month Span	Cash Flow Period	Add GST on Land Price? Reclaim All After First Land Payment	Y
Deposit in Trust Account <sup>1</sup>	0.00%	-	-	0	-	-		
Payment 1	10.00%	2,000,000	-	0	1	Jun-16 - Jun-16		
Payment 2	30.00%	6,000,000	-	11	1	May-17 - May-17		
Payment 3	40.00%	8,000,000	-	19	1	Jan-18 - Jan-18		
Payment 4	0.00%	-	-	0	1	Jun-16 - Jun-16		
Settlement (Balance)	20.00%		4,000,000	27	1	Sep-18 - Sep-18		
Stamp Duty <sup>1</sup>	NSW		1,085,490	0	1	Jun-16 - Jun-16		
Interest on Deposit in Trust Account	0.00%	Interest from deposit shared between parties						
Profit Share to Land Owner	0.00%	Paid progressively as project makes a profit.						

### Land Purchase Price (Optional)

Input the land purchase price in the second input item. It is not necessary to input a land purchase price if you are trying to determine the residual land value of the development, you will however need to input settlement dates for the residual land value to be calculated at.

### Deposit and Payments (Optional)

You can stage your land acquisition payments - deposit plus multiple staged payments either as a percentage and/or an amount. Each payment is a transfer of funds from the Developer to the Land Owner. Note that Deposit in a trust account is different from a payment because the land owner does not receive it until settlement or the first payment date.

### Stamp Duty (Optional)

The automatic stamp duty is calculated for the total purchase price. An option in the [Preferences](#) is available to select whether stamp duty is calculated on the land including or excluding GST/VAT. You will need to input the start and span dates for the payment of stamp duty.

If several acquisitions are involved then you should set the automatic stamp duty to NIL and manually calculate each stamp duty payment and enter them in 'Other Acquisition Costs'.

### Interest on Deposit in Trust Account (Optional)

Interest may be earned on that deposit during the time it sits in the trust account and the interest is divided evenly between the seller (Land Owner) and the buyer (Developer). Both the deposit percentage and interest on deposit are optional inputs.

### Profit Share to Land Owner (Optional)

You can also nominate a percentage of your development profit to be paid to the land owner at the completion of the project. By entering a percentage for profit share, it will impact your performance indicators and risk assessment, depending on what option you nominate in the [Preferences](#) for the calculation of Development Profit - Gross (before profit share) or Net (after profit share).

## Other Acquisition Costs

Other Acquisition Costs	% of Land Price inc Tax % paid	Amount	AND/OR Lump Amount	Month Start	Month Span	Cash Flow Period	Add GST
Legals	1.00%	200,000	-	L	-	Jun-16 - Sep-18	Y
Valuation	0.00%	-	55,000	1	1	Jul-16 - Jul-16	Y
.	0.00%	-	-	0	-	-	Y
.	0.00%	-	-	0	-	-	Y
.	0.00%	-	-	0	-	-	Y

**% Paid and Lump Amount**  
(Optional)

For other acquisition costs, such as legal fees, survey costs, etc, you may elect to either enter:

- A percentage of the land's purchase price, and/or
- A lump sum amount.

If entering a % of the land price and running the model in either GST or VAT mode then:

- The cost will be based on the land price excluding GST/VAT when using the General Tax Rule.
- The cost will be based on the land price including GST when using the Margin Scheme (GST Mode only).

**Start and Span** (Mandatory)

For each item's Start and Span, you have the following options:

- Enter a number to nominate the start and span manually, or
- Enter "L" as the start date to have the cost paid pro-rata with land payments. If "L" is chosen, the span date is ignored.

**GST/VAT** (Optional)

Select "Y" or "A", "B", or "C" in the GST/VAT column if the cost is GST/VAT inclusive and the developer will claim a percentage of the cost as an input credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the cost entered to include tax in the cash flow and reclaim tax credits.
- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits based on the cost amount entered.

Start and Span	
For every payment and revenue it is necessary to put a start date and span period, or else the program will not add the payment to the cash flow.	
<ul style="list-style-type: none"> <li>• The <b>Start Date</b> must be a number between zero (0) (which represents the first or current period) or an applicable letter (i.e. "L" for land costs or "C" for Professional Fees).</li> <li>• The <b>Span Period</b> must be greater than but not equal to zero.</li> </ul>	
The start and span numbers must not add up to more than the maximum time periods in the model - or else you will exceed the program's limits.	

## 6.8 Cost Escalation Rates

	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23	Jun-24	Jun-25
Professional Fees	2.50%	2.50%	2.50%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Construction Costs	2.50%	2.50%	2.50%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Statutory Fees	2.50%	2.50%	2.50%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Land Holding Costs	2.50%	2.50%	2.50%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Selling and Leasing Costs	2.50%	2.50%	2.50%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Finance Costs	2.50%	2.50%	2.50%	2.50%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

Escalation Rates can be defined for different categories of costs in the escalation table. Escalation rates can be set up in different ways:

- Either on a **Periodic Compounded Escalation** basis (e.g. 5% per annum, which equates to 0.41% compounded monthly) or **Annual Stepped Escalation** basis (e.g. 5% per month for the year).

- As a **Positive** (inflation) or **negative** (deflation) percentage.

Please note, when entering a cost that is a percentage of another cost item, it will be a percentage of the total escalated cost. Therefore, by entering an escalation for that cost item, it will be 'double escalated'.

Please refer to the [Preferences](#) on configuring the different escalation options.

## Application of Escalation Rates for Costs

The method of application of escalation can vary for each cost item. Below is the method of applying escalation rates.

- **E** = Escalates the cost to its start date;
- **R** = Escalates the cost to its start date and continues the escalation through the span period; and
- **N** = Does not apply escalation (this is the default if you leave the escalation input blank).

### Escalation Examples

Say there is a \$60,000 cost that starts in month 4 and has a 6 month duration and escalates 5% per annum. Using the different methods of escalation, the following cash flows would be created:

Current Amount	Month Start	Month Span	Current Amount (per Month)
60,000	4	6	10,000

Month 0	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9
5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
<b>Escalation Factor Compounded Monthly</b> (= Previous Months Escalation Factor x $(1+5\%)^{(1/12)}$ )									
100.00%	100.41%	100.82%	101.23%	101.64%	102.05%	102.47%	102.89%	103.31%	103.73%

Code	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9	Total
N	10,000	10,000	10,000	10,000	10,000	10,000	60,000
E	10,164	10,164	10,164	10,164	10,164	10,164	60,984
R	10,164	10,205	10,247	10,289	10,331	10,373	61,608

- When "E" is selected, the Month 4 Escalation Factor (101.64%) is applied to the non-escalated amount per month (10,000) for the entire span.
- When "R" is selected, the Month 4 - 9 Escalation Factors are applied to the non-escalated monthly amount (10,000) for that specific month.

## 6.9 Project Contingency

5.00%	of Project Costs and/or	500,000
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In this item you may put in a project contingency factor (or project reserve) as an amount and/or a percentage of development costs (inclusive of any GST/VAT), which are defined as:

- Professional Fees
- Construction Costs
- Statutory Fees

- PreSale Commissions (reported as a project cost).

This contingency cost is automatically paid pro-rata with the aforementioned development costs.

GST/VAT on Project Contingency	
There is no separate input for nominating whether GST/VAT is applied to Project Contingency - it is dependant on the costs that are a part of Project Contingency and whether they have GST/VAT on them.	
Since Project Contingency is based on various project costs, and all those costs may not necessarily always have GST/VAT on them, it gets the weighted average GST/VAT rate on all those items to forecast the GST/VAT on Project Contingency.	
For example, if the base GST/VAT rate was 10% and if half of the cost items excluded GST/VAT, then a background calculation will determine that the weighted average GST/VAT rate to apply to the Project Contingency is actually 5% (1/2 x 10%).	

## 6.10 Professional Fees

Description	Construct %	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)	S-Curve	Month Start <sup>2</sup>	Month Span	Cash Flow Period	Add GST
pre construction consultants	0.00%	1	500,000	E	E	1	12	Jul-16 - Jun-17	Y
stage 1 consultants	0.00%	1	100,000	R	-	12	8	Jun-17 - Jan-18	Y
stage 2 consultants	0.00%	1	100,000	R	-	20	8	Feb-18 - Sep-18	Y
stage 3 consultants	0.00%	1	100,000	R	-	28	8	Oct-18 - May-19	Y
	0.00%	-	-	-	-	0	-	-	Y
Development Management	2.00%	% of Project Costs (exc Land, Finance & T&E)				P2	-	Jul-16 - May-19	Y

### • % of Construction and/or Amount (Mandatory)

For each cost item it is mandatory to input:

- A percentage of total construction cost (excluding GST/VAT if applicable), and/or
- The number of units (e.g sqm) and base rate per unit (e.g \$/sqm).

If you do not input a number in the 'number of units' cell, the program will interpret the number as being zero (0) and consequently the cost will not be included in the cash flow. If you choose to enter the cost as a % of another cost this will not apply.

### Escalation (Optional)

You may elect to apply [escalation](#) on any cost items.

- Enter "E" to escalate to start, or
- Enter "R" to escalate to start and continue escalation through span period, or
- Leave blank or enter "N" to assume the cost is fixed, hence no escalation.

### S-Curve (Optional)

You may elect to span the cost payments evenly through the span period or apply a cumulative S-shape curve.

- Leave blank or enter "E" to evenly spread the cost, or
- Enter "S", to apply an S-Curve to the cost (You cannot modify the S-curve profiles in the ARGUS EstateMaster DF Lite version)

### Start and Span (Mandatory)

For each item's Start and Span, you have the following options:



### GST/VAT (Optional)

- Enter a number to nominate the start and span manually, or
- Enter "C" as the start date to have the cost paid pro-rata with construction costs. If "C" is chosen, the span date is ignored.

Select "Y" or "A", "B", or "C" in the GST/VAT column if the cost is GST/VAT inclusive and the developer will claim a percentage of the cost as an input credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the cost entered to include tax in the cash flow and reclaim tax credits.
- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits based on the cost amount entered.

### Development Management Fee (Optional)

Scroll down the last professional fee item to input a percentage for Development Management. Using the [Preferences](#), you can change the fee to be expressed as a percentage of either:

- Total Gross Sales Revenue,
- Total Net Sales Revenue (Gross Sales less Selling Costs),
- Total Project Costs including Land, or
- Total Project Costs excluding Land.

Project costs exclude finance costs and GST/VAT if applicable.

Development Management	2.00% % of Project Costs (exc Land, Finance & Tax)
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The Development Management Fee can also be spread in the cash flow in five different ways:

- Enter a start and span period manually.
- Enter "C" as the start date to have the cost paid pro-rata with Construction Costs.
- Enter "P1" as the start date to have the cost paid pro-rata with Project Costs (inc Land).
- Enter "P2" as the start date to have the cost paid pro-rata with Project Costs (exc Land).
- Enter "S" as the start date to have the cost paid pro-rata with Sales Settlements.

## 6.11 Construction Costs

Description	Cost Type	Units	Base Rate / Units	Escalate (E,R,N) <sup>1</sup>	S-Curve	Month Start	Month Span	Cash Flow Period	Add GST
stage 1	-	-	-	-	-	0	-	-	Y
block 1 apartments	-	43	35,000	-	S	12	8	Jun-17 - Jan-18	Y
block 2 apartments	-	30	35,000	-	S	12	8	Jun-17 - Jan-18	Y
.	-	-	-	-	-	0	-	-	Y
Construction Contingency		1,000,000	And / Or	5.00%	of Construction Costs (inc GST)				

### Amount and Start and Span (Mandatory)

For each cost item it is mandatory to input:



- The number of units (e.g sqm) and base rate per unit (e.g \$/sqm), and
- The start and span periods.

If any of the above are entered as zero (0), then the program will not include the cost in the cash flow.

#### Escalation (Optional)

You may elect to apply [escalation](#) on any cost items.

- Enter "E" to escalate to start, or
- Enter "R" to escalate to start and continue escalation through span period, or
- Leave blank or enter "N" to assume the cost is fixed, hence no escalation.

#### S-Curve (Optional)

You may elect to span the cost payments evenly through the span period or apply a cumulative S-shape curve.

- Leave blank or enter "E" to evenly spread the cost, or
- Enter "S", to apply an S-Curve to the cost (You cannot modify the S-curve profiles in the ARGUS EstateMaster DF Lite version)

#### Start and Span (Mandatory)

For each item, you must enter the start and span periods. If the span periods is zero (0) then the program will not include the cost in the cash flow.

#### GST/VAT (Optional)

Select "Y" or "A", "B", or "C" in the GST/VAT column if the cost is GST/VAT inclusive and the developer will claim a percentage of the cost as an input credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the cost entered to include tax in the cash flow and reclaim tax credits.
- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits based on the cost amount entered.

#### Construction Contingency (Optional)

Scroll down the last construction cost item to input a percentage for Construction Contingency (optional) as an amount and/or a percentage of construction costs (inclusive of any GST/VAT if applicable). This cost is automatically paid pro-rata with the construction costs.

Construction Contingency	5.00%	of Construction Costs and/or	1,000,000
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## 6.12 Statutory Fees and Contributions

Statutory Fees					This section heading can be customised			
Description	Units	Base Rate / Units	Escalate (E,R,N)	S-Curve	Month Start	Month Span	Cash Flow Period	Add GST
DA application / CC	1	80,000	-	-	4	1	Oct-16 - Oct-16	N
infrastructure levy	-	-	-	-	0	-	-	Y
stage 1	73	25,000	-	-	11	1	May-17 - May-17	N
stage 2	58	25,000	-	-	19	1	Jan-18 - Jan-18	N
stage 3	48	25,000	-	-	27	1	Sep-18 - Sep-18	N

**Amount and Start and Span**  
(Mandatory)

For each cost item it is mandatory to input:

- The number of units (e.g sqm) and base rate per unit (e.g \$/sqm), and
- The start and span periods.

If any of the above are entered as zero (0), then the program will not include the cost in the cash flow.

**Escalation** (Optional)

You may elect to apply [escalation](#) on any cost items.

- Enter "E" to escalate to start, or
- Enter "R" to escalate to start and continue escalation through span period, or
- Leave blank or enter "N" to assume the cost is fixed, hence no escalation.

**S-Curve** (Optional)

You may elect to span the cost payments evenly through the span period or apply a cumulative S-shape curve.

- Leave blank or enter "E" to evenly spread the cost, or
- Enter "S", to apply an S-Curve to the cost (You cannot modify the S-curve profiles in the ARGUS EstateMaster DF Lite version)

**Start and Span** (Mandatory)

For each item, you must enter the start and span periods. If the span periods is zero (0) then the program will not include the cost in the cash flow.

**GST/VAT** (Optional)

Select "Y" or "A", "B", or "C" in the GST/VAT column if the cost is GST/VAT inclusive and the developer will claim a percentage of the cost as an input credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the cost entered to include tax in the cash flow and reclaim tax credits.
- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits based on the cost amount entered.

## 6.13 Land Holding Costs

Description	No. Units	Base Rate /unit/term	Term <sup>1</sup>	Escalate (E,R,N)	Month Start	Month Span <sup>2</sup>	Cash Flow Period	Add GST
Rates and taxes	-	-	Y	-	0	-	-	Y
stage 1	73	190	Q	E	2	DS	Aug-16 - May-19	N
stage 2	58	190	Q	E	2	DS	Aug-16 - May-19	N
stage 3	48	190	Q	E	2	DS	Aug-16 - May-19	N

**Amount** (Mandatory)

For each cost item it is mandatory to input:

- The number of units (e.g sqm), and
- Base rate per unit per term (e.g \$/sqm/month), where the term is identified in the following input column.

If any of the above are entered as zero (0), then the program will not include the cost in the cash flow.

**Term** (Mandatory)

This is the payment frequency for the nominated amount:

- **M** = Monthly
- **BM** = Bi-Monthly
- **Q** = Quarterly
- **BA** = Bi-Annually
- **Y** = Yearly

**Escalation** (Optional)

You may elect to apply [escalation](#) on any cost items.

- Enter "**E**" to escalate to start, or
- Enter "**R**" to escalate to start and continue escalation through span period, or
- Leave blank or enter "**N**" to assume the cost is fixed, hence no escalation.

**Start and Span** (Mandatory)

For each item, you must enter the start and span periods. In the case of the span period you may elect to input a number span or the letters DS or DR.

- **DS** = The span period will indicate to the model that you would like to diminish the land holding costs proportionally with sales.
- **DR** = The span period will indicate to the model that you would like to diminish the land holding costs proportionally with the take-up of leases/rental income.

**GST/VAT** (Optional)

Select "Y" or "A", "B", or "C" in the GST/VAT column if the cost is GST/VAT inclusive and the developer will claim a percentage of the cost as an input credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the cost entered to include tax in the cash flow and reclaim tax credits.
- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits based on the cost amount entered.

## 6.14 Revenue Escalation Rates

Code	Category	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23	Jun-24	Jun-25
RS1	Residential - 1 Bedroom Units	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
RS2	Residential - 2 Bedroom Units	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
RS3	Residential - 3 Bedroom Units	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
RDD	Detached Dwellings Lots	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%

Escalation Rates can be defined for different categories of sales and rental revenue in the escalation table. Escalation rates can be set up in different ways:

- Either on a **Periodic Compounded Escalation** basis (e.g. 5% per annum, which equates to 0.41% compounded monthly) or **Annual Stepped Escalation** basis (e.g. 5% per month for the year).
- As a **Positive** (inflation) or **negative** (deflation) percentage.

Please refer to the [Preferences](#) on configuring the different escalation options.

## Escalation Rates

For each relevant category you may enter up to 10 years of escalation rates.

- **For Sales:** Escalation rates apply to end sale values from the first escalation month. Where the user has assumed pre-sales, escalation applies up to the exchange dates, otherwise it applies up to the settlement dates.
- **For Rents (Pre Lease):** Escalation rates apply to rental values from the first escalation month up to the lease start date. For escalation on rents during the lease period, refer to the rent review table in the [Rental input section](#).

## Code and Category

You have ability to define your own property categories (eg. "Residential") and codes (eg. "RS") for multiple escalation rates. There are 4 different property categories that can all have different escalation rates; the code for each property category is defined by the user (1-3 character length allowed). Negative escalation rates can be inputted.

## 6.15 Selling Costs

	Sales Commission	Sales Comm <sup>1</sup>	% of Comm. Pre-sales <sup>2</sup>	Deposits (% of Price) <sup>3</sup>	Add GST
RS1	Residential - 1 Bedroom Units	2.25%	50.00%	10.00%	Y
RS2	Residential - 2 Bedroom Units	2.25%	50.00%	10.00%	Y
RS3	Residential - 3 Bedroom Units	2.25%	50.00%	10.00%	Y
RDD	Detached Dwellings Lots	0.00%	0.00%	0.00%	Y

Pre-sale Comm are reported as a

Interest Rate on Deposits Invested in Trust Account	5.00%
% of Interest retained by Developer upon Settlement	50.00%

### Sales Commission (Optional)

For each relevant category you may enter sales commission. The first input column refers to sales commission as a percentage of End Sale Values that can be applied to:

- Revenue items in the 'Sales' input section.
- Capitalised Sales entered in the 'Tenants' section.

Select via the [Preferences](#) whether it the rate is applied to:

- Gross Sale Values (i.e sales price inclusive of any GST/VAT/Sales Tax)
- Net Sale Values (i.e sales price exclusive of any GST/VAT/Sales Tax)

### % of Commission at Pre-Sale (Optional)

The second input column (green font) is only relevant for pre-sales and refers to the proportion of sales commission that is paid at exchange date (date of pre-sale). Typically selling agents require a proportion of their commission to be paid on exchange of contracts.

### Deposit (Optional)

The third input column (green font) is only relevant for pre-sales and refers to the size of the deposits to be met by the end buyers. The model assumes that all pre-sale deposits are deposited in trust until settlement.

In addition to setting the deposit amount, you can nominate:

- Any interest earned on the deposit. The interest on deposits is calculated from the middle of the exchange period to the middle of the settlement period and spread evenly through the settlement period.
- The proportional split of the interest earned between the buyers and the seller (developer). By inputting 100% the developer would retain all the interest earned on the deposit. Typically contracts specify a 50:50 split.

**Report Pre-Sale Commissions as Project Cost** (Optional) Select via the [Preferences](#) to report all Commissions incurred at time of Exchange as either a positive Project Costs or a negative Revenue. This will impact how the Development Margin is reported, and where other cost items are a % of Project Costs.

## Other Selling Costs

Other Selling Costs	% of Gross Sales	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)	Month Start	Month Span	Cash Flow Period	Add GST
legals on sale	0.50%	-	-	-	S	1	Feb-18 - May-19	Y
marketing	0.00%	-	-	-	0	-	-	Y
stage 1	0.00%	73	3,000	E	5	12	Nov-16 - Oct-17	Y
stage 2	0.00%	58	3,000	E	13	12	Jul-17 - Jun-18	Y
stage 3	0.00%	48	3,000	E	21	12	Mar-18 - Feb-19	Y

**% Paid and/or Amount** (Mandatory) For each selling costs item, such as marketing, advertising, legals etc, it is mandatory to input:

- A percentage of gross sales (i.e sales price inclusive of any GST/VAT/Sales Tax), and/or
- The number of units (e.g lots) and base rate per unit (e.g \$/lot).

**Escalation** (Optional) You may elect to apply [escalation](#) on any cost items.

- Enter "E" to escalate to start, or
- Enter "R" to escalate to start and continue escalation through span period, or
- Leave blank or enter "N" to assume the cost is fixed, hence no escalation.

**Start and Span** (Mandatory) For each item, you must enter the start and span periods. In the case of the span period you may elect to input a number span or the letters S or E.

- Enter "S" to have the cost paid pro-rata with settlements or instalments (if using the [Sales Revenue Collection Profile](#) function), or
- Enter "E" to have the cost paid pro-rata with pre-sale exchanges (if used, otherwise it will be highlighted red).

If "S" or "E" is chosen, the span date is ignored.

**GST/VAT** (Optional) Select "Y" or "A", "B", or "C" in the GST/VAT column if the cost is GST/VAT inclusive and the developer will claim a percentage of the cost as an input credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the cost entered to include tax in the cash flow and reclaim tax credits.
- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits based on the cost amount entered.

## 6.16 Leasing Costs

Other Leasing Costs	% of Gross Rent	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)	Month Start	Month Span	Cash Flow Period	Add GST
Management Fees	5.50%	-	-	-	R	-	Jun-19 - May-20	Y
Outgoings	0.00%	1	1,200	-	36	12	Jun-19 - May-20	Y
.	0.00%	-	-	-	0	-	-	Y
.	0.00%	-	-	-	0	-	-	Y

**% Paid and/or Amount** (Mandatory) For other leasing costs that are not entered on the Tenants sheet, it is mandatory to input:

- A percentage of Total Gross Rents collected over the nominated lease terms for each Tenant. (i.e total gross rental income received inclusive of any GST/VAT/Sales Tax), and/or
- The number of units (e.g unit) and base rate per unit (e.g \$/unit).

**Escalation** (Optional)

You may elect to apply [escalation](#) on any cost items.

- Enter "E" to escalate to start, or
- Enter "R" to escalate to start and continue escalation through span period, or
- Leave blank or enter "N" to assume the cost is fixed, hence no escalation.

**Start and Span** (Mandatory)

For each item's Start and Span, you have the following options:

- Enter a number to nominate the start and span manually, or
- Enter "R" as the start date to have the cost paid pro-rata with rental income. If "R" is chosen, the span date is ignored.

**GST/VAT** (Optional)

Select "Y" or "A", "B", or "C" in the GST/VAT column if the cost is GST/VAT inclusive and the developer will claim a percentage of the cost as an input credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the cost entered to include tax in the cash flow and reclaim tax credits.
- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits based on the cost amount entered.

## 6.17 Tenants

### Rental Income

Description	Land Use Code	Units	Total Area	Current Rent	Outgoings and Vacancies			Pre-Commit Month	Lease Month Start	Lease Month Span	Escalated Rent at Lease Start /SqM/annum
			SqM	/SqM/annum	Amount /SqM/annum	% of Rent	Total Per Annum				
Ground Floor Café	RET	1	167	340	-	5.00%	2,839	-	22	12	340
Ground Floor Office	COM	1	706	340	10	0.00%	7,060	-	22	22	340

**Land Use Code** (Optional)

By detailing the land use code for a tenant, it will apply the following:

- **Escalation on rental income**, up until the lease start, based on the rates entered for that specific land use in the [Revenue Escalation](#) table.
- **Sales Commissions** for capitalised sales, based on the rates entered for that specific land use in the [Selling Costs](#) section.

If you neglect to enter a land use code, the rental and capitalised sales revenue will still be calculated, however:

- It will exclude escalations and sales commissions, and
- It will be shown as 'Not Classified' on the Summary Report rather than be grouped under a specific land use type.

**Units** (Mandatory)

The number of tenancies for that will share the same lease structure.

**Total Area** (Mandatory)

Enter the total size of tenancy (if multiple 'units' are entered in a line, then this is 'total' size of that quantity of tenancies) based on the unit of measurement from the list selector (purple font) such as number sqm, sqft, etc.

This information is used for further analysis on the Summary, Cash Flow (Stock Summary for Capitalised Sales) and Consolidate Reports (Yield Analysis).

**Current Rent** (Mandatory)

Enter in the current rent based on the unit of measurement selected and either as a weekly, monthly or annual rate (chosen from the list selector).

**Outgoings and Vacancies**  
(Optional)

You may select outgoing expenses and vacancy allowances either as:

- A lump sum per week/month/annum, and/or
- Percentage of gross rent.

