

# **Calculation Guide**

**Estate Master DF Tenancy Schedule**

**September 2013**

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## Introduction

Estate Master has put together this document to assist you with working through the different calculations that appear on the Tenants worksheet within the Estate Master DF (Development Feasibility) software

### Tenancy Schedule

12999 Rental Income & Capitalised Sales																													
Code	Stage	Description	Land Use Code	Total Area (sqft)	Current Rent (sqft/annum)	Outgoings and Vacancies Amount (sqft/annum)	Total Rent (sqft/annum)	Pre-Commit Month	Lease Month Start	Lease Month Stop	Cash Flow Period	Escalated Rent (sqft/annum)	Total Gross Rent (sqft/annum)	Letting Fee Total Amount	Total Rent Free Months	Incentives Fx out Cost	Residual Cap. Rate	Pre-Sale Exchange Month	Settlement Month	Leasing Up Period Month	Leasing Up Period Year	Discount	Purchaser's Costs	Nil Tax Induced on Sale?	Current Net Annual Rent	Current End Sale Value	Total Net Rental Income less Incentives	Escalated End-Sale Value	
D301	-	-	-	-	-	-	0.00%	-	0	-	-	0.00%	0.00%	-	-	-	0.00%	-	-	-	-	0.00%	Y	-	-	-	-		
D302	-	-	-	-	-	-	0.00%	-	0	-	-	0.00%	0.00%	-	-	-	0.00%	-	-	-	-	0.00%	Y	-	-	-	-		
D303	-	Commercial1	COM	5,100	400	-	0.00%	-	25	30	Oct-10-Jul-11	415	15,00%	0.00%	325,438	2	500,000	23	0.