Outgoings and Vacancies are shown as a 'Leasing Cost' in the Summary and Cash Flow reports are paid during the nominated lease start and span.

**Pre-Commitment** (Optional)

You may enter a lease pre-commitment period that is before the Lease Start month. When adopting a pre-commitment:

- Escalation on rental income will be applied up until the pre-commitment period only.
- A portion of the nominated Letting Fee can be paid at that point in time.



### Lease Start and Span (Mandatory)

To calculate a rental income stream, enter a lease start date and lease span period. If the span period is zero (0) then the program will not include the rental revenue in the cash flow.

Once the Current Rent and Lease Start is entered, the 'Escalated Rent as at the Lease Start' will be displayed. It is the Current Rent that has been escalated from the [Revenue Escalation](#) rates table. To escalate rents once the leases commence, use the Rental Review Escalation table.

Rental Review Escalation Rates by Year (Commence 1 year after Lease Start)									
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10 +
0.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%	4.00%
0.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%

### Rental Review Escalation (Optional)

For each tenant you may enter up to 10 years of rental review escalation rates. Escalation rates are applied on the anniversary month (Lease Start month) on a yearly basis (as opposed to cost escalation which is applied on each time period) and commence 1 year after Lease Start (ie the first 12 months of rent are calculated based on the rent value at the lease start date).

Rental Review Escalation is in addition to the [Pre-Lease Rental Escalation](#) that is calculated via the land use codes (ie RS1, COM, etc). It allows the user to enter in rent reviews during the lease period, whereas Pre-Lease Rental Escalation applies escalation to the current rent up until the lease start date.

Letting Fee			Incentives			Add GST	
% of Gross Rent	% paid at PreCommit	Total Amount	Rent Free Months	Fit out Cost	Month Start	on Costs	on Rents
5.00%	50.00%	2,839	2	-		N	N
0.00%	0.00%	-	-	50,000	20	N	N

### Letting Fee (Optional)

You may enter a letting fee expressed as a percentage of the gross annual rent. It is default to be paid in full at the start of the lease, otherwise you may elect to enter in a percentage that is paid at Pre-Commitment.

Letting Fees are shown as a 'Leasing Cost' in the summary and cash flow reports.

### Lease Incentives (Optional)

You may enter leasing incentives as:

- Rent Free Periods (calculated from the lease start date), or
- Fit-out Costs (calculated from the project start date to the start of the lease).

Lease Incentives are shown as a 'Leasing Cost' in the summary and cash flow reports.

### GST/VAT on Costs and Rents (Optional)

Select "Y" or "A", "B", or "C" in the GST/VAT column if the rents and leasing costs are GST/VAT inclusive and the developer will pay/receive a percentage of the revenue/cost as a tax liability/credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the rents and/or costs entered to



include tax in the cash flow and and reclaim tax credits (costs) or pay liabilities (rents).

- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits or pay liabilities based on the rent and/or cost amount entered.

## Capitalised Sales

Residual Cap. Rate	Pre-Sale Exchange Month	Settlement Month	Leasing Up Period Months Vacant	Discount Rate	Purchaser's Costs	GST Included on Sales <sup>1</sup>
6.50%	-	-	6	8.00%	2.75%	N
6.50%	22	27	-	0.00%	0.00%	N

### Residual Capitalisation Rate (Optional)

Entering a capitalisation rate credits the project with a terminal or residual value (i.e. sale revenue) at the end of the rental period (lease start plus span) or at the optional Settlement date (which takes precedence over lease start + span).

The Capitalised Value is calculated by the following formula:

**Capitalised Value** = Net Rental Income / Residual Capitalisation Rate

Where:

Net rental Income = Gross Rental Income less GST/VAT, Outgoings and Vacancies. Letting Fees and Incentives are not capitalised and therefore do not impact then Capitalised Value.

Residual Capitalisation Rate = A capitalisation rate (also now as 'Yield') that has been adopted from comparable evidence and research.

If there no actual rental income to be received by the developer for a specific tenancy (e.g it is not leased out or is sold on completion) and you only want to indicate a capitalised sale, the lease span should be left at ZERO and the capitalised value is calculated at the lease start (unless a Settlement date later than the lease start is entered).

### Pre-Sale Exchange (Optional)

You may enter a Pre-Sale Exchange date for capitalised sales. If it is adopted, you should be aware of the following:

- Any revenue escalation selected for that sale item will only apply up to the date of exchange. If no pre-sale date is entered then the escalation rates apply up to the date of settlement (lease start plus span or at the optional Settlement date, whichever is later).
- No capitalised sales revenue is actually collected by the developer until settlement. At pre-sale exchange, any [deposit](#) that is paid by the buyer is actually paid into a trust account and is not received by the developer until settlement.
- Any deposits collected and invested in the trust account can earn [interest](#) at a user-defined rate.
- The dates entered for the pre-sale exchange will impact the 'Sales Summary' on the Stock Summary report on the Cash Flow sheet.

**Settlement** (Optional)

This is used to nominate a settlement date (i.e. when the terminal capitalised sale value is accounted for in the cash flow). If this is left as zero, then the end of the lease start and span will be used as the settlement.

You should be aware of the following in relation to settlements:

- If the user has adopted pre-sale exchanges for a sale item and has elected to earn interest on any deposits collected at pre-sale, the interest earned will be apportioned between the developer and purchaser at time of settlement.
- The dates entered for the settlements will impact the 'Handover Summary' on the Stock Summary report on the Cash Flow sheet.

**Leasing Up Period / Letting Void** (Optional)

This allows the user to make an adjustment to the capitalised end sale value to take into account a known or expected vacancy period. Entering a Leasing Up Period (also known as 'Letting Void') requires two optional inputs:

- **Period Vacant:** Nominate the duration of the letting up (known/expected vacancy) period. The value of that vacancy is then determined by the following formula: Period Vacant x Forecasted Rental Income per Period
- **Discount Rate:** Given that the leasing up period may occur over more than one period, its 'present value' (as at the date of sale) can be calculated by adopting a discount rate.

The escalated end sale value will then be adjusted by the equivalent rental value (discounted by the optional discount rate).

For example: If you were to sell an office building that has a current rental of \$100k per annum on a capitalised basis for say \$1mil, and there is a known vacancy at the time of sale (e.g it is vacant for the next 6 months), then you can enter in '6' as the 'Months Vacant' period. The capitalised value of \$1mil will actually be reduced by \$50k (being 6 months rent), therefore the adjusted end sale price will be \$950k. If a discount rate has been adopted (say 14%), then the present value of the \$50k over 6 months will be calculated at approx \$48k, therefore the adjusted capitalised value in that instance will be approx \$952k.

**Purchasers Costs** (VAT mode only)

'Purchasers Costs' are calculated on the escalated gross end sale value and take into consideration items such as Stamp Duty, Legal and Agency Fees and Survey Fees. This input is mainly used in the UK property market. If it is used, Purchasers Costs should be factored into the Residual Capitalisation Rate.

**GST/VAT on Sale** (Optional)

Select "Y" or "A", "B", or "C" in the GST/VAT column if the revenue is GST/VAT inclusive and the developer will pay a percentage of the revenue as a tax liability.

## 6.18 Sales

Description	No. Units	Total Area SqM	Current Sale Price	Sales Calc Method	Pre-Sale Exchange		Settlements			Sales Rate Units / SqM per Month	GST		Land Use Code	Revenue Collection Profile
					Month Start	Month Span	Month Start	Month Span	Cash Flow Period		Included on Sales	Withheld by Purchaser		
Stage 1	-	-	-	Per Unit	0	-	0	-	-	-	Y	N	RS1	-
block 1 apartments	43	4,730	220,000	Per Unit	6	12	20	1	Jul-17 - Jul-17	3.58	Y	N	RS2	-
block 1 apartments	30	3,300	220,000	Per Unit	0	-	20	8	Jul-17 - Feb-18	3.75	Y	N	RS2	1
	-	-	-	Per Unit	0	-	0	-	-	-	Y	N	RS2	-
Stage 1	-	-	-	Per Unit	0	-	0	-	-	-	Y	N	RS2	-
block 1 apartments	14	4,900	310,000	Per Unit	6	12	28	1	Mar-18 - Mar-18	1.17	Y	N	RS2	-
block 1 apartments	7	2,450	310,000	Per Unit	0	-	28	8	Mar-18 - Oct-18	0.88	Y	N	RS2	2

### Units and Area (Mandatory)

For each sale item it is mandatory to enter:

- The total quantity (no. of lots, units, etc), and
- The total size of all sale items for that line item (sqm, sqft, ha, etc) based on the unit of measurement from the list selector (purple font), such as number of units or sqm, NLA, GFA, etc.

This information is used for further analysis on the Summary, Cash Flow (Stock Summary) and Consolidate Reports (Yield Analysis).

### Current Sale Price (Mandatory)

This is the current non-escalated sale price. This must be based on either the Units or Area measurement (ie \$/unit or \$/area)

### Sale Calc Method (Mandatory)

Indicate the method of calculating the total sale value. It is based on how the 'Current Sale Price' has been entered:

- If 'Current Sale Price' has been entered in as a \$/sqm, then select "Per Sqm" from the list selector in the Sales Rate column. The unit of measurement (sqm, sqft, etc) is based on the option selected in the 'Total Area' column.
- If 'Current Sale Price' has been entered in as a lump amount, then select "Per Unit" from the list selector.

### Pre-Sale Exchange Start and Span (Optional)

You may enter an exchange start date and span period, which is relevant only for pre-sales (items sold before completion).

If you nominate a pre-sale exchange for a sales line item, the program assumes all items in that line are pre-sold. Alternatively, you can split sales into two line items if you wish - those pre-sold and those sold after completion of development (i.e pre-sale exchange is ignored).

You should be aware of the following when adopting pre-sale exchanges:

- Any revenue escalation selected for that sale item will only apply up to the date of exchange. If no pre-sale date is entered then the escalation rates apply up to the date of settlement.
- Unless the [Sales Revenue Collection Profile](#) feature is used, no revenue is actually collected by the developer until settlement. At pre-sale exchange, any [deposit](#) that is paid by the buyer is actually paid into a trust account and is not received by the developer until settlement.
- Any deposits collected and invested in the trust account can earn [interest](#) at a user-defined rate.

	<ul style="list-style-type: none"> <li>The dates entered for the pre-sale exchange will impact the 'Sales Summary' on the Stock Summary report on the Cash Flow sheet.</li> </ul>
<b>Settlement Start and Span</b> (Mandatory)	<p>It is mandatory to enter the settlement date and span period for each sale item, otherwise the program will not include the revenue in the cash flow.</p> <p>You should be aware of the following in relation to settlements:</p> <ul style="list-style-type: none"> <li>If the user has adopted pre-sale exchanges for a sale item and has elected to earn interest on any deposits collected at pre-sale, the interest earned will be apportioned between the developer and purchaser at time of settlement.</li> <li>When using the <a href="#">Sales Revenue Collection Profile</a> feature, the final payment/instalment to the developer is made at the earliest milestone reached between the final nominated sales collection profile instalment and the settlement date.</li> <li>The dates entered for the settlements will impact the 'Handover Summary' on the Stock Summary report on the Cash Flow sheet.</li> </ul>
<b>GST/VAT</b> (Optional)	<p>Select "Y" or "A", "B", or "C" in the GST/VAT column if the revenue is GST/VAT inclusive and the developer will pay a percentage of the revenue as a tax liability.</p>
<b>Withheld by Purchaser</b> (Optional)	<p>If there is a Tax liability for a Sale line item, indicate whether it is being withheld by the Purchaser:</p> <ul style="list-style-type: none"> <li><b>Y:</b> Yes, Purchaser will withhold tax component of gross sale price, and remit it to the relevant taxation authority. When this option is selected:             <ul style="list-style-type: none"> <li>The settlement amount received by the developer from the purchaser will be reduced, and it be reflected in the Summary and Cash Flows reports.</li> </ul> </li> <li><b>N:</b> No, Purchaser will no withhold tax component of gross sale price. The settlement amount paid to the developer will include tax (if applicable), and it will be the developer's responsibility to remit any tax liability to the relevant taxation authority.</li> </ul> <p>This is only relevant if the 'GST' Taxation Format is selected in the <a href="#">Preferences</a>.</p>
<b>Land Use Code</b> (Optional)	<p>By detailing the land use code for a sale item, it will apply the following:</p> <ul style="list-style-type: none"> <li><b>Escalation on sales</b>, based on the rates entered for that specific land use in the <a href="#">Revenue Escalation</a> table.</li> <li><b>Sales Commissions</b>, based on the rates entered for that specific land use in the <a href="#">Selling Costs</a> section.</li> </ul> <p>If you neglect to enter a land use code, the sales revenue will still be calculated, however:</p> <ul style="list-style-type: none"> <li>It will exclude escalations and sales commissions, and</li> </ul>

- It will be shown as 'Not Classified' on the Summary Report rather than be grouped under a specific land use type.

### Revenue Collection Profile

(Optional)

Enter a Profile Number defined in the [Sales Revenue Collection Profile](#) table. If this is left as Zero, then revenue is only received during the defined Settlement Start and Span dates.

This option is only available if the Sales Revenue Collection Profile feature is enabled via the [Preferences](#)

### Interpreting the Sales Rate

A 'Sales Rate' calculation is provided for each sale line item. It is calculated depending on how something is sold:

No. Units	Total Area Sqm	Current Sale Price	Sales Calc Method	Pre-Sale Exchange		Settlements		Sales Rate Units / Sqm per Month
				Month Start	Month Span	Month Start	Month Span	
-	-	-	Per Unit	0	-	0	-	-
43	4,730	220,000	Per Unit	6	12	20	1	3.58
30	3,300	220,000	Per Unit	0	-	20	8	3.75
-	-	-	Per Unit	0	-	0	-	-

- If a sale item is pre-sold (i.e. Pre-Sale dates are defined), then the model will display the 'Sales Rate' for the pre-sale span period (i.e the rate of sale by quantity or area per period)

In the example above, 35 units are pre-sold over a 6 month span, equating to a sales rate of 5.83 units per month (35 / 6)

- If a sale item is sold on completion (no Pre-Sale dates are defined), then the model will display the 'Sales Rate' for the settlement sale span period (i.e the rate of sale by quantity or area per period)

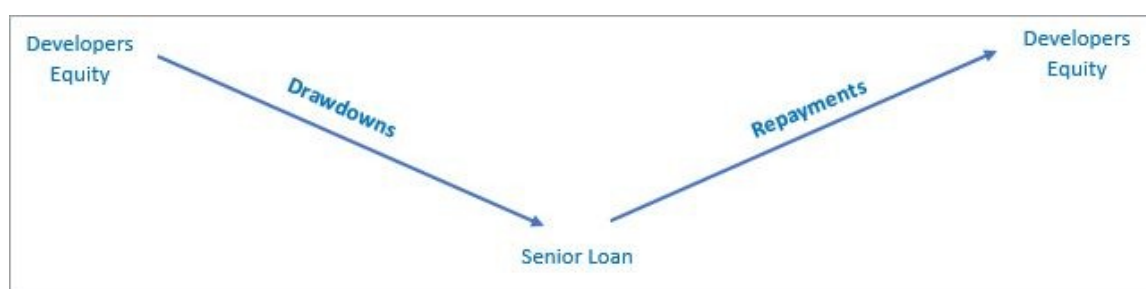
In the example above, 150 units are sold on completion over an 8 month span, equating to a sales rate of 18.75 units per month (150 / 8)

## 6.19 Financing

### Default Funding Priority

The ARGUS EstateMaster DF Lite accommodates up to 2 sources of financing - Equity and Debt. The program assumes the following default funding priority (this can be manually adjusted in the cash flow tables):

1. Equity is drawn down first as costs are expended.
2. Money is then borrowed from the Senior Loan (by default, acts as a Line of Credit facility).
3. As the project receives net revenue this reduces Senior Loan until the loan is fully paid.
4. Thereafter revenue pays back Equity.
5. Thereafter the project pays profit shares (if applicable) and then retains the balance as profit.



Default Funding Priority

### Funding Limits and Loan Ratios

Throughout the Finance Preferences, the user will have the ability to set:

- **Loan Facility Limits:** These are the defined drawdown limits for a loan, and
- **Loan Ratios:** The denominator for working out the % that is borrowed for reporting purposes only. It may be different to the Facility Limit.

It is therefore important to understand the options that are available for these preferences:

Option	Description	Facility Limits	Equity Ratios	Debt Ratios
Fixed Amount	The loan limit is manually entered on the Finance input section.	●	○	○
% of Purchase Price	A percentage of the Land Purchase price only, inclusive of GST/VAT.	●	●	●
% of Land Acquisition Costs	A percentage of the Land Purchase price and any associated acquisitions costs (Stamp duty, Legal Fees, etc), inclusive of GST/VAT.	●	●	●
% of Project Costs	A percentage of all Project Costs (exclusive of GST/VAT), which exclude Selling Costs, Leasing Costs, Interest Charges and Fees (e.g Application, Line and Standby).	●	●	●
% of Project & Finance Costs	A percentage of all Project Costs (exclusive of GST/VAT), which exclude Selling Costs and Leasing Costs but include Interest Charges, Application Fees and Line Fees.	○	●	●
% of Hard Costs	A percentage of costs that have defined as 'Hard Costs' as per the 'Global' section of the Finance Preferences.	●	●	●
% of Construction Costs	A percentage of total Construction Costs and Contingencies inclusive of GST/VAT.	●	●	●
% of Gross Sales	A percentage of Gross Sales Revenue (including Capitalised Sales) inclusive of GST/VAT/Sales Tax.	●	●	●
% of Sales (net of Tax)	A percentage of Sales Revenue (including Capitalised Sales) exclusive of GST/VAT/Sales Tax.	●	●	●
% of Sales (net of Selling Costs and Tax)	A percentage of Sales Revenue (including Capitalised Sales) exclusive of GST/VAT/Sales Tax and Selling Costs.	●	●	●
% of Value of Pre-Sales	A percentage of all Sales Revenue (including Capitalised Sales) that have been sold at a defined pre-sale exchange date.	●	●	●
% of Debt Funding	A percentage of total funds invested by all debt Lenders.	○	●	○
% of Net Profit	A percentage of total net development profit (after profit share has been paid out).	○	●	○

## Finance Preferences

Before you commence inputting finance information for your project you will need to setup the finance to suit your project.

You do this in the "Finance Preferences". See Preferences section for more details on how to do this.

### 6.19.1 Equity Inputs

Equity		
Developer's Equity Contribution	Fixed Amount	Percentage
Injected in total upfront.	2,000,000	0.00%

#### Developer's Equity Contribution

You can nominate an equity contribution by the Developer, either by a fixed amount or a on a percentage loan ratio, and can either be injected upfront or progressively when required. These options are set via the Finance Preferences.

Alternatively you can manually stage the equity injections/repayments in the cash flow table (click on the relevant button).

You cannot manually inject equity after the last date that the cumulative cash flow turns positive. Any date before then, you can put a:

- **Negative amount (repayment)**, where the equity owner is extracting equity from the project (i.e. equity owner cash inflow and project cash outflow), or
- **Positive amount (injection)**, where the equity owner is contributing to the project (i.e. equity owner cash outflow and project cash inflow).

## 6.19.2 Senior Loan Inputs

The Senior Loan is drawn down when all equity has been fully used.

Senior Loan		Description	Lender Name	Debt	Opening Balances
No Limit (use as overdraft facility)					-
Interest Rate		7.00% per annum Nominal - Capitalised (Compounded)			4,500
Fees		Amount	Percentage	Month Paid	
Application Fee		5,500	0.00%	2	-
Annual Line Fee		-	1.25%	Monthly	Paid in Arrears
Standby Fee			0.50%	Quarterly	Paid in Arrears
Maintain Leverage on Loan 4		20.00% % of Future Positive Net Cash Flows			-

### Facility Limit

The use of the facility limit can be changed via the Finance Preferences:

- **Used as an Overdraft Facility:** By default, this is a line of credit facility and there is no limit on the borrowed amount. No facility limit is required and the input is disabled.
- **Use Equity as the Overdraft Facility:** A facility limit can be set on the Senior Loan as a fixed amount, and then any additional funding is sourced from Equity.

The funds draw down for the Senior Loan are automatically progressively drawn down as and when required.

### Interest Rate

There is provision to nominate a per annum interest rate charged on the loan, and it can be manually varied for different periods in the cash flow tables.

### Fees

There are two types of fees that can be paid to a lender:

- **Application Fees:** These are a one-off payment and paid at the nominated period.
- **Line Fees:** These are a per annum amount and:
  - Charged and paid either monthly or quarterly, based on the selected option. (Note: The option to select Monthly/Quarterly payment frequency is only available when the cash flow rest periods of the model is set to 'Monthly')
  - Occur during the period that interest is due (i.e. in arrears)



- **Standby Fees:** These are entered as a percentage per annum rate, calculated on the undrawn loan amount, and:
  - Charged and paid in arrears either monthly or quarterly, based on the selected option. (Note: The option to select Monthly/Quarterly payment frequency is only available when the cash flow rest periods of the model is set to 'Monthly')
  - Occur until the entire Facility Limit of the loan is drawn down in full, or until the loan is repaid in full, whichever occurs first.

Note: If the loan is setup to be used as an overdraft facility, then these fees can only be entered as an amount, otherwise if a facility limit can be set, then they can also be entered as a % of the facility limit.

### Opening Balances

Enter in the opening Interest and Fee Balances for the Debt accounts.

These inputs can be used where:

- The funding facility is not solely used for this particular project, or
- The costs were incurred before the model's 'Date of First Period' (or Project Start).

## 6.19.3 Other Finance Costs

Financing Costs To be entered Inclusive of GST	No. of Units	Base Rate / Unit	Escalate (E,R,N)	Month Start	Month Span	Cash Flow Period	GST Included
Establishment Fee	1	12,000	-	2	1	Mar-19 - Mar-19	Y
Mortgage Duty	1	3,450	-	4	1	May-19 - May-19	Y
.	-	-	-	0	-	-	Y
.	-	-	-	0	-	-	Y

### Amount and Start and Span (Mandatory)

For each finance cost item such as application fees, legal fees, mortgage stamp duty, etc, it is mandatory to input:

- The number of units (e.g sqm) and base rate per unit (e.g \$/sqm), and
- The start and span periods.

If any of the above are entered as zero (0), then the program will not include the cost in the cash flow.

### Escalation (Optional)

You may elect to apply [escalation](#) on any cost items.

- Enter "E" to escalate to start, or
- Enter "R" to escalate to start and continue escalation through span period, or
- Leave blank or enter "N" to assume the cost is fixed, hence no escalation.

### GST/VAT (Optional)

Select "Y" or "A", "B", or "C" in the GST/VAT column if the cost is GST/VAT inclusive and the developer will claim a percentage of the

cost as an input credit.

- If the header shows 'Add GST/VAT' the model will automatically escalate the cost entered to include tax in the cash flow and reclaim tax credits.
- If the header shows 'GST/VAT Included', then the model will only reclaim tax credits based on the cost amount entered.

## 6.20 Project Hurdle Rates

Project Discount Rate (target IRR)	20.00%	per annum Nominal, on cash flow that includes financing costs but excludes interest.
Nominate an estimate of IRR	20.00%	per ann.
Developer's Target Dev. Margin	20.00%	on total development costs (inc selling costs).
Developer's Cost of Equity (for WACC)	0.00%	

### Project Discount Rate (Target IRR)

The discount rate or target IRR only affects three performance indicators on the 'Summary' sheet:

- Project Net Present Value (NPV),
- Residual Land Value (based on a Zero NPV), and
- Benefit Cost Ratio.

You can use the [Preferences](#) to change the discount rate calculation method (include or exclude finance costs and interest) and also the method of conversion from the annual discount rate to the monthly discount rate (quarterly or half yearly depending upon the rest period you selected).

### Nominate an Estimate of IRR

This is a number that you guess is close to the result of IRR. The model uses an iterative technique for calculating IRR. Starting with the estimate, it cycles through the calculation until the result is accurate within 0.00001 percent. If it can't find a result that works after 20 tries, the #NUM! error value is returned.

In most cases you do not need to provide the estimate for the IRR calculation. If it is omitted, it is assumed to be 0.1 (10 percent).

#### Important Note About Multiple IRRs:

- When cash flows of a project change sign more than once (e.g. cash outflow followed by cash inflows followed by cash outflow), there may be multiple (and technically valid and correct) IRRs for that cash flow.
- The IRR that ARGUS EstateMaster DF Lite will *attempt* to adopt, will be the one that is calculated using the user-defined 'guess rate' in the aforementioned input field.
- However, in the circumstance where such IRR calculation results in a #NUM! error value (cannot find a result after the iterative calculation process), ARGUS EstateMaster DF Lite will use different 'guess rates' in the background, until it finds a result.
- These start from 0%, and then using 3 different +ve and -ve percentages based on the user-defined 'guess rate'. For example, if the user-defined 'guess rate' of 20% cannot find a

result, then background process will attempt to find a result, using the following 'guess rates': 0%, 10% (1/2 of the user-defined 'guess rate'), -10% (the inverse of the previous 'guess rate'), 40% (2 x the user-defined 'guess rate'), -40% (the inverse of the previous 'guess rate'), 60% (3 x the user-defined 'guess rate') and -60% (the inverse of the previous 'guess rate').

- If a result is found using such process (most likely), this is the one that is reported in ARGUS EstateMaster DF Lite. However, if a result is still not found after this process, the IRR will be reported with an "N.A." value.
- A note will be displayed in this input section if multiple IRRs have been detected and/or an alternative guess rate was required to achieve a result.

PROJECT HURDLE RATES	
Project Discount Rate (Target IRR)	20.00% (per annum Nominal, on cash flow that includes financing costs but excludes interest and corp tax)
Weighted average rate of WACC	20.00% (per annum)
Developer's Target Dev. Margin	20.00% (on total development costs (inc. selling costs))
Developer's Cost of Equity (See WACC)	8.00%

\*\*\*Warning: An IRR on the following inputs may have been found to have more than one answer. That is different to the expected result. Summary: Project

### Developer's Target Margin

The Developers Target Development Margin is the required profit margin calculated on either total development costs net of selling costs or including selling costs, total sales and rental income or on total net sales proceeds. These options can be chosen on the 'Hurdle Rates' tab of the [Preferences](#).

The target margin is used to calculate the residual land value to achieve the desired profit margin (Developer Target Development Margin); it does not take into consideration the time value of money.

### Developer's Cost of Equity

Enter in the desired cost of the developer's equity.

This is used to calculate the [Weighted Average Cost of Capital](#) on the Summary Report

## 6.21 Manual Cash Flow Inputs

The Cash Flow sheet gives you the opportunity to manually input amounts in a cash flow table for the following items:

- **Financing:** Such as adjustments for equity drawdowns and repayments and interest rates variations for the loan facilities.
- **Discount Rate Variations**

### Financing

Manual input rows are readily available in the Financing component of the Cash Flow sheet to make adjustments to the following:

- Equity injections (positive) and repayments (negative).
- Periodic interest rate variations for the Senior Loan.

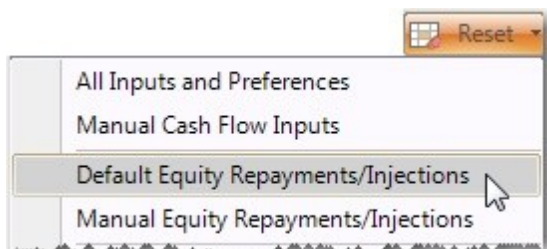
Equity				
Manual Adjustments (Inject + / Repay -)		100,000	50,000	0
Injects	150,000	100,000	50,000	-
Equity Repayment		-	-	-
Less Profit Share		-	-	-
Equity Balance	(36,364)	(100,000)	(150,000)	(150,000)

Manual Equity Injections and Drawdowns

Senior Loan - Lender Name				
Drawdown	(33,333)	(3,030)	(3,030)	(3,030)
Loan Interest Rate (%/ann)		7.00%	7.00%	7.00%
Interest Charged	(1,190)	-	(18)	(35)
Application and Line Fees			-	-

Manual Interest Rate Variations

If making manual adjustments in the Financing area, the 'Reset' function in the [Ribbon Menu](#) allows the user to toggle the rows between their default inputs or manual variations.



## Discount Rate

At the bottom of the Cash Flow sheet, there is provision to have a variable discount rate throughout the life of the cash flow.

<b>PROJECT IRR &amp; NPV</b>					
Cash Flow that includes financing costs but excludes interest and corp tax.		(1,005,000)	(188,012)	(12,893)	(833)
<b>Static Discount Rate (per ann. nominal)</b>	20.00%				
PV for each Month	51,152,157	(1,005,000)	(184,930)	(12,473)	(793)
NPV of Future Cash Flows		51,152,157	53,026,443	54,101,363	55,016,160
<b>Variable Discount Rate (per ann. nominal)</b>	20.65%	20.00%	20.00%	20.00%	25.00%
NPV (using weighted avg discount rate)	50,089,024				

Variable Discount Rate to provide an additional NPV

- The discount rate that was entered in the [Hurdle Rates](#) input section is known as the '**Static Discount Rate**' and that will form the basis of all IRR and NPV calculations on other reports, such as the Summary, Sensitivity and Probability reports. In addition, it will also be used to report the following in the Cash Flow:
  - The Present Value (PV) of net cash flow for each time period.
  - The Net Present Value (NPV) of all future cash flows at each time period.
- The Static Discount Rate then forms the starting point for the '**Variable Discount Rate**' inputs, where the user can manually adjust the discount rate up or down to reflect different levels of risk at different points in time in the project. Using the Variable Discount Rates entered by the user, a weighted average discount rate is calculated, and then it is used to calculate an NPV.

## 6.22 Taxes & Duties

It is recommended that the user regularly checks their relevant Statutory Revenue Office for recent changes to taxes and duties. ARGUS EstateMaster DF Lite has inbuilt Stamp Duty and Land Tax calculators based on tables for different regions that can be easily updated by the user when required.

Please Note: The software does not automatically update these table when the rates/thresholds change - this is the responsibility of the user to manually maintain.

### Updating the Stamp Duty and Land Tax Tables

- Click on the 'Taxes & Duties' worksheet tab.
- There will be tables for each region. Each table has the following columns:

- **Rating Land Value Thresholds:** The upper value of the dutiable land value range.
- **Tax Amount:** The fee that is payable in addition to the rate.
- **Rate:** The percentage marginal rate on the dutiable value of land.

### Stamp Duty Example

Say Stamp Duty is calculated as per the following rates:

- \$0 - \$14,000: \$1.25 for every \$100 or part of the dutiable value
- \$14,001 - \$30,000 \$175 plus \$1.50 for every \$100 or part, by which the dutiable value exceeds \$14,000
- \$30,001 - \$80,000 \$415 plus \$1.75 for every \$100 or part, by which the dutiable value exceeds \$30,000
- \$80,001 - \$300,000 \$1,290 plus \$3.50 for every \$100 or part, by which the dutiable value exceeds \$80,000
- \$300,001 - \$1m \$8,990 plus \$4.50 for every \$100 or part, by which the dutiable value exceeds \$300,000
- over \$1m \$40,490 plus \$5.50 for every \$100 or part, by which the dutiable value exceeds \$1,000,000

Rating Land Value Thresholds		Tax Amount	Rate
0	to 14,000	0	1.25%
14,001	to 30,000	175	1.50%
30,001	to 80,000	415	1.75%
80,001	to 300,000	1,290	3.50%
300,001	to 1,000,000	8,990	4.50%
1,000,001	and above	40,490	5.50%

### Land Tax Example

**If there is a tax free threshold** - this is indicated by entering '0's in the first row of a land tax table.

- Example: This year a \$368,000 threshold will apply to owners of liable land. The land tax rate will be \$100 plus 1.6% on the combined value of all taxable land in excess of \$368,000.

Rating Land Value Thresholds		Tax Amount	Rate
0	to 368,000	0	0.00%
368,001	to 2,250,000	100	1.60%
2,250,001	and above	30,212	2.00%

**If there is no tax free threshold** - this is usually indicated by entering only a % rate in the first row of a land tax table.

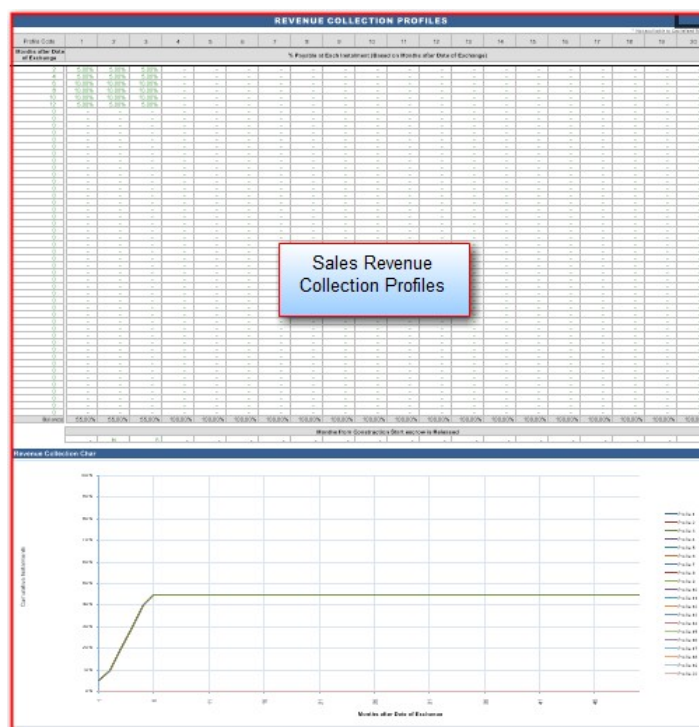
- Example: There is no threshold for land tax this year. Taxable land is assessed at the following rates:
  - Not more than \$75,000: 0.6%
  - Between \$75,001 and \$150,000: \$450 plus 0.89% on the taxable value that exceeds \$75,000
  - Between \$150,001 and \$275,000: \$1,118 plus 1.15% on the taxable value that exceeds \$150,000
  - More than \$275,001: \$2,555 plus 1.4% on the taxable value that exceeds \$275,000 Rating Land Value

Rating Land Value Thresholds		Tax Amount	Rate
0	to 75,000	0	0.60%
75,001	to 150,000	450	0.89%
150,001	to 275,000	1,118	1.15%
275,001	and above	2,555	1.40%

## 6.23 Profiles

The 'Profiles' tab contains the input tables for the following:

- [Sales Revenue Collection Profiles](#)



### 6.23.1 Sales Revenue Collection Profile

The Sales Revenue Collection Profile feature is enabled via the [Preferences](#). It allows you to set milestones for receiving multiple payment instalments from purchasers, either based on specific time periods in the cash flow, or on certain number of months after the Date of Exchange for each sale item. There are up to 6 different Sales Revenue Collection Profiles that can be set.

Profile Code	1	2	3	4	5	6
Specific Months in Cash Flow	% Payable at Each Instalment					
2	5.00%	15.00%	-	-	-	-
4	5.00%	-	-	-	-	-
6	10.00%	15.00%	-	-	-	-
8	10.00%	-	-	-	-	-
10	10.00%	5.00%	-	-	-	-
12	-	5.00%	-	-	-	-
0	-	-	-	-	-	-
0	-	-	-	-	-	-
0	-	-	-	-	-	-
Balance	60.00%	60.00%	100.00%	100.00%	100.00%	100.00%

Timing of Instalment

Instalment Percentages

Balance

### Timing of Instalment

The [Preferences](#) allows you to set whether instalments are base on:

- Specific Time Periods in the Cash Flow, such as a hard-coded time period (e.g Month 6, Month, 12, etc).
- A certain number of months after the Date of Exchange for each sale item.

When setting the instalment timings, each subsequent instalment must be later than the previous. There are up to 50 instalments that can be set.

### Instalment %

This is the % amount of the sale value that is paid by the purchaser and collected by the developer at the nominated instalment milestone.

### Balance

This shows the outstanding amount that is payable to the developer at Settlement for each sale item that applies that specific profile. However the actual settlement dates defined in the sales section take precedence and any future collection profiles (instalments set to occur after a settlement date) are ignored.

Once the profiles have been created, in the Sales input section, enter in 1 - 6 in the Revenue Collection Profile column.



SALES					
Description	Pre-Sale Exchange		Settlements		Revenue Collection Profile
	Month Start	Month Span	Month Start	Month Span	
stage 1	0	-	0	-	-
block 1 apartments	6	12	20	1	1
block 2 apartments	0	-	20	8	-
stage 2	0	-	0	-	-
block 3 townhouses	6	12	28	1	2
block 4 townhouses	0	-	28	8	-

Allocate Sales (which have Pre-Sale dates defined) to a specific Collection Profile

There are a few rules in relation to using this feature:

- A Sales Revenue Collection Profile can only be applied to a sale item if Pre-sale Exchanges start and span dates are set for that item.
- If a Sales Revenue Collection Profile is applied to a sale item, then any Pre-Sale Exchange Deposits and Interest on Deposits are ignored for that item.
- This functionality is not available for Capitalised Sales entered in the Tenants section.

### Collection Profile Examples

Say there are three a \$1,000,000 sales occurring as per the following collection profile, and the user has also nominated that there is a 10% Deposit payable on exchange, and that deposit earns interest at 5%:

Months in Cash Flow	4	5	6	7	8	9	10	18
Instalment %	20%	10%	10%	5%	10%	10%	5%	10%

Scenario	Pre-Sale Exchange				Settlement		Results
	Deposit	Interest on Deposit	Start	Span	Start	Span	
<b>Sale 1</b> Pre-Sale Exchange Start is before first instalment and Settlement is before last instalment.	10%	5%	2	4	14	6	<ul style="list-style-type: none"> <li>• No 10% deposit is collected from purchaser at month 2 and placed in a trust account to earn interest.</li> <li>• The first payment to the developer is made in month 4 as per collection profiles.</li> <li>• Outstanding amounts are paid in full at settlement month 14 over a 6 month span, irrespective of the future collection profiles in month 18.</li> </ul>
<b>Sale 2</b> Pre-Sale Exchange Start occurs at the same time as the first instalment and Settlement Start occurs at the same time as the last instalment, but is spread over several months.	10%	5%	4	4	18	6	<ul style="list-style-type: none"> <li>• No 10% deposit is collected from purchaser at month 4 and placed in a trust account to earn interest.</li> <li>• The first payment to the developer is made in month 4 as per collection profiles.</li> <li>• Final payment is collected in month 18 as per collection profile irrespective of the nominated Settlement dates.</li> </ul>
<b>Sale 3</b> Pre-Sale Exchange Start is after the	10%	5%	6	4	20	6	<ul style="list-style-type: none"> <li>• No 10% deposit is collected from purchaser at month 6 and placed in a trust account to earn interest.</li> </ul>



first instalment and Settlement Start is after last instalment.							<ul style="list-style-type: none"> <li>• In month 6, instalments 1 (20%), 2 (10%) and 3 (10%) are collected, equating to total back-pay of 40%.</li> <li>• Final payment is collected in month 18 as per the collection profile irrespective of the nominated Settlements dates.</li> </ul>
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**Part**

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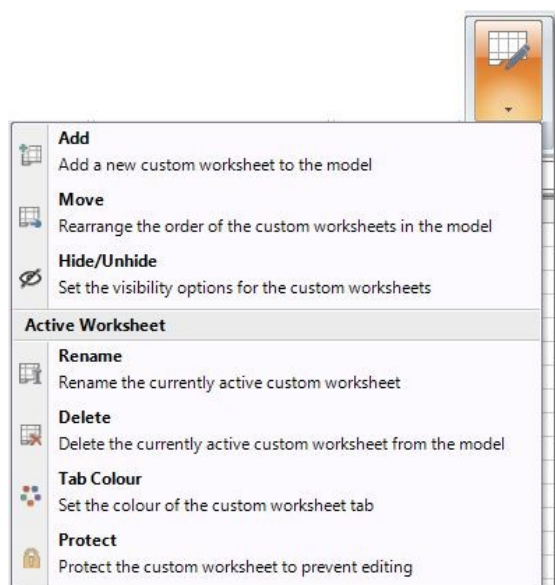
**VII**

## 7 Custom Worksheets

The ARGUS EstateMaster DF Lite program is based on a spreadsheet interface and allows you to insert additional blank worksheet into the model.

### Adding a Custom Sheet

Adding custom sheets is conducted via the 'Sheets' section in the [Ribbon Menu](#).



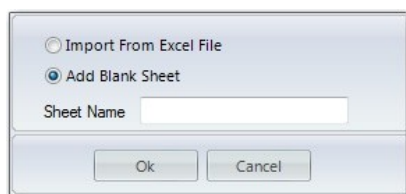
When you click on 'Add', there will be 2 options for adding a custom worksheet into the model:

1. **Importing a sheet(s) from another Excel file:** This will prompt you to browse to an Excel file and select one or more worksheets in that file to import.

#### Important Notes:

- If you attempt to import a worksheet that has formula links to another worksheet, you will be required to import the other worksheet to avoid any links being broken, otherwise you will not be able to import the worksheet.
- If you attempt to import a protected worksheet that has password on it, you will be prompted to enter in the password before the worksheet can be imported. Once the worksheet is successfully imported, it will be protected again and can be unprotected using the [sheet context menu](#).
- Any 'Global' range names (those that are global to a workbook) that exist on the worksheet to be imported will be removed. Only 'local' range names (those that are local to a worksheet) will be imported with the worksheet. If you have a range name on the worksheet and you want it to be imported into ARGUS EstateMaster DF Lite, you will need to ensure they 'local'. Refer to this Microsoft Article about using Global and Local range names: <http://support.microsoft.com/kb/274504>
- Any 'Local' range names (that exist on the worksheet to be imported) that refer to an external Excel workbook will be removed.
- Any 'Local' range names (that exist on the worksheet to be imported) that have the same name as a standard ARGUS EstateMaster DF Lite Global Name will be renamed with "\_RENAMED" appended to the end of the name. This means that any formulae that was referencing this name will be automatically adjusted.

2. **Adding a blank worksheet:** This will add a blank unprotected worksheet to the model.



Please Note:

- Custom sheets are file specific. They are not separately stored with storing [Options/Stages](#). Therefore, since each Option/Stage may have different numbers of input rows and time periods between them, be careful when linking data from the standard sheets to the custom sheets, as the same cell reference may be referring to different items between them.

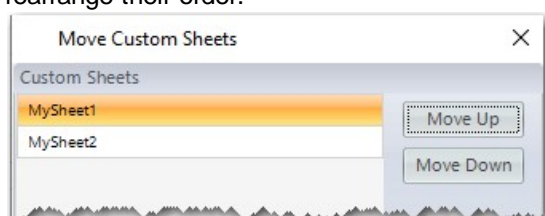
Therefore, if you are using Options/Stages and are linking inputs to the custom sheets, then you should either:

1. Not delete any rows/columns on the custom worksheet once you have stored an Option/Stage
2. Have a separate worksheet for each Option/Stage, and only edit it while that specific Option/Stage is live

## Working with Existing Custom Sheets (Rename, Delete, etc)

Once a sheet is added, you can do the following to it via the Ribbon Menu:

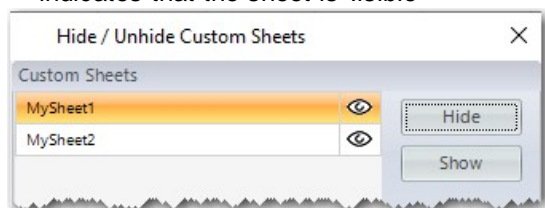
- **Rename:** Click on 'Rename', and a prompt will appear asking you to give the active sheet a different name.
- **Delete:** Click on 'Delete', and it will ask you to confirm the deletion of the active sheet.
- **Move:** Click on 'Move', and a list of all the custom sheets in the model will appear where you can rearrange their order.



- **Hide/Unhide:** Click on 'Hide/Unhide' and a list of all the custom sheets in the model will appear where you can change the visibility setting.

🔍 indicates that the sheet is hidden

👁 indicates that the sheet is visible



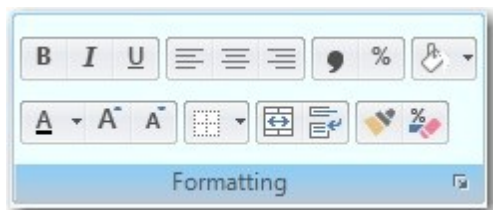
- **Change the Tab Colour:** Click on 'Tab Colour', and a colour picker will appear to allow you to customise the sheet's tab colour.

- **Protect / Unprotect:** Click on 'Protect' or 'Unprotect' (will differ, based on the current protection status of the sheet) to either protect the sheet with a password, or unprotect it.

<b>Renaming or Deleting Sheets when using Options/Stages</b>
<p>Deleting/Renaming a custom worksheet will make any custom formulae that you have created in your Options/Stages inputs that refer to this sheet, invalid. That is because, when that Option/Stage is recalled, it may have formulae that refer to a sheet name that no longer exists.</p> <p>Any invalid formulae will then be converted to its corresponding 'value' the next time the Option/Stage is recalled.</p>

## Custom Sheets Formatting Menu

In addition to the [context menu](#) available for custom sheets, there is also a Ribbon Menu item that appears when a custom sheet is activated to assist with cell formatting.




It contains the following functions:

- Setting the font to Bold, Italics and Underlined.
- Left, centre or right aligning text.
- Changing the number format to Comma (#,###.00) or Percentage Style (#.00%).
- Setting the Fill colour of the cell.\*
- Setting the Font colour.\*
- Increasing or decreasing font size.
- Merge and Centre across cells and text wrapping.
- Format Painter (copies formatting of current selection and pastes it onto the next selected cell(s))
- Clearing cell formatting.

\* When setting colours to fill or font, the previously selected colour will be displayed when hovering over the menu item.



For a complete menu of all formatting available for custom sheets, click on the  button at the bottom right of the menu.

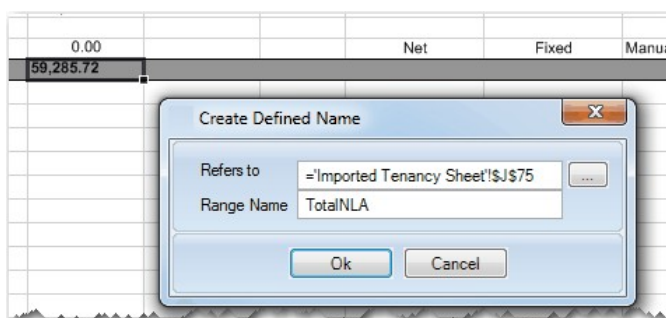
## 7.1 Names

This feature allows you to create a named range or a named constant/formula to use them in other formulas. By using 'Names', you can make your formulas much easier to understand and maintain, and more importantly, make them dynamic.

### Defining a Range Name

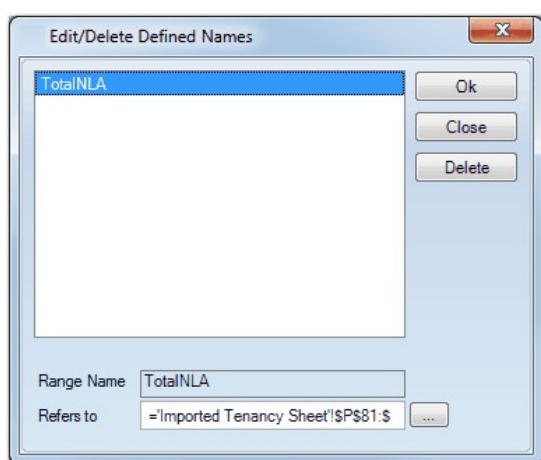
1. On the custom sheet, select the cell(s) you want to define with a Name
2. Right-click and select 'Names > Define'
3. A form will appear with two fields:
  - a. **Refers to:** This defaults to the cell address that is currently selected and that the Name is being applied to. This can be updated to a different cell address if required, or alternatively edited to be formula (e.g. to build dynamic range names) or hardcoded with value.

- b. **Range Name:** This is the actual Name applied to it. It must have no spaces in the text and not already exist.
4. Once completed, click [OK]. This will apply it as a 'Local' Name in the active worksheet.



## Editing a Range Name

1. On the custom sheet, right-click and select 'Names > Edit'
2. A form will appear listing all the Names located on the active worksheet.
3. You can select an individual Name and either:
  - a. Click [Delete] to remove it from the worksheet. Any formulae referencing it will then become invalid and will need to be updated.
  - b. Edit the 'Refers to' details to change where the Name is pointing to or its formula/value.



## Using Names

The Names that are created by this function are 'Local'; meaning that it is available by default only on the sheet where it is defined, whereas 'Global' Names are available to the whole workbook. This means that when using your custom Names in user-inserted formulae:

- If the formula is on the *same* worksheet where the Name is located, you can just type in the name in the formula (e.g. =TotalNLA)
- If the formula is on a *different* worksheet where the Name is located, you must include the sheet name (within single quotes if the sheet name has spaces) with an exclamation point (!) before the Name (e.g. ='Imported Tenancy Sheet'!TotalNLA)

Please Note: Unlike Excel, where it automatically resolves a cell address to a Name (if it has one) when you are editing a formula, ARGUS EstateMaster DF Lite will not behave like this. You will need to manually type in the Name, whether it be a custom or standard one, in a formula to use it.



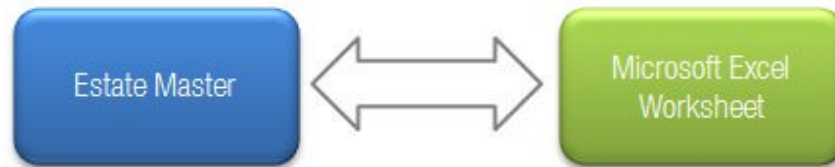
**Part**



## 8 Integration with Microsoft Excel and Word

### 8.1 Linking to Excel Files

Just like in Excel, you can use this feature to either create a formula in ARGUS EstateMaster DF Lite that is referencing an external Excel file (an 'Incoming' link), or you can create a formula in an external Excel file that is referencing the ARGUS EstateMaster DF Lite file (an 'Outgoing' link).



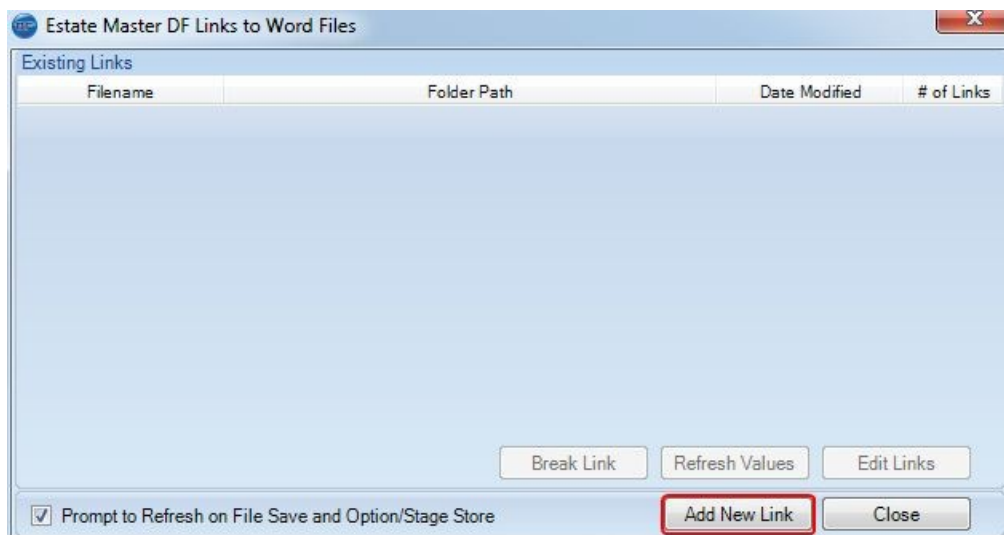
#### Creating an Excel Link

1. Click on the [Excel] button in the 'Office Links' menu.

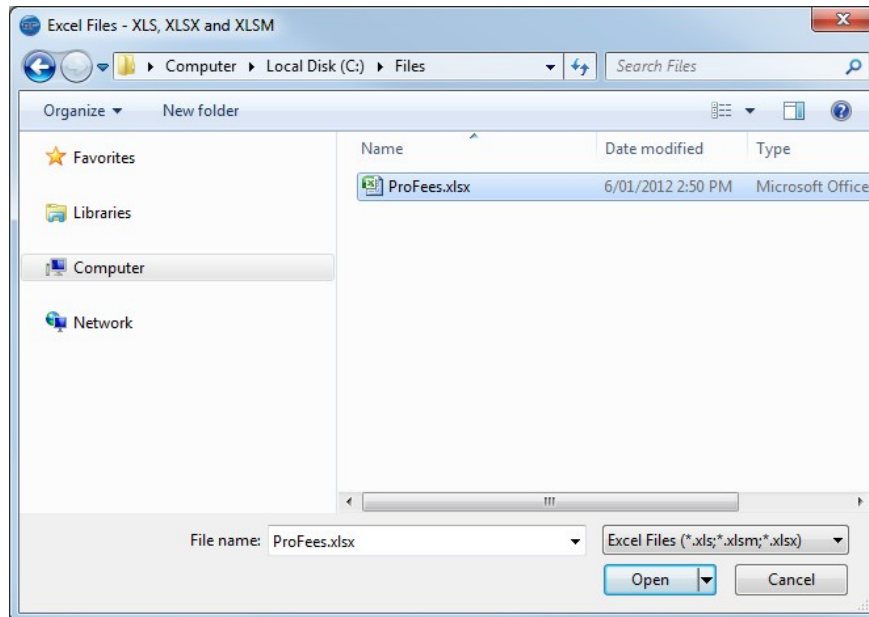


2. A dialog will appear. Click on the [Add New Link] button.

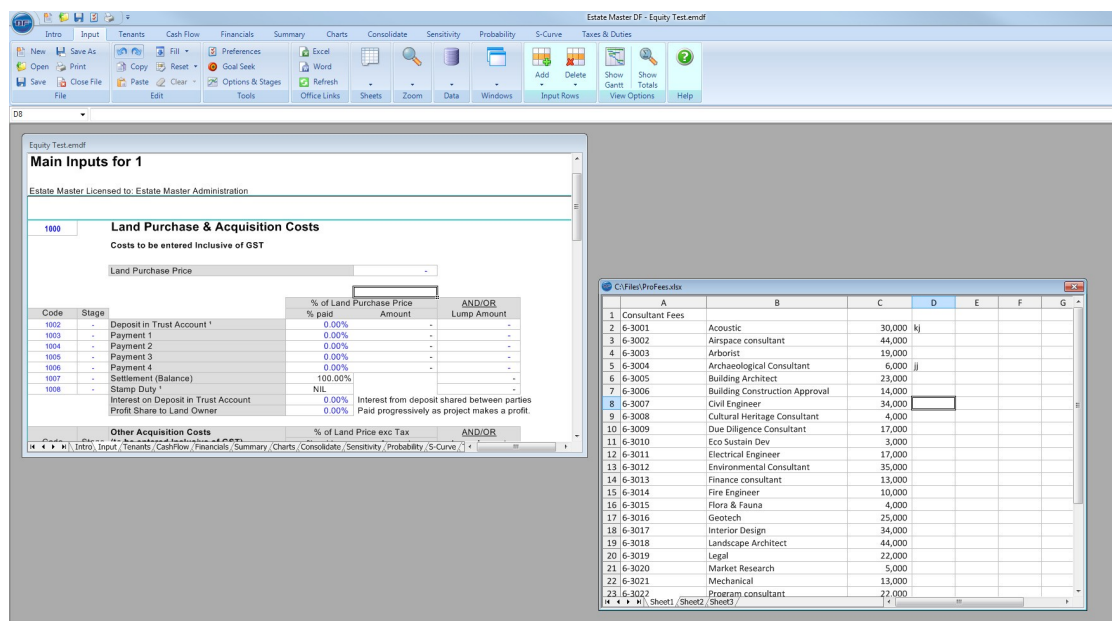
**Please Note:** Only 1 ARGUS EstateMaster DF Lite window (i.e file) can be open when loading an external Excel file. If there are multiple ARGUS EstateMaster DF Lite windows open in the application, it will prompt you to close down the other windows before trying to add a new link.



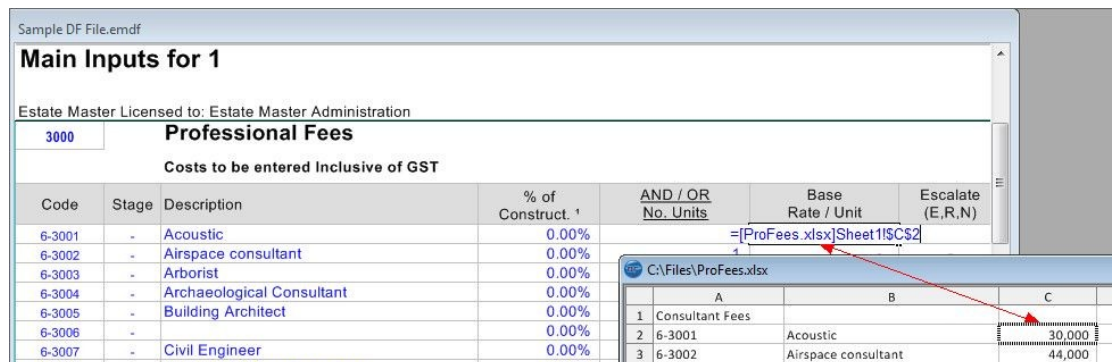
- Browse to the Excel file you want to open and create links with. Select the file and press [Open].



- The ARGUS EstateMaster DF Lite application window will re-adjust to show the ARGUS EstateMaster DF Lite file and Excel file as individual cascading windows.



5. While these windows are displayed, you can write formulae in either one that reference the other, just by selecting a cell, starting to write a formula, and then selecting the other file to select a cell/range to refer to in that formula.



6. When you are completed linking your files, you will need to close the Excel file. This can be done by clicking on the Close button (red X) on the top right of the window.

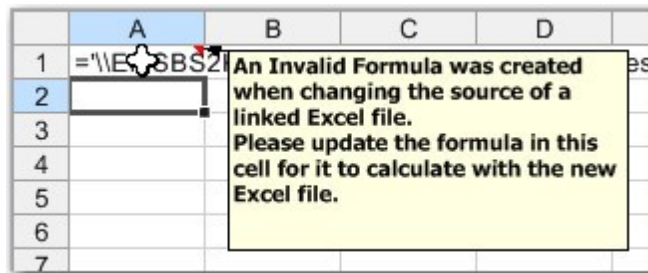


7. If any changes were made to the Excel file, it will ask you if you want to save these changes before closing the file.

**Please Note:** If you save the file, some features that are not completely supported by this spreadsheet interface may be lost (including, but not limited to, items such as Form/ActiveX Controls, Pivot Charts, Cell Comments, Cell Gradients, Excel 2007-style Conditional Format options, Excel 2007-style Tables and Structured References, OLE objects (Camera, Embedded Documents, etc) and Shape fill effects and shadows).

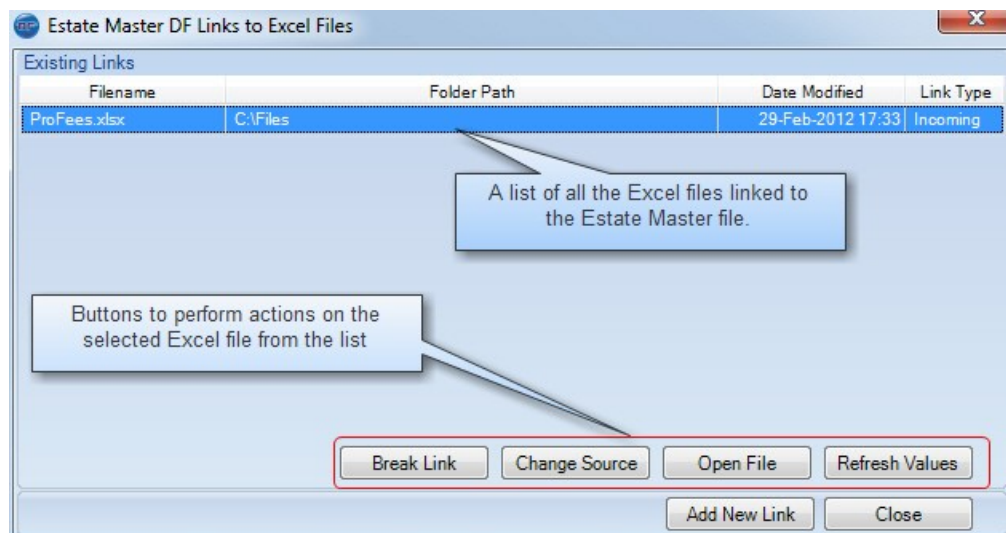
8. At any time you can click on the [Excel] button in the 'Office Links' menu to reload the dialog where you can:
- View a list of all files linking to the ARGUS EstateMaster DF Lite file, where they are located and whether they have Incoming, Outgoing or multi-directional links.
  - Click **[Break Link]**, to remove the selected Excel file from being linked to the ARGUS EstateMaster DF Lite files. After the file is saved and re-opened, any formulas in the ARGUS EstateMaster DF Lite file that were referencing this Excel file will be:
    - On Standard Worksheets: Loaded as its last known calculated 'value' (no formula). This will allow the model to continue calculating without issues.
    - On Custom Worksheets: Converted to text, by adding an apostrophe before the '=' in the formula. This will allow the user to check and amend the formula where necessary.
  - Click **[Change Source]**, to change the location of the selected Excel file. This will prompt you to browse to another file, and the program will search for all formulae where the old Excel file was referenced, and replace it with the name of the newly selected Excel file. During such process, if any of the formulae becomes invalid (due to worksheet or range name that existed in the old Excel file, but not in the new one), there following will occur to such formulae:
    - On Standard Worksheets: Converted to its last known calculated 'value' (no formula). This will allow the model to continue calculating without issues.
    - On Custom Worksheets: Converted to text, by adding an apostrophe before the '=' in the formula. This will allow the user to check and amend the formula where necessary.

In addition, a warning will appear, listing the worksheets where such invalid formulae were found after the 'Change Source' process was completed, and cell comments will be added to the actual cells where the invalid formulae were processed.

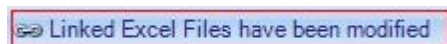


Example showing a red cell comment where an invalid formula was created as a result of a 'Change Source'

- Click **[Open File]** to open the selected Excel file again to change/add links.
- Click **[Refresh Values]** to momentarily open the selected Excel file to refresh the results.
- Click **[Add New Link]** to add a link to another Excel file.



9. If there are an external Excel files that have 'Incoming' links (i.e. there is a formula in the ARGUS EstateMaster DF Lite file that is referencing the Excel file), a warning will appear in the Status bar if the program has detected that the Excel file has been modified since the last refresh. Clicking this warning, will momentarily open the Excel file(s) to refresh the results.

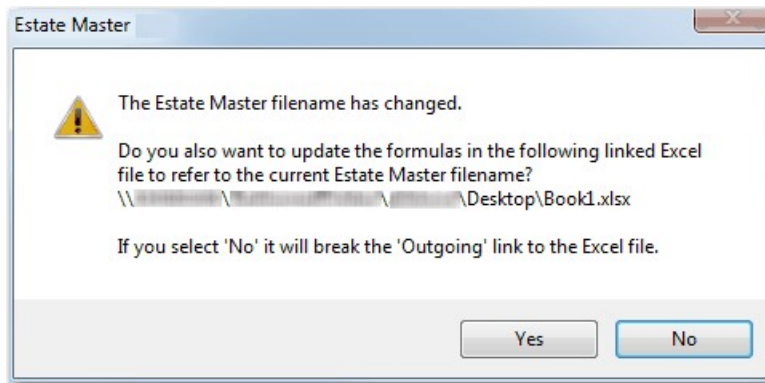


## Renaming or Moving ARGUS EstateMaster DF Lite Files

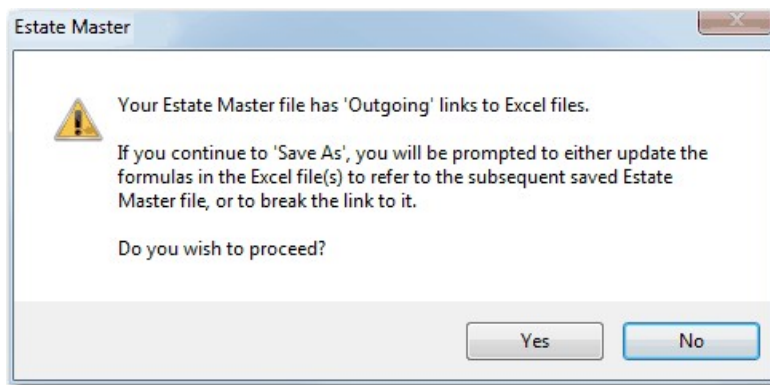
If you create a formula in an external Excel file that is referencing the ARGUS EstateMaster DF Lite file (i.e. an 'Outgoing' link), the formula will contain the full path and file name of that ARGUS EstateMaster DF Lite file. Therefore if the ARGUS EstateMaster DF Lite file is renamed and/or moved, either manually in Windows Explorer, or during a Save-As process, to maintain the integrity of any formulae in the external Excel file, the following will occur:

1. **During File Open:** No warning will be given to the user, as Outgoing links are not critical to the opening of the ARGUS EstateMaster DF Lite file.
2. **During Office Links > Excel > 'Refresh Values' or 'Open File':** If it has detected that the ARGUS EstateMaster DF Lite file has been renamed/moved (most likely via Windows Explorer)

since the 'Outgoing' link was made to an Excel file, the user will be asked whether they wish to update the linked Excel files so any formulae now refer to the new one, or to break the link.



3. **During File Save:** As soon as the 'Save As' button is clicked, the user will be warned that the ARGUS EstateMaster DF Lite file has 'Outgoing' links and if they continue with the 'Save As' and they change the file name and/or path, they will be prompted to either update the formulae in the linked Excel file(s) or break the link.



## Using Square Brackets in File Names and Folders

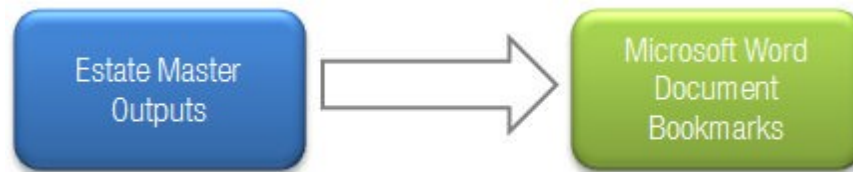
Formula links reserve the use of square brackets [ ] in its syntax to enclose the source file, for example =SUM([Budget.xls]Annual!C10:C25). Therefore you cannot use these characters in the path to that source file, or in the file name itself. This applies to the Excel files used in an 'Incoming Link' to create a formula in ARGUS EstateMaster DF Lite and also in ARGUS EstateMaster DF Lite files used in an 'Outgoing Link' to create a formula in an Excel file.

### Important Notes:

- If a user opens an ARGUS EstateMaster DF Lite file that already had an 'Incoming' link to an Excel file that contained [ and/or ] in its file name or path (applies to previous versions of ARGUS EstateMaster DF Lite) , then when it is next opened only values will be loaded into the input cells, not formulae.
- If an ARGUS EstateMaster DF Lite file contains [ and/or ] in its file name or path, then the user will not be able to create any Excel Links at all.
- If an Excel file contains [ and/or ] in its file name or path, then the user will not be able to create any links to it.
- If the user attempts to save an ARGUS EstateMaster DF Lite file with a file name or to a file path contains [ and/or ], they will not be able to.

## 8.2 Linking to Word Files

This feature allows you to populate fields in a Word document with data from an ARGUS EstateMaster DF Lite file. This is done by selecting from a list of predefined ARGUS EstateMaster DF Lite outputs and linking them to a Word document that contains the required Bookmarks. A Bookmark is a feature in Word that identifies a location or a selection of text that you name and identify for future reference.



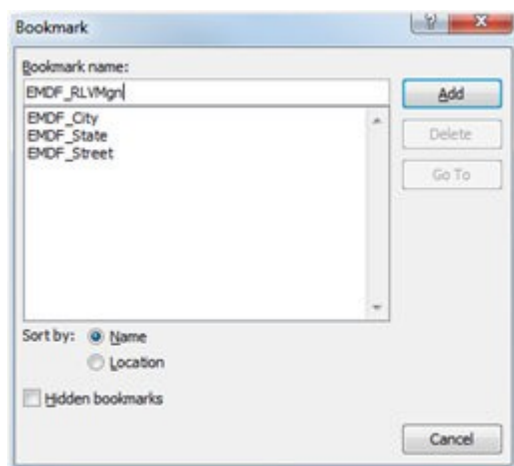
### Creating Bookmarks in your Word Document

The first thing that needs to be done is to set up the Word document you wish to link to, with the required Bookmarks. Refer to the following [Bookmarks Directory](#) to see what ARGUS EstateMaster DF Lite outputs are available and their corresponding Bookmark.

1. Open the document in Word.
2. Select a location, or highlight the text you wish to turn into a Bookmark.

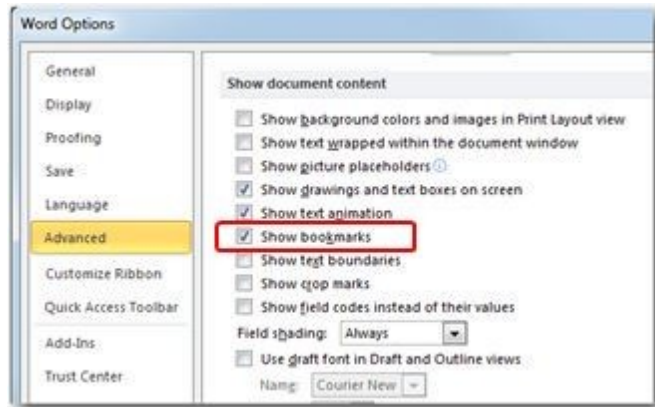


3. Based on the ARGUS EstateMaster DF Lite output that you want to appear in this location, type in the name of the Bookmark that corresponds to that output. For example, if you want to populate the selected location/text with the output of the 'Residual Land Value based on Target Margin' from the ARGUS EstateMaster DF Lite file, the name of EMDF\_RLVMgn must be given to that Bookmark. When done, press [Add].

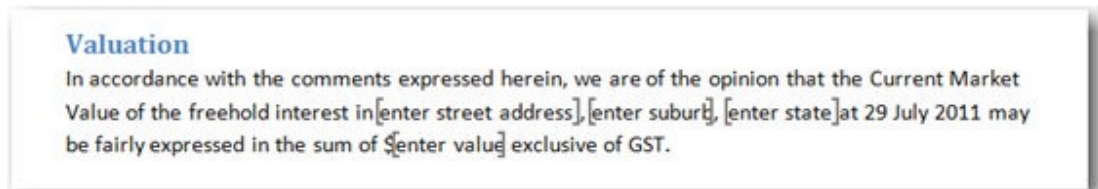




4. If you wish to highlight the Bookmarks in a Word document so you can easily identify them, there is a setting in the Word Options, under the Advanced section called 'Show Bookmarks'



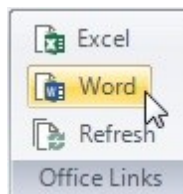
5. When selected, it will identify Bookmarks in the document with square brackets.



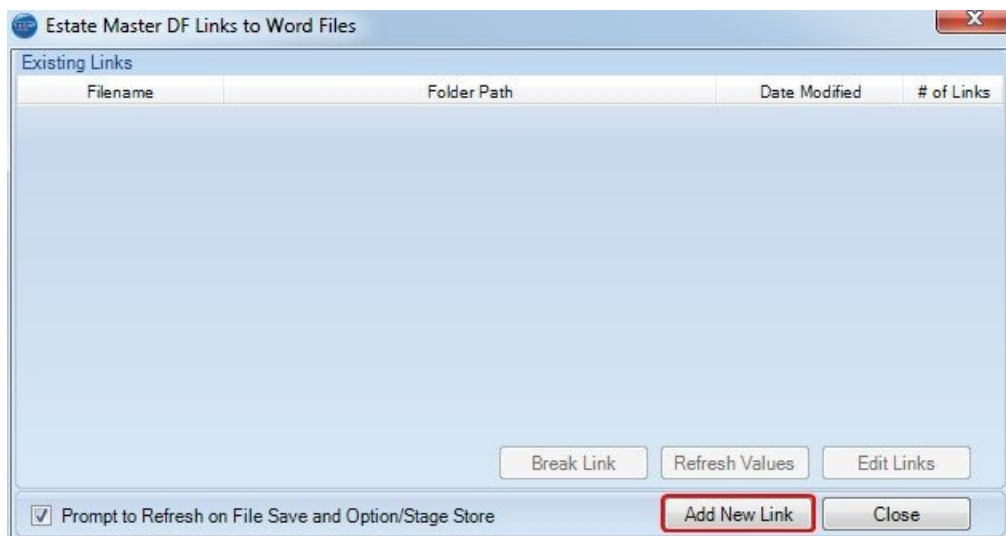
6. Once the Bookmarks have been created in the document, save and close the file.

## Setting up a Link to the Word Document

1. Click on the [Word] button in the 'Office Links' menu.

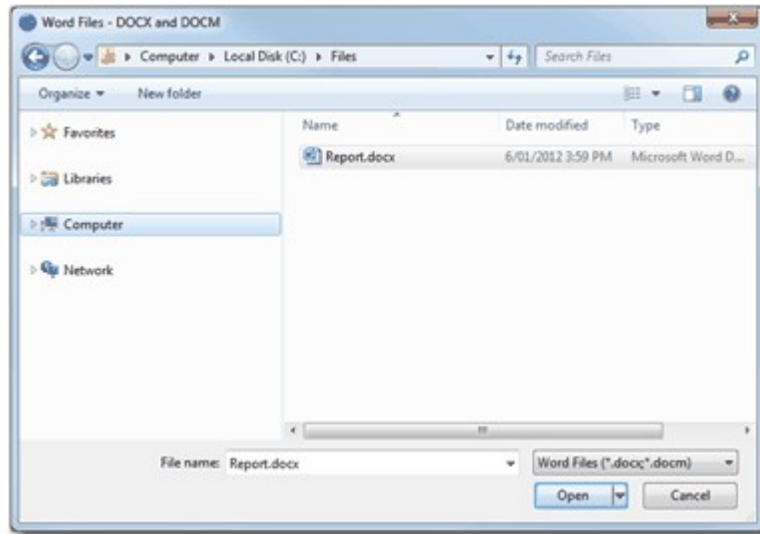


2. A dialog will appear. Click on the [Add New Link] button.





3. Browse to the Word file (\*.docx, \*.docm, \*.dotx and \*.dotm) you want to open and create links with. Select the file and press [Open].

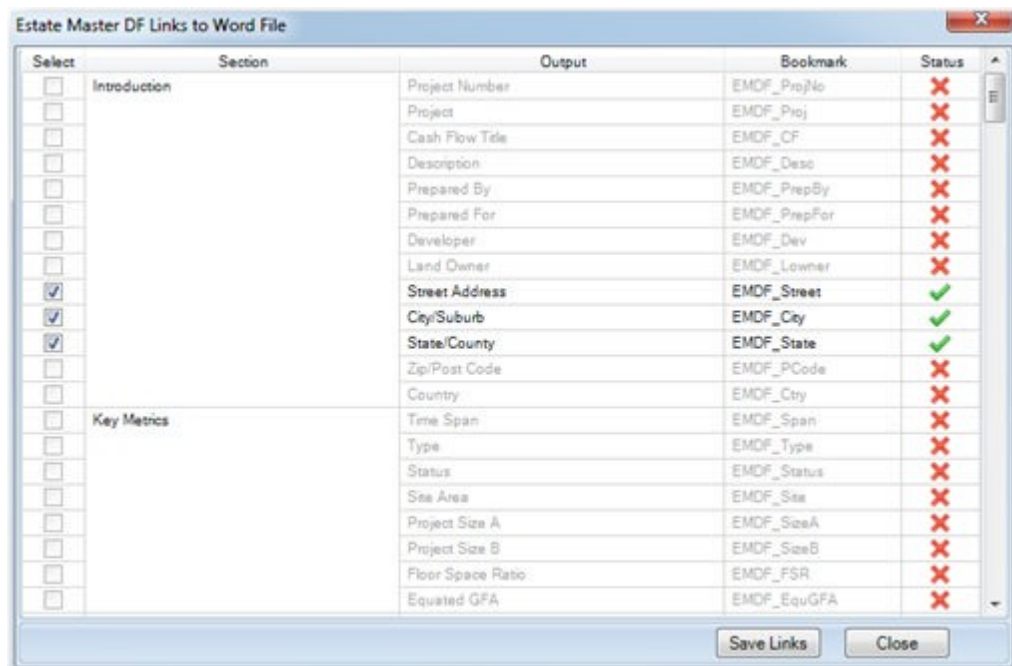


4. A new dialog will appear.

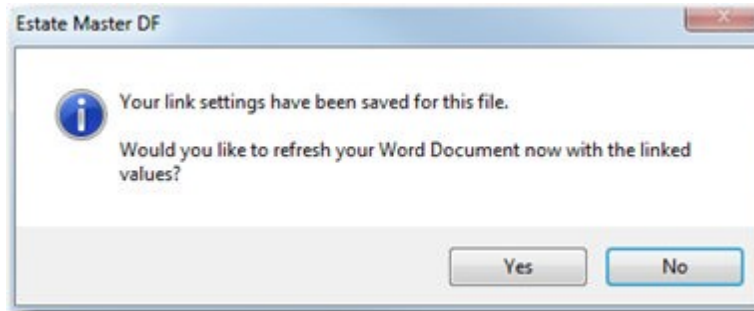
It will list all the ARGUS EstateMaster DF Lite outputs that can be linked to a Word document, what section they belong to in the ARGUS EstateMaster DF Lite file, and the related Bookmark name that must be inserted into that Word document for the link to be created.

The 'Status' will indicate if that Bookmark exists in that Word document already or not.

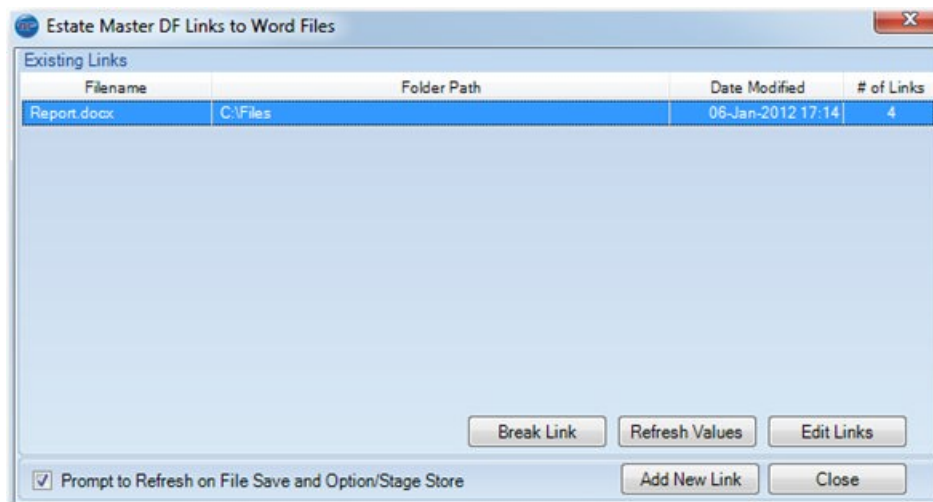
- If it does exist (green tick ✓), you can select so the Word file is updated with that ARGUS EstateMaster DF Lite output.
- If it doesn't exist (red cross ✗), but you do want to link to it, you will have to close the dialog and open the document in Word and add the bookmarks to that file before you can create the link.



5. Once you have selected the outputs you want to link, click [Save Links]. It will prompt you to refresh the Word document at that time.



6. If you click [Yes], it will programmatically update the bookmarks in that Word document with the results of the selected outputs.
7. If you open the document in Word, you can see the end result.
8. At any time you can click on the [Word] button in the 'Office Links' menu to reload the dialog where you can:
- View a list of all files linking to the ARGUS EstateMaster DF Lite file, where they are located and the number of outputs they are linked to.
  - Click [Break Link], to remove the selected Word file from being linked to the ARGUS EstateMaster DF Lite files.
  - Click [Refresh Values] to momentarily refresh the Bookmarks in the selected Word file with update values.
  - Click [Edit Links] to change the Bookmarks being linked to in the selected Word file.
  - Click [Add New Link] to add a link to another Word file.
  - Select an option to prompt the user to refresh Word links when saving a file or storing an Option/Stage to ensure that the Word document always has the latest results.



## 8.2.1 Word Bookmarks Directory

This is a list of the outputs from ARGUS EstateMaster DF Lite, and their relative Bookmark name, that can be used to populate Word documents.

Output Description	Bookmark
<b>Introduction</b>	
Property Photo	EMDF_PropPhoto
Project Number	EMDF_ProjNo
Project	EMDF_Proj
Cash Flow Title	EMDF_CF
Description	EMDF_Desc
Prepared By	EMDF_PrepBy
Prepared For	EMDF_PrepFor
Developer	EMDF_Dev
Land Owner	EMDF_Lowner
Street Address	EMDF_Street
City/Suburb	EMDF_City
State/County	EMDF_State
Zip/Post Code	EMDF_PCode
Country	EMDF_Ctry
<b>Key Metrics</b>	
Time Span	EMDF_Span
Type	EMDF_Type
Status	EMDF_Status
Site Area	EMDF_Site
Project Size A	EMDF_SizeA
Project Size B	EMDF_SizeB
FSR	EMDF_FSR
Equated GFA	EMDF_EquGFA
<b>Revenues</b>	
Gross Sales Revenue	EMDF_GrossSale
Selling Costs	EMDF_SellCost
Purchasers Costs	EMDF_PurchCost
Net Sale Proceeds	EMDF_NetSale
Gross Rental Income	EMDF_GrossRent
Outgoings & Vacancies	EMDF_OG
Letting Fees	EMDF_LetFee
Incentives (Rent Free and Fit-out Costs)	EMDF_Incent
Other Leasing Costs	EMDF_LeaseCost
Net Rental Income	EMDF_NetRent
Interest Received	EMDF_IntRec
Other Income	EMDF_OtherInc
Total Revenue (before Tax paid)	EMDF_RevBT
Tax paid on all Revenue	EMDF_RevTax
Total Revenue (after Tax paid)	EMDF_RevAT
<b>Costs</b>	
Land Purchase Cost	EMDF_Land
Land Transaction Costs	EMDF_OthLand
Construction (inc. Construct. Contingency)	EMDF_Construct
Contingency	EMDF_ConstCont
Professional Fees	EMDF_ProFee
Statutory Fees	EMDF_StatFee
Miscellaneous Costs 1	EMDF_Misc1
Miscellaneous Costs 2	EMDF_Misc2
Miscellaneous Costs 3	EMDF_Misc3
Project Contingency	EMDF_ProjCont
Land Holding Costs	EMDF_LandHold
Pre-Sale Commissions	EMDF_PreComm
Finance Charges (inc. Fees)	EMDF_FinChg
Interest Expense	EMDF_IntExp
Total Costs (before Tax reclaimed)	EMDF_CostBT
Tax reclaimed	EMDF_CostTax
Corporate Tax	EMDF_CorpTax
Total Costs (afterTax reclaimed)	EMDF_CostAT
<b>Key Performance Indicators</b>	
Gross Development Profit	EMDF_GrossProf
Net Development Profit	EMDF_NetProf

Development Margin	EMDF_Dev Mgn
Target Margin	EMDF_TgtMgn
Residual Land Value (based on Target Margin)	EMDF_RLVMgn
Net Present Value	EMDF_NPV
Discount Rate	EMDF_DiscRate
Benefit Cost Ratio	EMDF_BCR
Project Internal Rate of Return (IRR)	EMDF_IRR
Residual Land Value (based on NPV)	EMDF_RLVNPV
Weighted Average Cost of Capital (WACC)	EMDF_WACC
Breakeven Date for Cumulative Cash Flow	EMDF_BEDate
Yield on Cost	EMDF_YldCost
Rent Cover	EMDF_RentCvr
Profit Erosion	EMDF_ProfErr
<b>Returns on Funds Invested - Equity</b>	
Funds Invested (Cash Outlay)	EMDF_Eq_Funds
Peak Exposure	EMDF_Eq_Peak
Date of Peak Exposure	EMDF_Eq_DatePk
Weighted Average Interest Rate	EMDF_Eq_AvgRte
Interest Charged	EMDF_Eq_Int
Profit	EMDF_Eq_Prof
Margin on Funds Invested	EMDF_Eq_Mgn
Payback Date	EMDF_Eq_Pback
IRR on Funds Invested	EMDF_Eq_IRR
Loan to Value Ratio	EMDF_Eq_LVR
<b>Returns on Funds Invested - Senior Loan</b>	
Lender Name	EMDF_Snr_Name
Funds Invested (Cash Outlay)	EMDF_Snr_Funds
Peak Exposure	EMDF_Snr_Peak
Date of Peak Exposure	EMDF_Snr_DatePk
Weighted Average Interest Rate	EMDF_Snr_AvgRte
Interest Charged	EMDF_Snr_Int
Line Fees Charged	EMDF_Snr_Line
Application Fees Charged	EMDF_Snr_App
Total Profit to Funder	EMDF_Snr_Prof
Margin on Funds Invested	EMDF_Snr_Mgn
Payback Date	EMDF_Snr_Pback
IRR on Funds Invested	EMDF_Snr_IRR
Loan to Value Ratio	EMDF_Snr_LVR
<b>Returns on Funds Invested - Total Debt</b>	
Funds Invested (Cash Outlay)	EMDF_Debt_Funds
Peak Exposure	EMDF_Debt_Peak
Date of Peak Exposure	EMDF_Debt_DatePk
Weighted Average Interest Rate	EMDF_Debt_AvgRte
Interest Charged	EMDF_Debt_Int
Line Fees Charged	EMDF_Debt_Line
Application Fees Charged	EMDF_Debt_App
Profit Share Received	EMDF_Debt_Share
Total Profit to Funder(s)	EMDF_Debt_Prof
Margin on Funds Invested	EMDF_Debt_Mgn
Payback Date	EMDF_Debt_Pback
Equity to Debt Ratio	EMDF_Debt_IRR
Loan to Value Ratio	EMDF_Debt_LVR
<b>Options/Stages</b>	
Cash Flow Title (Option/Stage 1)	EMDF_CF_1
Cash Flow Title (Option/Stage 2)	EMDF_CF_2
Description (Option/Stage 1)	EMDF_Desc_1
Description (Option/Stage 2)	EMDF_Desc_2
Gross Sales Revenue (Option/Stage 1)	EMDF_GrossSale_1
Gross Sales Revenue (Option/Stage 2)	EMDF_GrossSale_2
Gross Rental Income (Option/Stage 1)	EMDF_GrossRent_1
Gross Rental Income (Option/Stage 2)	EMDF_GrossRent_2
Land Purchase Cost (Option/Stage 1)	EMDF_Land_1
Land Purchase Cost (Option/Stage 2)	EMDF_Land_2
Construction (Option/Stage 1)	EMDF_Construct_1
Construction (Option/Stage 2)	EMDF_Construct_2
Net Development Profit (Option/Stage 1)	EMDF_NetProf_1
Net Development Profit (Option/Stage 2)	EMDF_NetProf_2
Development Margin (Option/Stage 1)	EMDF_Dev Mgn_1

Development Margin (Option/Stage 2)	EMDF_DevMgn_2
RLV based on Target Margin (Option/Stage 1)	EMDF_RLVMgn_1
RLV based on Target Margin (Option/Stage 2)	EMDF_RLVMgn_2
NPV (Option/Stage 1)	EMDF_NPV_1
NPV (Option/Stage 2)	EMDF_NPV_2
Project IRR (Option/Stage 1)	EMDF_IRR_1
Project IRR (Option/Stage 2)	EMDF_IRR_2
RLV based on NPV (Option/Stage 1)	EMDF_RLVNPV_1
RLV based on NPV (Option/Stage 2)	EMDF_RLVNPV_2
<b>Sensitivity Analysis</b>	
Land Acquisition Costs Hi Variation Rate	EMDF_SensLandHi
Land Acquisition Costs Lo Variation Rate	EMDF_SensLandLo
Land Acquisition Costs Hi Variation - Net Profit	EMDF_SensLandHi_Profit
Land Acquisition Costs Lo Variation - Net Profit	EMDF_SensLandLo_Profit
Land Acquisition Costs Hi Variation - NPV	EMDF_SensLandHi_NPV
Land Acquisition Costs Lo Variation - NPV	EMDF_SensLandLo_NPV
Land Acquisition Costs Hi Variation - Dev. Margin	EMDF_SensLandHi_Mgn
Land Acquisition Costs Lo Variation - Dev. Margin	EMDF_SensLandLo_Mgn
Land Acquisition Costs Hi Variation - Project IRR	EMDF_SensLandHi_IRR
Land Acquisition Costs Lo Variation - Project IRR	EMDF_SensLandLo_IRR
Land Acquisition Costs Hi Variation - Equity IRR	EMDF_SensLandHi_Equ
Land Acquisition Costs Lo Variation - Equity IRR	EMDF_SensLandLo_Equ
Construction Costs Hi Variation Rate	EMDF_SensConstHi
Construction Costs Lo Variation Rate	EMDF_SensConstLo
Construction Costs Hi Variation - Net Profit	EMDF_SensConstHi_Profit
Construction Costs Lo Variation - Net Profit	EMDF_SensConstLo_Profit
Construction Costs Hi Variation - NPV	EMDF_SensConstHi_NPV
Construction Costs Lo Variation - NPV	EMDF_SensConstLo_NPV
Construction Costs Hi Variation - Dev. Margin	EMDF_SensConstHi_Mgn
Construction Costs Lo Variation - Dev. Margin	EMDF_SensConstLo_Mgn
Construction Costs Hi Variation - Project IRR	EMDF_SensConstHi_IRR
Construction Costs Lo Variation - Project IRR	EMDF_SensConstLo_IRR
Construction Costs Hi Variation - Equity IRR	EMDF_SensConstHi_Equ
Construction Costs Lo Variation - Equity IRR	EMDF_SensConstLo_Equ
Construction Period Hi Variation Rate	EMDF_SensConPeriodHi
Construction Period Lo Variation Rate	EMDF_SensConPeriodLo
Construction Period Hi Variation - Net Profit	EMDF_SensConPeriodHi_Profit
Construction Period Lo Variation - Net Profit	EMDF_SensConPeriodLo_Profit
Construction Period Hi Variation - NPV	EMDF_SensConPeriodHi_NPV
Construction Period Lo Variation - NPV	EMDF_SensConPeriodLo_NPV
Construction Period Hi Variation - Dev. Margin	EMDF_SensConPeriodHi_Mgn
Construction Period Lo Variation - Dev. Margin	EMDF_SensConPeriodLo_Mgn
Construction Period Hi Variation - Project IRR	EMDF_SensConPeriodHi_IRR
Construction Period Lo Variation - Project IRR	EMDF_SensConPeriodLo_IRR
Construction Period Hi Variation - Equity IRR	EMDF_SensConPeriodHi_Equ
Construction Period Lo Variation - Equity IRR	EMDF_SensConPeriodLo_Equ
End Sale Values Hi Variation Rate	EMDF_SensSalesHi
End Sale Values Lo Variation Rate	EMDF_SensSalesLo
End Sale Values Hi Variation - Net Profit	EMDF_SensSalesHi_Profit
End Sale Values Lo Variation - Net Profit	EMDF_SensSalesLo_Profit
End Sale Values Hi Variation - NPV	EMDF_SensSalesHi_NPV
End Sale Values Lo Variation - NPV	EMDF_SensSalesLo_NPV
End Sale Values Hi Variation - Dev. Margin	EMDF_SensSalesHi_Mgn
End Sale Values Lo Variation - Dev. Margin	EMDF_SensSalesLo_Mgn
End Sale Values Hi Variation - Project IRR	EMDF_SensSalesHi_IRR
End Sale Values Lo Variation - Project IRR	EMDF_SensSalesLo_IRR
End Sale Values Hi Variation - Equity IRR	EMDF_SensSalesHi_Equ
End Sale Values Lo Variation - Equity IRR	EMDF_SensSalesLo_Equ
Cap Rate Hi Variation Rate	EMDF_SensCapHi
Cap Rate Lo Variation Rate	EMDF_SensCapLo
Cap Rate Hi Variation - Net Profit	EMDF_SensCapHi_Profit
Cap Rate Lo Variation - Net Profit	EMDF_SensCapLo_Profit
Cap Rate Hi Variation - NPV	EMDF_SensCapHi_NPV
Cap Rate Lo Variation - NPV	EMDF_SensCapLo_NPV
Cap Rate Hi Variation - Dev. Margin	EMDF_SensCapHi_Mgn
Cap Rate Lo Variation - Dev. Margin	EMDF_SensCapLo_Mgn
Cap Rate Hi Variation - Project IRR	EMDF_SensCapHi_IRR
Cap Rate Lo Variation - Project IRR	EMDF_SensCapLo_IRR
Cap Rate Hi Variation - Equity IRR	EMDF_SensCapHi_Equ

Cap Rate Lo Variation - Equity IRR	EMDF_SensCapLo_Equ
Sales Span Hi Variation Rate	EMDF_SensSpanHi
Sales Span Lo Variation Rate	EMDF_SensSpanLo
Sales Span Hi Variation - Net Profit	EMDF_SensSpanHi_Profit
Sales Span Lo Variation - Net Profit	EMDF_SensSpanLo_Profit
Sales Span Hi Variation - NPV	EMDF_SensSpanHi_NPV
Sales Span Lo Variation - NPV	EMDF_SensSpanLo_NPV
Sales Span Hi Variation - Dev. Margin	EMDF_SensSpanHi_Mgn
Sales Span Lo Variation - Dev. Margin	EMDF_SensSpanLo_Mgn
Sales Span Hi Variation - Project IRR	EMDF_SensSpanHi_IRR
Sales Span Lo Variation - Project IRR	EMDF_SensSpanLo_IRR
Sales Span Hi Variation - Equity IRR	EMDF_SensSpanHi_Equ
Sales Span Lo Variation - Equity IRR	EMDF_SensSpanLo_Equ
Rental Income Hi Variation Rate	EMDF_SensRentHi
Rental Income Lo Variation Rate	EMDF_SensRentLo
Rental Income Hi Variation - Net Profit	EMDF_SensRentHi_Profit
Rental Income Lo Variation - Net Profit	EMDF_SensRentLo_Profit
Rental Income Hi Variation - NPV	EMDF_SensRentHi_NPV
Rental Income Lo Variation - NPV	EMDF_SensRentLo_NPV
Rental Income Hi Variation - Dev. Margin	EMDF_SensRentHi_Mgn
Rental Income Lo Variation - Dev. Margin	EMDF_SensRentLo_Mgn
Rental Income Hi Variation - Project IRR	EMDF_SensRentHi_IRR
Rental Income Lo Variation - Project IRR	EMDF_SensRentLo_IRR
Rental Income Hi Variation - Equity IRR	EMDF_SensRentHi_Equ
Rental Income Lo Variation - Equity IRR	EMDF_SensRentLo_Equ
Debt Interest Rates Hi Variation Rate	EMDF_SensDebtHi
Debt Interest Rates Lo Variation Rate	EMDF_SensDebtLo
Debt Interest Rates Hi Variation - Net Profit	EMDF_SensDebtHi_Profit
Debt Interest Rates Lo Variation - Net Profit	EMDF_SensDebtLo_Profit
Debt Interest Rates Hi Variation - NPV	EMDF_SensDebtHi_NPV
Debt Interest Rates Lo Variation - NPV	EMDF_SensDebtLo_NPV
Debt Interest Rates Hi Variation - Dev. Margin	EMDF_SensDebtHi_Mgn
Debt Interest Rates Lo Variation - Dev. Margin	EMDF_SensDebtLo_Mgn
Debt Interest Rates Hi Variation - Project IRR	EMDF_SensDebtHi_IRR
Debt Interest Rates Lo Variation - Project IRR	EMDF_SensDebtLo_IRR
Debt Interest Rates Hi Variation - Equity IRR	EMDF_SensDebtHi_Equ
Debt Interest Rates Lo Variation - Equity IRR	EMDF_SensDebtLo_Equ
Discount Rates Hi Variation Rate	EMDF_SensDiscHi
Discount Rates Lo Variation Rate	EMDF_SensDiscLo
Discount Rates Hi Variation - NPV	EMDF_SensDiscHi_NPV
Discount Rates Lo Variation - NPV	EMDF_SensDiscLo_NPV


**Part**

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**IX**

## 9 Storing and Recalling Options/Stages

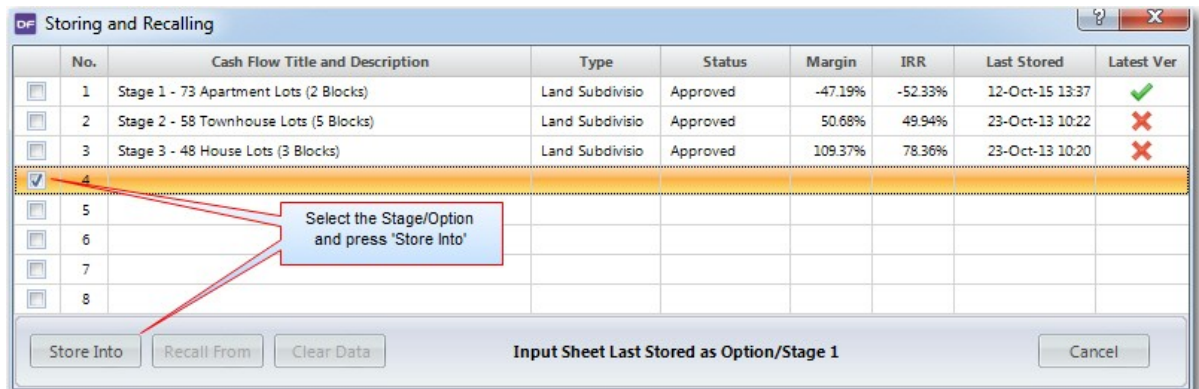
### 9.1 Using the Options/Stages Function

Using the 'Options and Stages' function  on the [Ribbon Menu](#), you may compare up to 2 different development options or amalgamate up to 2 project stages using the 'Consolidate' report within the one ARGUS EstateMaster DF Lite file.

Examples of how Options/Stages could be used	Option/Stage 1	Option/Stage 2, etc
<b>Development Options</b>	10 residential lots	20 town houses
<b>Feasibility / Sensitivity Scenarios</b>	no escalation on sales	5% per annum escalation
<b>Stages of the Project</b>	Stage 1	Stage 2
<b>Phases</b>	Acquisition and Holding	Development and Disposal

### 9.2 Storing

Once you are satisfied that all the inputs have been entered for a particular Option/Stage, you may store this by using the 'Options and Stages' function  and selecting where to store the data before clicking on the 'Store Into' button.



**Note:** Screenshot depicts Consolidate Report for full version of DF (8 options/stages). DF Lite only accommodates 2.

Before the storing process will begin, the program will check that the user has entered a unique 'Cash Flow Title' in the [Preliminary](#) input section. If it is blank, or not unique to the other Options/Stages that have been stored already, it will not proceed.

Preliminary		
Cash Flow Title	Burnwood Estate Stage	
Date of First Period:	Jan-2007	
Cash Flow Rest Period:	Monthly	
Enter Project Size (a)	150.0	Apartments
Enter Project Size (b)	20,000.0	GFA (sqm)
Enter Site Area	10,000.0	SqM



On successful execution, the following input data ranges are stored:

- 'Input' sheet data;
- 'Tenant' sheet data;
- 'Manual Input' data from the Cash Flow tables (includes manual adjustments to the financing and variable discount rates);
- Taxes and Duties tables; and
- Sensitivity settings; and
- All Preferences.


Storing enables you to make changes to the input data while retaining the original data. Once a change is made, storing it as Option/Stage 2 can create a new option/stage. The original Option/Stage 1 can be retrieved at a later date for further analysis.

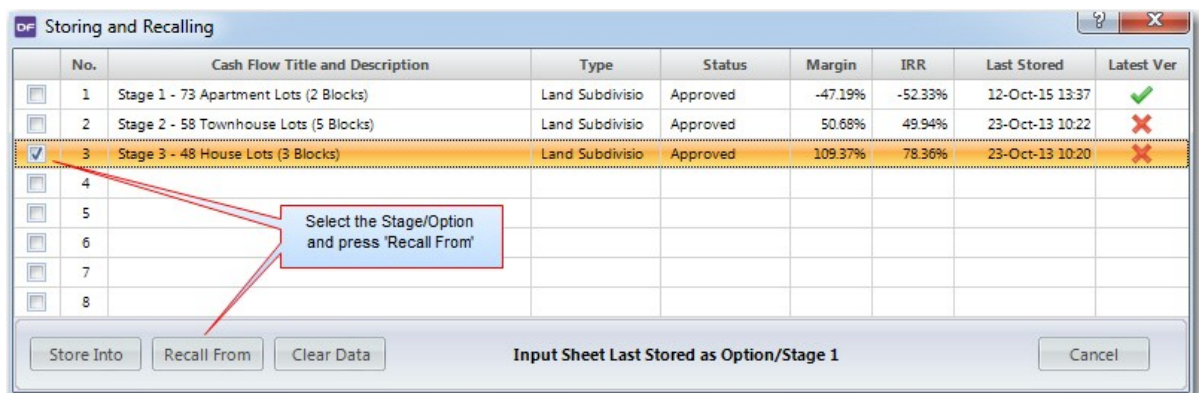
Storing Options/Stages	
<p>When using the Store and Recall feature to compare different development scenarios or to consolidate stages, it is recommended that you keep the following Hurdle Rate options in the <a href="#">Preferences</a> the same so that the performance indicators which are calculated for each scenario or stage are consistent:</p> <ol style="list-style-type: none"> <li>1. <b>Gross or Net Profit Performance:</b> Gross (before any profit share) or Net (after any profit share)</li> <li>2. <b>The calculation of the developer's Target IRR and target Development Margin</b></li> <li>3. <b>The Annual to Rest Period Conversion for the Discount Rate:</b> Nominal or Effective</li> </ol>	

As well as comparing different development options or scenarios, you can use the 'Options and Stages' facility to split large projects into stages. This is beneficial when you have a project life exceeding the maximum time periods in the model (120).

If modelling a project in stages with staggered starting dates for each stage by using the Option sheets, a consolidation can be facilitated for a project of up to 30 years on a monthly cash flow. Each stage is limited to 120 time periods, and 30 years in total for the consolidated stages.

## 9.3 Recalling

To change data in an option/stage that has been previously stored, it is recommended that you 'Recall' the relevant data back into the input data ranges. This is achieved by using the 'Recall From' option from the 'Options and Stages' function  and deciding what Option/Stage to recall.




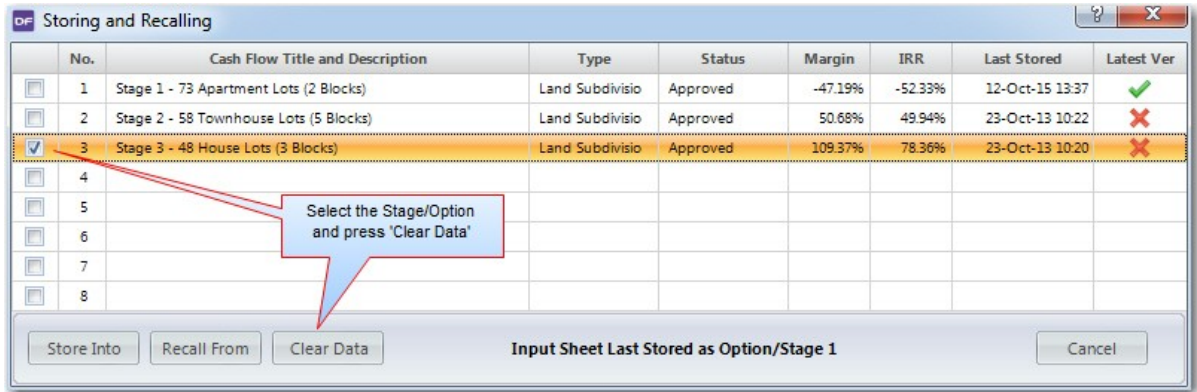
**Note:** Screenshot depicts Consolidate Report for full version of DF (8 options/stages). DF Lite only accommodates 2.

When recalling options, the model will replace the existing data in the input ranges with that of the option being restored.

Remember to store information in the input ranges to an option sheet prior to recalling an option.

## 9.4 Clearing Data

To delete all data for an option/stage that has been previously stored, use the 'Clear Data' option from the 'Options and Stages' function  and deciding what Option/Stage to clear.



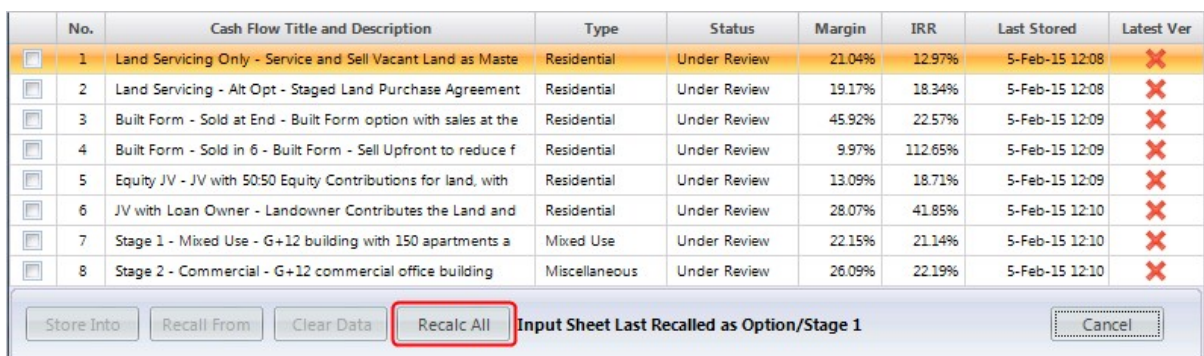
**Note:** Screenshot depicts Consolidate Report for full version of DF (8 options/stages). DF Lite only accommodates 2.

When using this function, be carefully not to accidental clear the wrong Option/Stage, as the data cannot be retrieved once it has been cleared (unless you have a backup of the file).

## 9.5 Recalc All

The 'Recalc All' function automatically recalls each Option/Stage, lets it recalculate, and then re-stores it back. It is useful when:

- There are custom worksheets or external Excel links that have data linking *into* the input cells of the Option/Stages, and you want to change that data and see the impact it has on the Options/Stages on a click of a button.
- You have opened an ARGUS EstateMaster DF Lite file that has Options/Stages stored in a previous version (indicated by the red ✗ in the 'Latest Ver' column in the form), and you want to update all the Options/Stages to the latest version. This is important to ensure that the Options/Stages are calculated using the latest calculation engine.



Once the 'Recalc' button is clicked, it will do the following:

1. Prompt the user to store any active Option/Stage currently recalled to the Input sheet
2. For every Option/Stage currently stored, begin the process of recalling it into the input sheets, letting it recalculate and refresh any formula links, and then re-store it back

3. Recall back the original Option/Stage

## 9.6 The Consolidate Report

EstateMaster Development Feasibility		Enable	Enable	Enable	Enable	Enable	Enable	Enable	Enable	Enable	TOTAL
CONSOLIDATION OF STAGES		1	2	3	4	5	6	7	8		
		Stage 1	Stage 2	Stage 3							
Pacific Palms		73 Apartment Lots (2 Blocks)	58 Townhouse Lots (3 Blocks)	48 House Lots (3 Blocks)							
		10,550 GSA (Sign)	13,450 GSA (Sign)	16,800 GSA (Sign)							
		73 Unit Lots	58 Townhouse Lots	48 House Lots							
		2 Ha	2.5 Ha	3 Ha							
		Land Subdivision Approved	Land Subdivision Approved	Land Subdivision Approved							
Revenues											
Show	Gross Sales Revenue	8,427,937	17,167,857	18,369,185							43,964,799
Show	Less Selling Costs	(450,768)	(646,111)	(646,152)							(1,746,031)
Show	Less Purchases Costs	-	-	-							-
Show	NET SALES REVENUE	7,977,169	16,521,546	17,723,033							42,218,728
Show	Gross Rental Income	-	-	-							-
Show	Less Outgoings & Vacancies	-	-	-							-
Show	Less Letting Fees	-	-	-							-
Show	Less Incentives (Rent Free and Fit Out Costs)	-	-	-							-
Show	Less Other Leasing Costs	-	-	-							-
Show	NET RENTAL INCOME	-	-	-							-
Show	Interest Received	-	-	-							-
Show	Other Income	-	-	-							-
Show	TOTAL REVENUE (before GST paid)	7,977,169	16,521,546	17,723,033							42,218,728
Show	Less GST paid on all Revenue	(766,176)	(1,560,686)	(1,669,524)							(3,996,796)
Show	TOTAL REVENUE (after GST paid)	7,210,993	14,960,860	16,053,509							38,221,932
Costs											
Show	Land Purchase Cost	6,500,000	3,900,000	2,600,000							13,000,000
Show	Land Acquisition Costs	460,480	252,480	154,480							867,470
Show	Construction (Inc. Construct. Contingency)	2,555,000	2,505,000	2,160,000							7,220,000
Show	Professional Fees	719,681	196,346	182,190							1,098,218
Show	Statutory Fees	3,000,000	2,320,000	1,920,000							7,240,000
Show	Miscellaneous Costs 1	-	-	-							-
Show	Miscellaneous Costs 2	-	-	-							-
Show	Miscellaneous Costs 3	-	-	-							-
Show	Project Contingency (Reserve)	-	-	-							-
Show	Land Holding Costs	115,893	129,114	134,871							379,978
Show	Pre-Sale Commissions	-	-	-							-
Show	Finance Charges (Inc. Line Fees)	90,000	-	-							90,000
Show	Interest Expense	959,791	716,870	449,824							2,126,084
Show	TOTAL COSTS (before GST reclaimed)	14,400,855	10,019,620	7,601,276							32,021,751
Show	Less GST reclaimed	(344,686)	(307,860)	(274,304)							(926,790)
Show	TOTAL COSTS (after GST reclaimed)	14,056,169	9,711,760	7,326,972							31,065,001
Performance Indicators		1	2	3	4	5	6	7	8	TOTAL	
Show	Gross Development Profit	4,527%	5,249,090	8,723,117							7,126,931
Show	Net Developer's Profit	4,527%	5,249,090	8,723,117							7,126,931
Show	Development Margin (Profit)	7.19%	50.68%	109.37%							21.70%
Show	Target Development Margin	5.00%	25.00%	25.00%							-
Show	Residual Land Value (Target Margin)	(637,238)	5,663,696	7,130,750							12,157,208
Show	Break-even Date for Cumulative Cash Flow	N.A. (Negative Profit)	Mar-2015	Sep-2015							Oct-2015
Show	Discount Rate (Target IRR)	20.00%	20.00%	20.00%							-
Show	Net Present Value	@ Start of Stage	(6,265,717)	2,340,892	3,958,911						34,086
Show	Date of Commencement	Jun-12	Jun-12	Jun-12							-
Show	Holding Discount Rate	-	(6,265,717)	2,340,892	3,958,911						34,086
Show	NPV at Start of Consolidated Cash Flow										-
Show	Benefit Cost Ratio				1.903						20.11%
Show	Project Internal Rate of Return (IRR)				78.36%						14,704,852
Show	Residual Land Value (NPV)	@ Start of			8,113,803						18,828,586
Show	Peak Debt Exposure				7,384,774						Sep-2015
Show	Date of Peak Debt Exposure	Jan-2014	Sep-2014	May-2015							-
Show	Break-even Date for Project Overdraft	N.A.	Mar-2015	Sep-2015							-
Show	Total Equity Contribution	6,845,276	-	-							6,845,276
Show	Peak Equity Exposure	6,845,276	-	-							6,845,276
Show	Date of Peak Equity Exposure	Sep-2014	N.A.	N.A.							Jun-2015
Show	IRR on Equity	#NUM!	N.A.	N.A.							37.50%
Show	Weighted Average Cost of Capital (WACC)	4.67%	8.50%	7.50%							-
Yield Analysis		1	2	3	4	5	6	7	8	TOTAL	
Show	Sales	Qty	SqM	Qty	SqM	Qty	SqM				Qty
Show	Detached Dwellings Lots	-	-	-	-	48	16,800				48
Show	Townhouse Lots	-	-	58	13,450	-	-				58
Show	Residential Unit Lots	73	10,950	-	-	-	-				73
Show	TOTAL	73	10,950	58	13,450	48	16,800				179
Show	Tenancies	SqM	SqM	SqM							-

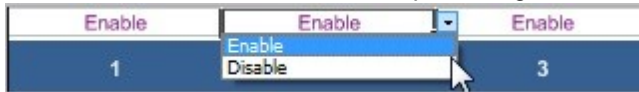
Note: Screenshot depicts Consolidate Report for full version of DF (8 options/stages). DF Lite only accommodates 2.

Using the 'View Comparison/Consolidate' button at the top of the 'Consolidate' report, the user can change how the results are reported:

- **Comparing the 'Options'**, where up to 2 columns of reporting data is made available for each scenario, providing a summary of the performance indicators for all Options or Scenarios that were previously stored.
- **Consolidating the 'Stages'**, where an additional 'Total' column is provided to report on the consolidated performance of up to 2 individual stages. This is only relevant if the data stored are stages or precincts within the one larger project. It enables the user to model long term projects (up to 30 years using monthly rests) in smaller stages.

**Toggleing an Option/Stage**

To hide an option/stage on the 'Consolidate' sheet when it is printed, you can use the drop-down to select 'Enable' or 'Disable' above each option/stage in the report.



Disabling will not delete the data stored. It will only vary the report outputs. For example, if you wanted to excluded a number of stages from the consolidated report, disabling these will adjust the total costs, revenues and performance indicators calculated for the total project as displayed in the Consolidate report.

To restore the options/stages in the report, just select 'Enable' for the relevant option/stage.

## Holding Discount Rate

The Consolidate report also allows the user to input a 'Holding Discount Rate' for the consolidated cash flow of all the stages stored. Since each stage may have different start dates, the NPV's for each stage cannot simply be added until they are discounted to a common date - that is the start of the consolidated project.

This is the rate that is applied to discount the NPV of each stage to present value at the start of the consolidated cash flow. Since there is little or no development risk during the holding period, a lower discount rate is usually applied (i.e. lower than the rate applied during the development period).

The NPV of each Stage, discounted to their start date by their individual discount rate.

PERFORMANCE INDICATORS	1	2	TOTAL
Discount Rate (Target IRR)	20.00%	20.00%	
Net Present Value <sup>6</sup>	2,224,521	1,192,451	
Date of Commencement	Jun-07	Sep-09	
Holding Discount Rate	10.00%		
NPV at Start of Consolidated Cash Flow	2,224,521	961,994	3,186,515

The Holding Discount Rate applied to stages that start after the start of the consolidated project.

Stage 2 is further discounted back to Jun-07 (consolidated project start) at the 10% Holding Discount Rate

The 'Consolidated NPV'

## Cash Flow Charts

Depending on how the user has indicated how the Consolidate report is used, there is a cash flow chart on the Chart sheet, either displaying a:

- **Comparison Chart**, displaying the cash flows for each option stored in the Chart sheet.
- **Consolidate Chart**, displaying the cash flow for the consolidated stages that have been stored in the Chart sheet.

**Part**

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## 10 Tracking Performance

### 10.1 Development Financial Summary

SUMMARY OF PROJECT RETURNS

Pacific Palms

Stage 1

73 Apartment Lots (2 Blocks)

Time Span: Jun-12 to Sep-14  
 Type: Land Subdivision  
 Status: Approved  
 2 Ha  
 0.1  
 10,950 GSA (Sqm)  
 73 Unit Lots

Drop-down options to  
 show Sales based on 'per  
 area' or 'per unit' basis

Drop-down options to report  
 costs/revenues on per lot, per  
 dwelling, per sqm of site area, etc

		Quantity	Sqm	AUD/Quantity	Total AUD	AUD Per GSA (Sqm)	AUD Per Ha of Site Area	AUD Per Total Net Reven
Show	<b>Revenues</b>							
Show	Gross Sales Revenue	73	10,950.00	115,451.19	8,427,937	770	4,213,968	116.9%
Show	Residential Unit Lots	73	10,950.00	115,451.19	8,427,937			
Show	Less Selling Costs				(450,766)	41	225,384	-6.3%
Show	Less Purchasers Costs							0.0%
Show	NET SALES REVENUE				7,977,169	729	3,988,584	110.6%
Show	Gross Rental Income	Average Yield	Sqm	AUD/Sqm/annum				0.0%
Show	Less Outgoings & Vacancies							0.0%
Show	Less Letting Fees							0.0%
Show	Less Incentives (Rent Free and Fit-out Costs)							0.0%
Show	Less Other Leasing Costs							0.0%
Show	NET RENTAL INCOME							0.0%
Show	Interest Received							0.0%
Show	Other Income							0.0%
Show	TOTAL REVENUE (before GST paid)				7,977,169	729	3,988,584	110.6%
Show	Less GST paid on all Revenue				(766,176)	70	383,088	-10.6%
Show	TOTAL REVENUE (after GST paid)				7,210,993	659	3,605,496	100.0%
Show	<b>Costs</b>							
Show	Land Purchase Cost				6,500,000	594	3,250,000	90.1%
Show	Land Acquisition Costs				460,490	42	230,245	6.4%
Show	Construction Costs				2,555,000	233	1,277,500	35.4%
Show	Professional Fees				718,681	66	359,841	10.0%
Show	Statutory Fees				3,000,000	274	1,500,000	41.6%
Show	Miscellaneous Costs 1							0.0%
Show	Miscellaneous Costs 2							0.0%
Show	Miscellaneous Costs 3							0.0%
Show	Project Contingency (Reserve)							0.0%
Show	Land Holding Costs				115,893	11	57,846	1.6%
Show	Pre-Sale Commissions							0.0%
Show	Finance Charges (inc. Fees)				90,000	8	45,000	1.2%
Show	Interest Expense				959,791	88	479,895	13.3%
Show	TOTAL COSTS (before GST reclaimed)				14,400,855	1,315	7,200,428	199.7%
Show	Less GST reclaimed				(344,566)	31	172,283	-4.8%
Show	Plus Corporate Tax							0.0%
Show	TOTAL COSTS (after GST reclaimed)				14,056,289	1,284	7,028,134	194.9%
Show	<b>Performance Indicators</b>					Per GSA (Sqm)	Per Ha of Site Area	
Show	Net Development Profit				(6,845,276)	625	3,422,638	
Show	Development Margin (Profit/Risk Margin)	Based on total costs (inc. selling costs)			-47.19%			
Show	Residual Land Value	Based on Target Margin of 20% (Exclusive of GST)			(637,236)	58	318,619	
Show	Net Present Value	Based on Discount Rate of 20% p.a. Nominal			(6,265,717)			
Show	Benefit Cost Ratio				0.4367			
Show	Project Internal Rate of Return (IRR)	Per annum Nominal			-52.33%			
Show	Residual Land Value	Based on NPV (Exclusive of GST)			(200,461)	18	100,240	
Show	Equity IRR	Per annum Nominal			#N/A			
Show	Equity Contribution				6,845,276			
Show	Peak Debt Exposure				11,845,869			
Show	Equity to Debt Ratio				60.43%			
Show	Weighted Average Cost of Capital (WACC)				4.67%			
Show	Break-even Date for Cumulative Cash Flow				N.A. (Negative Profit)			
Show	Yield on Cost				0.00%			
Show	Rent Cover				N.A.			
Show	Profit Erosion				N.A.			

Footnotes:

- Development Profit is calculated less total costs (including interest and land costs)
- Net Present Value is the present value of the project's cash flows
- Development Margin is profit divided by total costs (inc. selling costs)
- Residual Land Value is the maximum purchase price for the land while achieving the target development margin
- Net Present Value is the present value of the project's cash flows discounted to present value. It includes financing costs but excludes interest and stamp duty
- Benefit Cost Ratio is the ratio of discounted benefits to discounted costs (excluding financing costs but includes interest and stamp duty)
- Internal Rate of Return is the discount rate where the NPV of cash flows is zero
- Residual Land Value (based on NPV) is the purchase price for the land to achieve a zero NPV
- The Weighted Average Cost of Capital (WACC) is the rate that a company is expected to pay to finance its assets
- Break-even Date for Cumulative Cash Flow is the date when total cash flow is equal to zero (when profit is reached)
- Yield on Cost is Current Net Asset Value divided by Total Costs (before GST reclaimed), including all selling costs
- The period of time pay period (percentage) that a loan can be repaid based on the loan and interest payments (represents the profit for the development to zero)

Drop-downs to select  
 what rows to hide/show

KPIs

## Performance Indicators

<b>Gross Development Profit</b>	Total Project Revenue less Total Project Costs (after GST/VAT/Sales Tax paid and reclaimed, but before any profit share/split has been made to either the land owner or lender at the completion of the project).
<b>Net Development Profit</b>	Gross Development Profit less any profit share/split to either the land owner or lenders.
<b>Development Margin (profit/risk margin)</b>	<p>The ratio of Development Profit to:</p> <ul style="list-style-type: none"> <li>• Development Costs (inc Selling and Leasing Costs), or</li> <li>• Development Costs (inc Selling Costs), or</li> <li>• Development Costs (net of Selling and Leasing Costs), or</li> <li>• Total Revenue net of GST/VAT/Sales Tax, or</li> <li>• Total Sales Proceeds (net of Selling Costs and GST/VAT/Sales Tax).</li> </ul> <p>These options can be chosen on the 'Hurdle Rates' tab of the <a href="#">Preferences</a>.</p>
<b>Residual Land Value (Target Margin)</b>	The maximum price that can be paid for the land (net of stamp duty and other acquisition costs) that will result in the development achieving the Target Development Margin.
<b>Net Present Value</b>	The project cash flow (excluding equity) discounted to present value at the nominated discount rate (Target IRR).
<b>Benefit Cost Ratio</b>	The ratio of discounted revenue to discounted costs.
<b>Internal Rate of Return</b>	The return on the development or the discount rate at which the NPV equals zero.
<b>Residual Land Value (Target IRR)</b>	It is the maximum price to be paid for the land (excludes stamp duty and other acquisition costs) that will result in the project being feasible – i.e. when the IRR equals the discount rate and NPV equals zero.
<b>Equity IRR</b>	The return on the developer's equity investment into the project.
<b>Equity Contribution</b>	The sum of all developer equity contributions (injections) into the project.
<b>Peak Debt Exposure</b>	The maximum cash flow exposure after equity and including capitalised interest.
<b>Equity to Debt Ratio</b>	The ratio of equity funding to debt funding in the project.
<b>Weighted Average Cost of Capital (WACC)</b>	<p>The rate that a company is expected to pay to finance its assets. It is based on the following formula:</p> $\text{WACC} = \frac{D}{(D+E)} * R_D + \frac{E}{(D+E)} * R_E$ <p>Where:  D = Total Debt  E = Total Equity  R<sub>D</sub> = Cost of Debt (risk free rate of return plus debt premium based on the credit rating of the company); and</p>

	$R_E$ = Cost of Equity (required return on equity) $T_R$ = Corporate Tax Rate The date the cumulative cash flow first turns positive.
<b>Breakeven Date for Cumulative Cash Flow</b>	
<b>Rent Cover</b>	The total Net Development Profit divided by the Current Net Annual Rental expressed as a number of years/months. It is only applicable for developments with rental income.
<b>Yield on Cost</b>	Current Net Annual Rent divided by Total Costs (before GST reclaimed), including all Selling Costs.
<b>Profit Erosion</b>	The period of time post practical completion that it can remain unsold (but leased out) until finance and land holding costs erodes the profit for the development to zero. It is only applicable for developments with rental income.
<b>Return on Funds Invested</b>	
<b>Funds Invested</b>	The total amount of equity/debt funding injected into the project.
<b>Peak Exposure</b>	The maximum cash flow exposure of the equity/debt loan balance (including capitalised interest).
<b>Weighted Average Interest Rate</b>	The weighted average interest rate of the equity/debt facilities, weighted by the size of their loan balances.
<b>Interest and Fees Charged</b>	The total interest, application and line fees that have been charged by the financier to the project.
<b>Total Profit to Funders</b>	The total repayments less funds invested, including profit share paid or received.
<b>Margin on Funds Invested</b>	Margin is Total Profit to Funder divided by Funds Invested (Cash Outlay).
<b>Payback Date</b>	The last date when total equity/debt is repaid.
<b>IRR on Funds Invested</b>	<p>The IRR of the financier's cash flow.</p> <p>Refer to the Cash Flow sheet to view the cash flow data for each financier that is used to calculate their IRR.</p>
<b>Equity to Debt Ratio</b>	The ratio of equity funding to debt funding in the project.
<b>Loan to Value Ratio</b>	Loan to Value ratio is the Peak Equity/Debt Exposure divided by Total Sales Revenue.
<b>Loan Ratio</b>	<p>Loan Ratio is the total funds invested (cash outlay) divided by the nominated ratio calculation method.</p> <p>Use the <a href="#">Finance Preferences</a> to determine if 'funds invested' includes or excludes capitalised interest for the purposes of this calculation.</p>



### Important Notes about the calculation of IRR and NPV's

To help understand how the NPV's and IRR's are calculated, please be aware of the following:

- The 'Project' IRR is based on the project's cash flow, including inflows (revenues) and outflows (costs).
- You can choose whether financing costs, interest expenses and corporate tax are included in the project cash flow to calculate the 'Project' NPV and IRR, using the settings on the 'Hurdle Rates' tab of the [Preferences](#).
- It is based on the data in the 'Project IRR & NPV' section of the Cash Flow table, which summarises the cash flow lines that are included in the cash flow to calculate the Project NPV and IRR

#### PROJECT IRR & NPV

Cash Flow that includes financing costs but excludes interest and corp tax:	(1,005,000)	(188,012)	(12,893)	(833)
---	-------------	-----------	----------	-------

- The 'Equity' IRR is different to the 'Project' IRR, as it looks at the return on equity contributor's cash inflows (injections) and outflows (repayments). It is based on the 'Equity Cash Flow' line in the Financing section in the Cash Flow table.

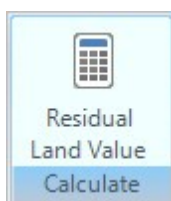
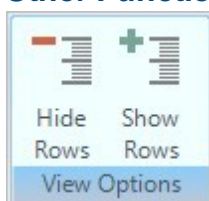
Equity Balance	(18,614,755)	(10,000,000)	(10,300,234)	(16,614,755)	(17,614,755)
Equity Cash Flow	(18,614,755)	(10,000,000)	(300,234)	(6,314,521)	(1,000,000)

- The 'Lenders' IRR is different to the 'Project' and 'Equity' IRR, as it looks at the return on lenders cash inflows (principal and interest repayments) and outflows (drawdowns). It is based on the 'Loan x Cash Flow' line for each lender in the Financing section in the Cash Flow table.

Loan Balance	-	-	-	(7,637,835)	(8,078,131)	(8,627,104)	(12,943,192)
% of Land Purchase Price	-	-	-	47.7%	50.0%	52.9%	79.4%
Profit Share	-	-	-	-	-	-	-
Loan 1 Cash Flow	8,735,158	-	-	(7,637,835)	(363,917)	(468,192)	(4,235,818)

- All these indicators use the standard 'NPV' and 'IRR' functions (not XNPV or XIRR).
- When calculating the NPV, it assumes time period zero is not discounted .
- You can choose whether all NPV's and IRR's noted above are calculated on an Effective or Nominal basis, using the settings on the 'Hurdle Rates' tab of the [Preferences](#).

### Other Functions



You can customise the rows that are displayed in the Summary Report:

- **Hide Rows:** This will hide the rows that have been deselected using the checkboxes on the left of the report.
- **Show Rows:** This will unhide all rows on the report. Any rows that were hidden will have their checkbox still deselected.

Update the Residual Land Values based on the Target Margin and Target IRR.

## 10.2 Cash Flow Table

### Stock Summary

This reports on stock that has been 'Sold' and 'Handed Over' via the revenue inputs from the Sales section and the Capitalised Sales calculated from the Rental Income section.

- Stock is **'Sold'** at the defined 'Pre-Sale Exchange' date for a sale item, or if no pre-sale is nominated, then at the defined 'Settlement' date.
- Stock is **'Handed Over'** at the defined 'Settlement' date for a sale item.

		Jan-18	Feb-18	Mar-18
<b>Sale Summary</b>				
Units Sold	94.00	-	3.75	3.75
Cumulative Units Sold		57.00	60.75	64.50
% Units Sold		60.6%	64.6%	68.6%
Sqm Sold	15,380.00	-	412.50	412.50
Cumulative Sqm Sold		9,630.00	10,042.50	10,455.00
% Sqm Sold		62.6%	65.3%	68.0%
AUD Sold	23,373,222	-	859,661	861,431
Cumulative AUD Sold		14,130,811	14,990,471	15,851,903
% AUD Sold		60.5%	64.1%	67.8%
<b>Handover Summary</b>				
Units Handed Over	94.00	-	46.75	3.75
Cumulative Units Handed Over		-	46.75	50.50
% Units Handed Over		-	49.7%	53.7%
Sqm Handed Over	15,380.00	-	5,142.50	412.50
Cumulative Sqm Handed Over		-	5,142.50	5,555.00
% Sqm Handed Over		-	33.4%	36.1%
AUD Handed Over	23,373,222	-	10,546,434	861,431
Cumulative AUD Handed Over		-	10,546,434	11,407,865
% AUD Handed Over		-	45.1%	48.8%

### Costs and Revenues Cash Flow

This report will display a summary of all costs and revenues for the Developer's Cash Flow.

		Jan-18	Feb-18	Mar-18
<b>Revenue</b>				
Gross Sales Revenue	23,373,222	-	10,546,434	861,431
Selling Costs	(1,025,247)	(16,382)	(215,538)	(56,224)
Gross Rental Income	-	-	-	-
Leasing Costs	(1,320)	-	-	-
Interest Received*	17,424	-	424	-
GST Payments (Liabilities)	(951,355)	-	(508)	(34,755)
<b>TOTAL NET REVENUE</b>	<b>21,500,000</b>	<b>380,064</b>	<b>405,028</b>	<b>811</b>
<b>Costs</b>				
Land and Acquisition	21,365,990	8,088,000	-	-
Professional Fees	1,334,173	74,607	31,431	25,460
Manual Input	5,500	-	5,000	-
Construction Costs (inc. Contingency)	9,339,100	380,064	405,028	405,028
stage 1	-	-	-	-
block 1 apartments	1,738,275	199,902	-	-
block 2 apartments	1,212,750	139,466	-	-
block 3 townhouses	46,800	-	80,850	80,850
block 4 townhouses	52,400	-	40,425	40,425
block 5 houses	-	-	84,459	84,459
block 6 houses	79,625	-	97,453	97,453
block 7 houses	67,775	-	58,472	58,472
stage 3	-	-	-	-
block 8 houses	1,403,325	-	-	-
block 9	311,850	-	-	-
block 10	779,625	-	-	-
Statutory Fees	7,508,500	2,407,000	-	-
Project Contingency (Reserve)	-	-	-	-
Land Holding Costs	252,954	-	18,696	-
Pre-Sale Commissions	119,874	-	-	-
Financing Costs (exc Fees)	99,000	-	-	-
GST Refunds (Input Credits)	(1,377,519)	(137,823)	(59,273)	(44,247)
<b>TOTAL COSTS</b>	<b>41,327,071</b>	<b>10,921,117</b>	<b>512,329</b>	<b>502,688</b>
Net Cash Flow (before Interest)	(19,822,669)	(10,937,499)	9,410,483	267,765
Cumulative Cash Flow		(28,110,972)	(18,700,489)	(18,432,725)

Each section has its own 'Manual Input' row that can be shown via the 'View Options' function

Sections can be expanded to show detail via the 'View Options' function

## Financing Cash Flow

This reports on all the sources of funding that have been employed for the project, in particular:

- The funds drawn down and any manual adjustments.
- The funds repaid back to the financier, broken up by interest and principal, and any manual adjustments.
- The interest rate for each period, and any manual adjustments.
- The cash flows for each financier, used as the basis for calculating their IRR.

*Lender Cash Flow = Drawdowns + Interest Paid by Equity + Loan Repayments*

- The running Loan Ratios for each source of funding, which are set up via the [Finance Preferences](#).
- The Interest Coverage and Debt Service Ratios.

*Interest Coverage Ratio = Total Net Revenue / (Interest Charged - Interest Paid by Equity + Loan Fees (e.g. Application, Line and Standby))*

*Debt Service Ratio = Total Net Revenue / Loan Repayments*

		Jan-18	Feb-18	Mar-18
<b>Developer's Equity</b>				
Manual Adjustments (Inject + / Repay -)		0	0	0
Injections	21,823,805	-	-	-
Interest Charged	-	-	-	-
Equity Repayment	-	-	-	-
Less Profit Share	-	-	-	-
Equity Balance	(21,823,805)	(10,494,938)	(10,494,938)	(10,494,938)
Equity Cash Flow				
<b>Project Cash Account</b>				
Surplus Cash Injection				
Cash Reserve Drawdown				
Interest on Surplus Cash				
Surplus Cash Balance				
<b>Senior Loan - Lender Name</b>				
Debt				
Drawdown	(24,488,090)	(10,937,499)	-	-
Loan Interest Rate (%/ann)		7.50%	7.50%	7.50%
Interest Charged	(2,001,136)	(42,872)	(111,499)	(53,381)
Application and Line Fees	-	-	-	-
Interest Paid by Equity	-	-	-	-
Loan Repayment	6,489,225	-	9,410,483	267,765
Interest and Fees	2,001,136	-	335,369	53,381
Principal	4,488,090	-	9,075,114	214,384
Loan Balance	-	(17,839,903)	(8,540,920)	(8,326,536)
% of Land Purchase Price		88.08%	88.08%	88.08%
Senior Loan Cash Flow	2,001,136	(10,937,499)	9,410,483	267,765
Interest Coverage Ratio	10.82	(0.38)	88.99	14.43
Debt Service Ratio	0.72	-	1.05	2.88
Project Overdraft		(17,839,903)	(8,540,920)	(8,326,536)
% of Land Purchase Price		88.08%	88.08%	88.08%
Total Equity to Debt Ratio	88.12%	59.58%	59.58%	59.58%
Total Debt Interest Coverage Ratio	10.82	(0.38)	88.99	14.43
Total Debt Service Ratio	0.72	-	1.05	2.88
Net Cash Flow (after Interest)	(21,823,804)	(10,980,371)	9,298,983	214,384
Cumulative Cash Flow**		(28,334,841)	(19,035,858)	(18,821,474)
Check Balance	-	-	-	-

Loans that are not used can be hidden via the 'View Options'

Manual Adjustment rows for drawdowns, repayments and interest rates.

Repayments broken down to principal and interest/fees.

Running loan ratios for each loan and entire debt.

## GST Liability Summary

This section is only enabled when the 'GST' Taxation Format is selected in the [Preferences](#). It reports the GST Liability that is calculated on all revenue, and then the GST on Sales that are [withheld by Purchasers](#). The difference is the developer's Net Liability:

- A **positive** Net Liability indicates that the purchasers have withheld a tax amount greater than actual tax liability, and therefore the developer is entitled to a credit for that amount.
- A **negative** Net Liability indicates that the purchasers have withheld a tax amount less than than actual tax liability, and therefore the developer is liable to pay that amount.

The Net Liability is then summarised in the 'GST Payments' Cash Flow Row in the Revenue section, impacting the 'Total Net Revenue' accordingly.

GST Payments (Liabilities)	(57,075,287)	-	420	2,250	(2,267)	(6,683)
<b>TOTAL NET REVENUE</b>	<b>1,018,605,076</b>	<b>(390,134)</b>	<b>(468,557)</b>	<b>(67,264)</b>	<b>106,804</b>	<b>495,387</b>

<b>GST Liability Summary</b>						
Total Liability on Revenue	(58,814,888)	-	(2,332)	(6,007)	(20,118)	(36,881)
Withheld by Purchaser	(1,739,601)	-	(2,752)	(8,257)	(17,851)	(30,197)
<b>Net Liability (-ve) / Credit (+ve)</b>	<b>(57,075,287)</b>	<b>-</b>	<b>420</b>	<b>2,250</b>	<b>(2,267)</b>	<b>(6,683)</b>

The Net Liability is summarised in the 'GST Payments' Cash Flow Row

A positive Net Liability = tax credit for developer.

A negative Net Liability = tax liability for developer.



## IRR and NPV

This reports on the calculation of the Project IRR and NPV, as well as providing the user to have a [variable discount rate](#).

- The first row of data displays the cash flow that is being used to calculate the IRR and NPV, set via the Hurdle Rate options in the [Preferences](#)
- The discount rate that was entered in the [Hurdle Rates](#) input section is known as the '**Static Discount Rate**' and that will form the basis of all IRR and NPV calculations on other reports, such as the Summary and Sensitivity reports. In addition, it will also be used to report the following in the Cash Flow:

The Present Value (PV) of net cash flow for each time period.

The Net Present Value (NPV) of all future cash flows at each time period.

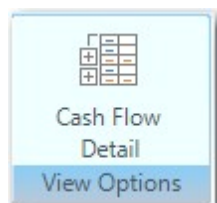
- The Static Discount Rate then forms the starting point for the '**Variable Discount Rate**' inputs, where the user can manually adjust the discount rate up or down to reflect different levels of risk at different points in time in the project. Using the Variable Discount Rates entered by the user, a weighted average discount rate is calculated, and then it is used to calculate an NPV.

The Cash Flow the Project IRR is based on.

Developer's IRR & NPV					
Cash Flow that includes financing costs but excludes interest and corp tax.		(3,105,490)	(76,741)	(146,451)	(21,741)
Static Discount Rate (per ann. nominal)	20.00%				
PV for each Month	(16,215,305)	(3,105,490)	(75,483)	(141,688)	(20,690)
NPV of Future Cash Flows		(16,215,305)	(13,328,312)	(13,472,430)	(13,548,079)
Variable Discount Rate (per ann. nominal)	25.00%	20.00%	20.00%	25.00%	25.00%
NPV (using weighted avg discount rate)	(15,538,419)				

Variable Discount Rate used to calculate an alternate NPV

## Cash Flow Detail



### Costs and Revenues

This feature on the Cash Flow sheet allows the user to change the way the cash flow input sections are displayed in relation to the rows. For each cost and revenue section, the user can select from the following row views:

- **All Rows:** Shows all rows (used and unused) for a particular input section.
- **Populated Rows:** Shows only used rows for a particular input section. A row is 'used' when there is an input description evident and/or there is data in any of the stored forecasts.
- **Sub Totals:** Hides all input rows for a section and only shows the heading and sub total row.

Costs Revenues Stock Summary Financing

Cash Flow Rows

Land Acquisition Sub-Totals

Professional Fees Sub-Totals

### Stock Summary

For the Stock Summary report, the user can select from the following row views:

- **Quantity Sold/Handed Over:** Select to hide/show the exchanges and settlements by quantity.
- **Area Sold/Handed Over:** Select to hide/show the exchanges and settlements by area.
- **Value Sold/Handed Over:** Select to hide/show the exchanges and settlements by value.
- **Land Use Groups:** Select to hide/show the sub totals for quantity/area/value grouped by their Land Use Category.

Costs Revenues Stock Summary Financing

Sales (Exchange) Summary

☒ Quantity Sold

☒ Area Sold

☒ Value Sold

☒ Land Use Groups

	TOTAL	12 Jan-18	13 Feb-18
<b>Sale Summary</b>			
<b>Units Sold</b>	525.33	42.94	42.94
Residential Apartment	515.33	42.94	42.94
Commerical Office	10.00	-	-
Cumulative Units Sold		42.94	85.89
% Units Sold		8.2%	16.3%
<b>SqM Sold</b>	28,368.00	4,119.17	4,119.17
Residential Apartment	24,715.00	4,119.17	4,119.17
Commerical Office	3,653.00	-	-
Cumulative SqM Sold		4,119.17	8,238.33
% SqM Sold		14.5%	29.0%
<b>AUD Sold</b>	892,907,139	68,102,667	68,325,617
Residential Apartment	861,067,463	68,102,667	68,325,617
Commerical Office	31,839,677	-	-
Cumulative AUD Sold		68,102,667	136,428,284
% AUD Sold		7.6%	15.3%

### Financing

For the Financing Cash Flow, the user can select from the following row views:

- For Financing Costs:
  - **All Rows:** Shows all rows (used and unused) for a particular input section.
  - **Populated Rows:** Shows only used rows for a particular input section. A row is 'used' when there is an input description evident and/or there is data in any of the stored forecasts.
  - **Sub Totals:** Hides all input rows for a section and only shows the heading and sub total row.
- For Sources of Funding:

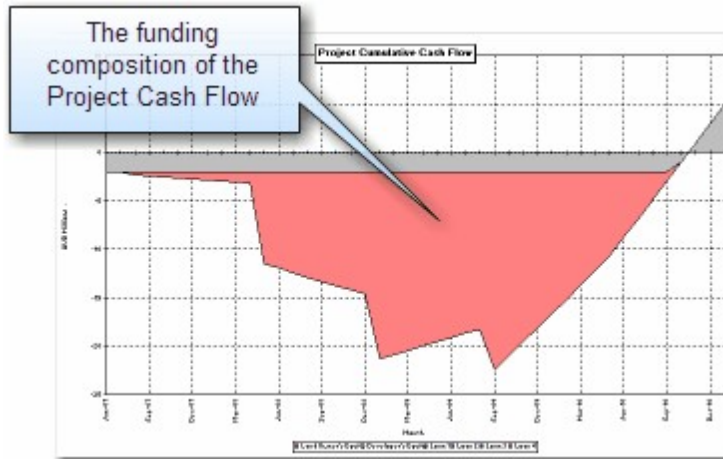
- **All Sources:** All sources of funding are displayed in the Financing Cash Flow, regardless if they are used or not.
- **Used Sources:** Only sources of funding that are 'used' are displayed. A source of funding is used if there are any drawdowns, repayments, interest charges or profit share payments.

The screenshot shows the 'Financing' tab selected in the top navigation bar. Below the navigation bar, there are two main sections: 'Manual Inputs' and 'Cash Flow Rows'. Under 'Manual Inputs', there is a 'Financing Costs' section with a small square icon. Under 'Cash Flow Rows', there is a 'Sub-Totals' dropdown menu. Below these, there is a 'Sources' section with a 'Sources of Funding' section and an 'All Sources' dropdown menu.

## 10.3 Cash Flow Charts

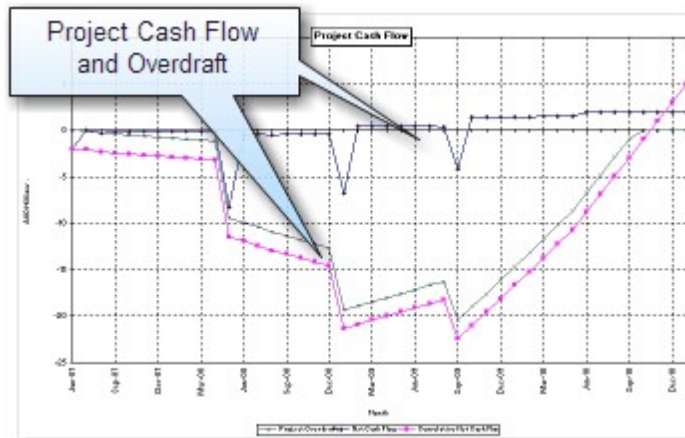
### Cumulative Cash Flow

Highlighting the position of equity and debt draw downs and repayments through the project life.



### Project Cash Flow

This chart depicts the Project Overdraft, Net Cash Flow and Cumulative Net Cash Flow.

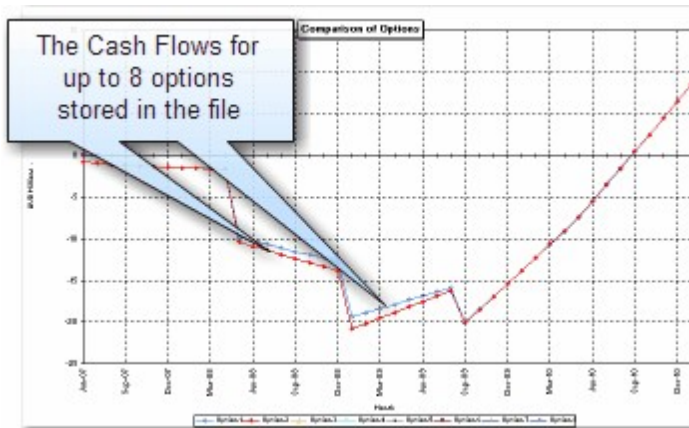




## Consolidated Cash Flow or Comparison of Options

Depending on how the user has elected to report their Options/Stages in the [Consolidate](#) sheet, one of the following two charts will be displayed:

- **Comparison Chart:** Displaying the cash flows for each option stored.



- **Consolidate Chart:** displaying the net cash flow and cumulative net cash flow for the consolidated stages that have been stored.



**Part**

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**XI**

## 11 Risk Assessment

### 11.1 Sensitivity Analysis

The Sensitivity Analysis is a risk assessment mechanism and allows the user to examine the impact on development performance indicators resulting from changes in a series of input variables.

There are 3 Sensitivity Analysis features available in the ARGUS EstateMaster DF Lite program:

1. Scenario Analysis
2. One-Way What-If Analysis
3. Two-Way What-If Analysis
4. Three-Way What-If Analysis of Residual Land Values

#### Scenario Analysis

On the 'Sensitivity' sheet, the 'Scenario Analysis' allow you to input variations to each of the variables listed on the table. The 'Variation' column in the 'Scenario Analysis' table affects the calculation cells in the cash flow. You can put any combination of variations and see their impact on the various performance indicators. No function is required to be run as this alters the model directly.

Variable	Variation	Base + Variation	Performance Indicator *	Result
Land Acquisition Costs	0.00%	900,000,000	Development Profit	335,614,473
Construction Costs	5.00%	1,236,510,710	Development Margin	11.47%
Construction Period	0.00%	Months 6 to 25	Maximum Debt Exposure	1,824,641,245
End Sale Values	-5.00%	3,261,148,009	Date of Peak Exposure	Jul-2009
Capitalisation Rate	0.00%	0.00%	Breakeven Date of Cash Flow	Dec-2010
Sales Span Period *	0.00%	Months 25 to 42	Project NPV	(604,370,201)
Rental Levels	0.00%	-	Project IRR	9.25%
All Loan Interest Rates	0.50%	8.50%	Equity IRR	9.68%
* Includes Pre-Sale Exchange and Settlement Spans			WACC	5.55%
			* Based on Gross Development Profit before Profit Share	

Before commencing with further work, the values in the variations should be set back to zero. When you run the 'Sensitivity Analysis' function, the values in the 'Variation' column will return to zero automatically.

#### One-Way What-If Analysis

In the One-Way What-If Analysis table, put low, mid and high forecast variations for each of the variables.

- Using the 'Enable' dropdown options to select the variables you wish to test before running the sensitivity procedure. If 'No' is selected, the inputs will be greyed out and that rows for that variable will be hidden on the Sensitivity Table.
- Check for any warnings that the variations have caused the model to exceed the maximum time periods or that the variations have resulted in negative interest or capitalisation rates.

Sensitivity to Changes in:	Enable	Warnings	Low	Mid	High
Land Acquisition Costs	Yes		-5.0%	-3.0%	3.0%
Construction Costs	No		-10.0%	-5.0%	5.0%
Construction Period	Yes	Model exceeds 60 periods	-20.0%	-10.0%	10.0%
End Sale Values	Yes		-5.0%	-3.0%	3.0%
Capitalisation Rate	Yes		-0.5%	-0.2%	0.2%
Sales Span Period	No		-30.0%	-20.0%	20.0%
Rental Levels	Yes		-20.0%	-10.0%	10.0%
All Debt Interest Rates	Yes		-2.0%	-1.0%	1.0%
Developer's Discount Rate	Yes		18.0%	19.0%	20.0%

Note that these variations do not affect the cash flow - only the outputs on the Sensitivity Table, which is generated when the 'Sensitivity Analysis' function is run.

	Change %	Gross Dev. Profit	NPV	Dev. Margin	Project IRR	Equity IRR	WACC	RLV (Target Margin)	RLV (Target IRR)
<b>Base Case (No Variation)</b>	0.00%	335,614,473	(604,370,201)	11.47%	9.25%	9.68%	5.55%	Not Computed	Not Computed
Land Acquisition Costs	-5.00%	641,678,361	(425,055,583)	22.99%	13.93%	17.40%	5.25%	852,779,221	452,573,070
	-3.00%	623,678,361	(443,055,583)	22.20%	13.54%	16.75%	5.21%	835,111,913	443,241,667
	3.00%	569,678,361	(497,055,583)	19.90%	12.41%	14.73%	5.10%	786,581,928	417,421,764
	5.00%	551,678,361	(515,055,583)	19.15%	12.04%	14.14%	5.06%	771,623,109	409,470,873

## Two-Way What-If Analysis

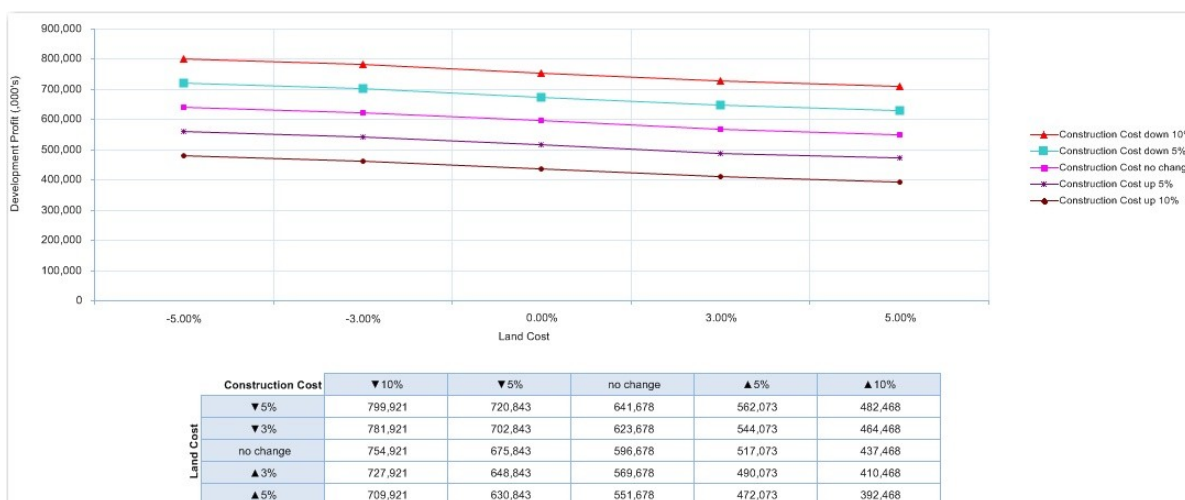
In the 'Two-Way What-if Analysis' section there are dropdown options for setting parameters.

	<b>Two-Way Chart 1</b>	<b>Two-Way Chart 2</b>	<b>Three-Way RLV Tables</b>
Performance Indicator	Development Profit ▼	Development Margin ▼	RLV (Target Margin) ▼
Variable 1 (X-Axis)	Land Cost ▼	Land Cost ▼	Construction Cost ▼
Variable 2	Construction Cost ▼	Construction Cost ▼	Construction Period ▼
Variable 3			Target Margin

There are two charts each with three dropdown options:

- **Performance Indicator:** Select either 'Development Profit' or 'Net Present Value' for Chart 1 and either 'Project IRR', 'Equity IRR', 'WACC' or 'Development Margin' for Chart 2;
- **Variable 1:** Select either Land Costs, Construction Costs, End Sale Values, Construction Period, Selling Span Period, Rental Income, Debt Interest Rates, and Discount Rate (only relevant for Chart 1 if selecting net present value as your performance indicator); and
- **Variable 2:** Select either Land Costs, Construction Costs, End Sale Values or Rental Income.

These are translated into charts on the 'Sensitivity' sheet when the 'Sensitivity Analysis' function is run.



## Three-Way What-If Analysis of Residual Land Values

The 'Three-Way What-if Analysis' is similar to the 'Two-Way', however it focuses on the two Residual Land Values that the application calculates; the RLV based on the Target Margin and the RLV based on the Target IRR.

There are three dropdown options as well, however the main difference being that the first one allows you to select one of the two available Residual Land Value outputs as the Performance Indicator, which then automatically defines the third variable as either the Target Margin or Discount Rate.

	Two-Way Chart 1	Two-Way Chart 2	Three-Way RLV Tables
Performance Indicator	Development Profit	Development Margin	RLV (Target Margin)
Variable 1 (X-Axis)	Land Cost	Land Cost	Construction Cost
Variable 2	Construction Cost	Construction Cost	Construction Period
Variable 3			Target Margin

By default, the Performance Indicator option is set to "Do No Generate", meaning that it will not generate the results for the Three-Way What If tables when the Sensitivity function is run, and it will not print that part of the report. This is recommended if you do not require this analysis, as it is time consuming to run.

Three-Way RLV Tables
-- Do Not Generate --
Construction Cost
Construction Period

The data generated by 'Sensitivity Analysis' function is run is a series of tables:

- A summary table, which looks at the 4 variations to the Target Margin or Target IRR, depending on the Residual Land Value selected from the dropdown option, and the resultant variation to the Base Residual Land Value (the Residual Land Value calculated based on the target hurdle defined on the 'Input' sheet)
- Four detailed tables, one for each variations to the Target Margin or Target IRR, displaying the impact to the Residual Land Value based on the variation to the other two variables defined.

# Variations in Residual Land Value

Summary Table


Target IRR (Discount Rate)	Residual Land Value	Variation to Base RLV
Base Case @25.0%	429,944,417	
18.00%	679,417,041	58.02%
19.00%	639,949,709	48.84%
20.00%	601,827,663	39.98%
21.00%	565,008,067	31.41%

Detail Tables

Target IRR (Discount Rate)		Sale Span Period				
End Sale Value	18.00%	▼30%	▼20%	▲20%	▲30%	no change
	▼5%	631,061,760	620,594,809	539,466,924	529,639,135	579,462,902
	▼3%	672,127,919	661,440,990	578,608,085	568,573,838	619,444,557
	▲3%	795,326,397	783,979,534	696,031,569	685,377,946	739,389,524
	▲5%	836,392,556	824,825,715	735,172,730	724,312,649	779,371,180
	no change	733,727,158	722,710,262	637,319,827	626,975,892	679,417,041

Target IRR (Discount Rate)		Sale Span Period				
19.00%		▼20%	▼20%	▲20%	▲30%	no change

## Running the Sensitivity Function

Once you have finished making all input entries, click the Sensitivity Analysis  button on the [Ribbon Menu](#). The sensitivity function performs 5 key functions:

1. It resets the values in the 'Variation' column of the 'Scenario Analysis' to zero.
2. It updates the One-Way What-If sensitivity table on the developer's 'Sensitivity' sheet;
3. It generates the Two-Way What-If charts on the developer's 'Sensitivity' sheet;
4. It resizes the time scale on the developer's cash flow chart to the life of the project; and
5. It recalculates the residual land value based on developer's Target Margin & IRR.

The length of the operation will be dependant on the memory and speed of your PC, and may take from several seconds to several minutes to complete. You can improve waiting time by keeping as much memory free and closing unnecessary applications.

### Variations to Time

The sensitivity analysis varies the period/span variables by adjusting the timing of the cash flow.

Varying the time for the Construction Period has the following impact on the cash flow:

- **Construction Costs, Professional Fees and Statutory Fees:** Extends their starting period (exc Construction) and extends their span time periods.
- **Land Holding Costs:** Extends their span periods.
- **Sales and Rental Income:** Delays the starting date for settlements and the lease start for rentals.
- **Land Costs and Financing Costs:** No direct changes, except for any indirect impact on interest costs by varying debt exposure and funding requirements.

Varying the Sale Span Period only affects the span periods for pre-sale exchanges and settlements, but not the starting dates for each sale item.

### **Exceeding Time Periods During Sensitivity**

Whilst the cash flow has a maximum time periods, it can accommodate an extra 15 periods for the Sensitivity Analysis. If you should select scenarios for period/span variables in the sensitivity table that will expand the cash flow beyond these additional time periods, you will get a warning message when you try to run the sensitivity analysis. If this happens you will probably need to check your assumptions in the 'Sensitivity' sheet, adjust your variations in the One-Way What-If Analysis table, select a different rest period (eg quarters instead of months) or insert more time periods by using the "Resize Model" function.

## **Reports**

The Sensitivity Report consists of two sections:

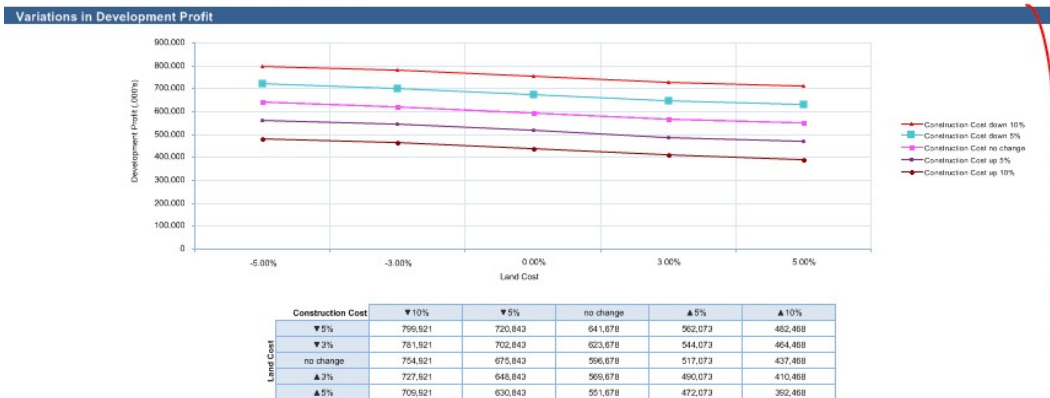
1. **One-Way What-If Analysis Table:** The sensitivity table shows the effects on Profit, Development Margin, NPV, Equity IRR, Project IRR, WACC and the Residual Land Values to the high, mid and low variations (as selected in the Sensitivity settings towards the top of the sheet) for the various variables.
2. **Two-Way What-If Charts:** The two charts below the sensitivity table illustrate the sensitivity of the performance indicators to changes in the combinations of two variables as selected by the user in the relevant dropdown options.
3. **Three-Way What-If Tables of Residual Land Values:** These tables illustrate the sensitivity of the residual land value to changes in the combinations of the target hurdle rate and two variables as selected by the user in the relevant dropdown boxes. This section of the report will be excluded from printouts, if the 'Do Not Generate' option is selected in the relevant dropdown.



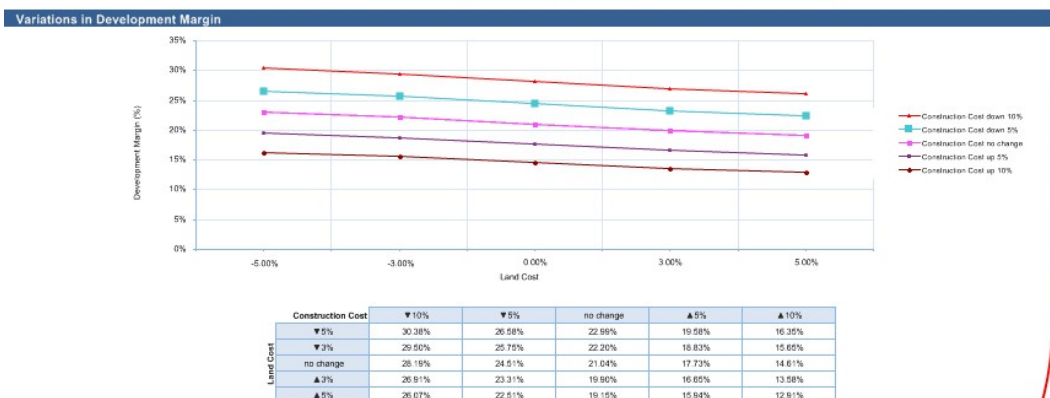
EstateMaster Development Feasibility		SENSITIVITY ANALYSIS									
Sample Project											
Land Servicing Only											
Service and Sell Vacant Land as Master Developer											
		Estate Master - Licensed to Estate Master Administration									
	Change %	Gross Dev. Profit	NPV	Dev. Margin	Project IRR	Equity IRR	WACC	RLV (Target Margin)	RLV (Target IRR)		
Base Case (No Variation)	0.00%	335,614,473	(604,370,201)	11.47%	9.25%	9.68%	5.55%	Not Computed	Not Computed		
Land Acquisition Costs	-5.00%	641,678,361	(425,055,583)	22.99%	13.93%	17.40%	5.25%	852,779,221	452,573,070		
	-3.00%	623,678,361	(443,055,583)	22.20%	13.54%	16.75%	5.21%	835,111,813	443,241,667		
	3.00%	569,678,361	(497,055,583)	19.90%	12.41%	14.73%	5.10%	786,581,928	417,421,764		
	5.00%	551,678,361	(515,055,583)	19.15%	12.04%	14.14%	5.06%	771,623,109	409,470,873		
Construction Costs	-10.00%	754,921,694	(366,583,085)	28.19%	15.50%	19.04%	4.99%	968,400,000	533,416,915		
	-5.00%	675,843,944	(418,319,334)	24.51%	14.22%	17.46%	5.07%	889,243,902	481,680,666		
	5.00%	517,073,426	(521,791,832)	17.73%	11.73%	13.93%	5.23%	730,606,924	378,208,168		
	10.00%	437,488,491	(573,528,081)	14.81%	10.51%	12.12%	5.30%	650,998,481	326,471,919		
Construction Period *	-20.00%	577,617,508	(336,646,150)	20.73%	14.49%	17.50%	5.06%	804,924,802	543,353,851		
	-10.00%	587,989,265	(428,530,539)	20.87%	13.48%	16.30%	5.13%	807,051,240	471,469,461		
	10.00%	606,682,167	(536,006,032)	21.15%	12.25%	14.85%	5.17%	811,782,886	363,993,969		
	20.00%	615,441,825	(573,414,684)	21.31%	11.88%	14.33%	5.18%	814,797,338	326,585,316		
End Sale Values	-5.00%	428,709,330	(552,633,952)	15.14%	10.50%	11.94%	5.15%	676,442,280	347,366,048		
	-3.00%	495,896,943	(519,602,605)	17.50%	11.50%	13.47%	5.15%	729,952,200	380,397,395		
	3.00%	697,180,193	(420,508,562)	24.56%	14.39%	17.86%	5.15%	880,100,000	479,491,438		
	5.00%	764,122,859	(387,477,214)	26.90%	15.31%	19.17%	5.15%	943,151,099	512,522,786		
Capitalisation Rate	-0.50%	596,678,361	(470,055,583)	21.04%	12.97%	15.80%	5.15%	810,224,708	429,944,417		
	-0.20%	596,678,361	(470,055,583)	21.04%	12.97%	15.80%	5.15%	810,224,708	429,944,417		
	0.20%	596,678,361	(470,055,583)	21.04%	12.97%	15.80%	5.15%	810,224,708	429,944,417		
	0.50%	596,678,361	(470,055,583)	21.04%	12.97%	15.80%	5.15%	810,224,708	429,944,417		
Sales Span **	-30.00%	580,214,192	(402,074,190)	20.55%	13.86%	17.16%	5.15%	800,706,036	497,925,810		
	-20.00%	583,505,978	(415,965,121)	20.68%	13.67%	16.96%	5.15%	802,543,138	484,034,880		
	20.00%	609,772,931	(521,884,245)	21.38%	12.37%	14.81%	5.15%	817,600,690	378,115,755		
	30.00%	613,152,383	(534,502,304)	21.47%	12.24%	14.56%	5.15%	819,501,139	365,497,696		
Rental Levels	-20.00%	596,678,361	(470,055,583)	21.04%	12.97%	15.80%	5.15%	810,224,708	429,944,417		
	-10.00%	596,678,361	(470,055,583)	21.04%	12.97%	15.80%	5.15%	810,224,708	429,944,417		
	10.00%	596,678,361	(470,055,583)	21.04%	12.97%	15.80%	5.15%	810,224,708	429,944,417		
	20.00%	596,678,361	(470,055,583)	21.04%	12.97%	15.80%	5.15%	810,224,708	429,944,417		
Loan Interest Rates	-2.00%	644,952,482	(470,055,583)	23.13%	12.97%	16.82%	3.87%	858,296,458	429,944,417		
	-1.00%	621,103,162	(470,055,583)	22.09%	12.97%	16.32%	4.51%	834,575,612	429,944,417		
	1.00%	571,647,993	(470,055,583)	19.98%	12.97%	15.26%	5.80%	785,184,424	429,944,417		
	3.00%	519,925,797	(470,055,583)	17.85%	12.97%	14.11%	7.09%	733,460,843	429,944,417		
Discount Rate	18.00%		(376,633,827)						678,417,041		
	19.00%		(412,751,667)						639,949,709		
	20.00%		(447,609,553)						601,827,663		
	21.00%		(481,247,914)						565,008,067		
Target Margin	18.00%							973,033,819			
	19.00%							948,499,190			
	20.00%							924,631,579			
	21.00%							900,947,368			

\* Variation to Construction Period in sensitivity table delays span dates for Construction and start and span for Professional Fees, Statutory Contributions and Misc. Costs.  
Delays start but not span dates for Sales, Rental and Other Income. Delays the span for Land Holding costs. Has no effect on Land Purchase or Finance costs (except interest).  
\*\* Varies span date for Pre-Sale Exchange and Settlement periods, but not commencement dates.

One-Way  
What If  
Tables



Two-Way  
What If  
Charts



Notes: Two-Way What If Charts do not take into construction any variations to the Corporate Tax caused by the change in the 2 selected variables.  
This is due to Finance Fee and Interest Charges being set in the Preferences to be allocated to Works in Progress (WIP) for Profit and Loss reporting.

Variations in Residual Land Value

Target IRR (Discount Rate)	Residual Land Value	Variation to Base RLV
Base Case @25 %	429,944,417	
18.00%	679,417,041	58.02%
19.00%	639,949,709	48.84%
20.00%	601,827,663	39.98%
21.00%	565,008,067	31.41%

Target IRR (Discount Rate)		Sale Span Period				
18.00%		▼30%	▼20%	▲20%	▲30%	no change
End Sale Value	▼5%	631,061,760	620,594,809	539,466,924	529,639,135	579,462,902
	▼3%	672,127,919	661,440,990	578,608,085	568,573,838	619,444,557
	▲3%	755,326,397	783,979,534	696,031,569	685,377,946	739,389,524
	▲5%	836,392,556	824,825,715	735,172,730	724,312,649	779,371,180
	no change	733,727,158	722,710,262	637,319,827	626,975,892	679,417,041

Target IRR (Discount Rate)		Sale Span Period				
19.00%		▼30%	▼20%	▲20%	▲30%	no change
End Sale Value	▼5%	596,629,362	585,677,510	500,991,760	490,757,806	542,696,748
	▼3%	636,664,235	625,482,185	539,016,444	528,567,445	581,597,932
	▲3%	756,768,852	744,896,210	653,090,434	641,996,362	696,301,485
	▲5%	796,803,724	784,700,885	691,115,098	679,806,001	737,202,669
	no change	696,716,544	685,189,198	596,053,439	585,281,903	639,949,709

Target IRR (Discount Rate)		Sale Span Period				
20.00%		▼30%	▼20%	▲20%	▲30%	no change
End Sale Value	▼5%	563,292,936	551,890,308	483,926,439	473,321,892	507,199,223
	▼3%	602,323,548	590,681,223	500,868,240	490,040,854	545,050,599
	▲3%	719,415,385	707,053,964	611,693,647	600,197,740	656,604,728
	▲5%	758,445,996	745,844,878	648,635,449	636,916,703	696,456,103
	no change	660,869,466	648,867,594	556,280,943	545,119,297	601,827,663

Target IRR (Discount Rate)		Sale Span Period				
21.00%		▼30%	▼20%	▲20%	▲30%	no change
End Sale Value	▼5%	531,020,159	519,199,321	428,222,984	417,281,538	472,929,769
	▼3%	569,072,800	557,003,448	464,114,495	452,943,103	509,761,068
	▲3%	683,230,720	670,415,830	571,789,028	559,927,798	620,255,046
	▲5%	721,283,360	708,219,957	607,680,539	595,589,363	657,086,365
	no change	626,151,760	613,709,639	517,951,761	506,435,451	565,008,067

Three-Way  
What-If RLV  
Tables



**Part**

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**XII**

## 12 Printing Reports

### Conducting a Final Check

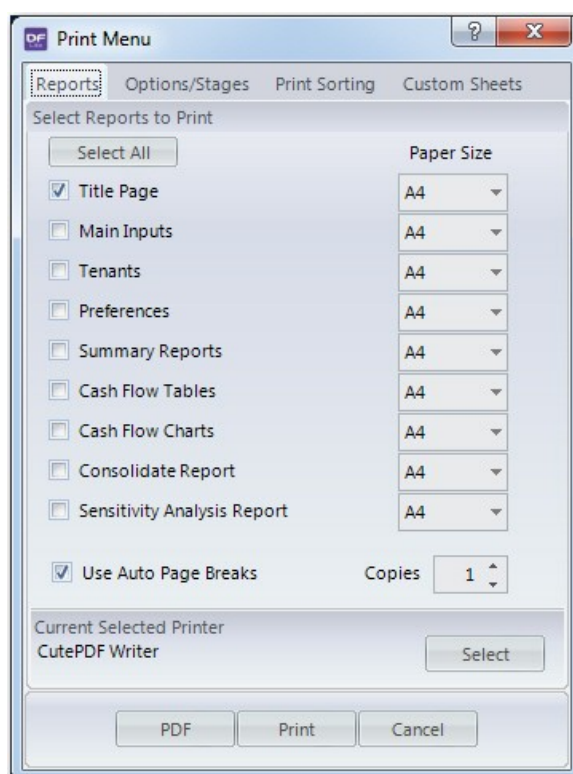
There are numerous output report sheets in the ARGUS EstateMaster DF Lite program that provide you with the performance indicators upon which the property's feasibility is assessed. You should do a reality check of these to make sure that there are no errors. Check the graphs to make sure that they look reasonable and make sure there are no numbers in the cash flow or summary reports, which appear to be unrealistic or wrong. If there are obvious errors, amend them accordingly and update the model if necessary.

### Printing

- To print the reports, load the Print Menu by clicking on one of the  **Print** buttons on the toolbars.
- When the Print Menu is activated, a series of check boxes will appear for each report.
- Select the reports that you wish to print and the paper size and then click [Print].
- If any results need to be updated, such as the Sensitivity or Residual Land Value analysis, the software will run these functions automatically before printing their respective reports.

### Auto Page Breaks

On the Inputs and Cash Flow reports, 'Auto Page Breaks' can be set to apply page breaks at the start of certain cash flow sections so they start on a new page rather than have a continuous flow. Using Auto Page Breaks will provide neater report layouts, but may print out on more pages.



### Selecting your Printer

Before printing any reports, check that the printer you wish to print to is the currently active printer (ie 'Currently Printing on.....'). If you need to select a different printer, then click on the [Select Printer] button.

### PDF

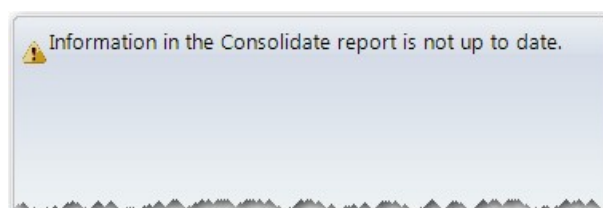
ARGUS EstateMaster DF Lite has its own built-in PDF writer. When you initially installed the software, a printer would have been added to your list if Printers called "EstateMaster PDF Printer". This is used to generate PDF files of the selected reports. When [PDF] is clicked:

- If multiple reports are selected, a single PDF file will generated containing all those reports in the orders as selected in the 'Print Sorting' tab.
- If multiple Options/Stages are selected in the 'Options/Stages' tab, then a separate PDF file for each Option/Stage will be created.

## Warnings

A warning may appear if it relates to data that needs to be updated on any of the selected reports. The program will provide a warning in the following circumstances:

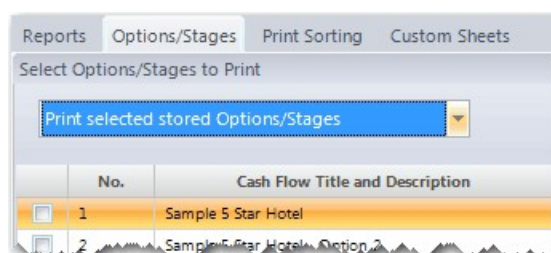
- Variations in the Scenario Analysis are affecting the cash flow.
- The cash flow exceeds the maximum time periods or if the variations in the sensitivity test will extend the cash flow beyond the maximum time periods.
- The current set of inputs has not been stored and that the 'Consolidate' sheet is not up to date.



If you wish to ignore the warnings, click on the 'Proceed to Print' button, otherwise select 'Cancel' to rectify any of the issues before attempting to print again.

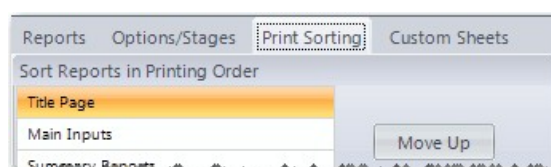
## Printing Options/Stages

This feature allows the user to print the selected reports for either the current set of inputs, or any of the stored Options/Stages.



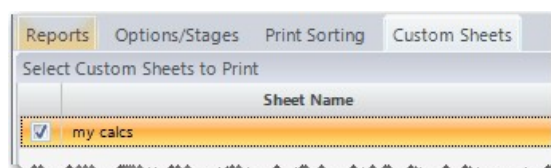
## Print Sorting

Using the 'Move Up/Down' buttons, the user can sort the printing order of the selected reports.



## Custom Sheets

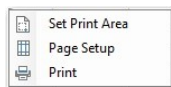
If there are any custom worksheets in the model, the user can select to print them here. They will be printed in the order they appear, after the standard reports are printed. If one of the custom worksheets is greyed out in this list, it indicates there is nothing to print on that sheet.



Before printing custom worksheets, it is advised that the Print Area and Page Setup be set for them via the options in the [context menu](#) of each custom sheet.

## 12.1 Custom Worksheets

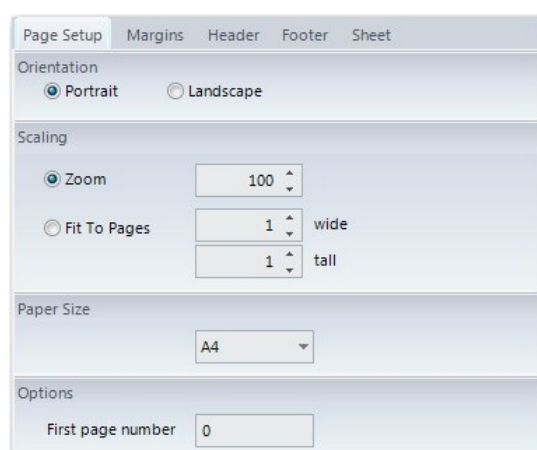
If using User-Inserted Worksheets, printing functionality is provided to customise how these worksheets are printed. This is available via the [Sheet Context Menus](#). When right-clicking on a User-Inserted Worksheet, the following options are provided:



**Set Print Area** Define what part of the worksheet to print by setting the currently selected range as the 'Print Area'.

**Page Setup** Change the settings for how the page is to be printed, such as:

- Orientation (portrait or landscape)
- Zoom (percentage or 'Fit to Page')
- Margins and Page Centring
- Headers and Footers
- Print Area
- Title Rows and Columns to repeat
- Page Order.



**Print** Print the active User Inserted sheet.

**Part**



## 13 Troubleshooting and Support

### 13.1 Maximum Cash Flow Periods

For every payment and revenue item it is necessary to put a start date and span period else the program will not add the payment to the cash flow. The start date must be a number between zero (0) (which represents the first or current period) and the maximum time periods as shown on the bottom of the 'Setup'/Input' sheet. The span period must be one (1) or more.

The start and span numbers must not add up to more than the maximum time periods. If you exceed the maximum time periods a warning will be displayed.

If you find that the number of time periods are not enough for the project, re-examine the interval period nominated and adjust it to a greater interval period eg from months to quarters or insert more time periods by changing the ['Resize Time Periods'](#) preference.

If you put too high variation for construction and/or sale span period in the sensitivity input table you will get an error message just to the right of the input cells. This occurs where the variation causes the cash flow to exceed the maximum number for the purpose of sensitivity analysis (15 more time periods than the cash flow depicts). You will need to either reduce the variation (high forecast percentage) or else select a longer interval period (eg quarters instead of months).

### 13.2 Entering the Correct Data

If you find that once all data has been entered and calculated, the performance indicators in the financial summary are returning a #VALUE or #NUM value. The reasons for this could be either of the following:

1. Incorrect data entered in the input cells. There is a safeguard built into the program against entering text in a cell that requires a numerical entry. If this is the case the cell will return 'Error Input' in red font or the cell will have a red background. The contents of the cell should be examined and edited appropriately.

#### Examples of User Input Error Warnings

Description	% of Construct. 1
Management Fees	Error Input
	0.00%

**Text entered in a numerical cell**

GST Included	Land Use Code
Y	RS1
Y	-

**Incorrect code entered**

Total Area	Current Sale Price	Sales Calc Method
SqFt		
5,000	1,000,000	Per SqM
-	-	Per Unit

**Incorrect unit of measurement used**

2. The estimate of IRR in the 'Hurdle Rates' section of the 'Setup' sheet may be too far off and should be adjusted to a rate closer to the expected IRR.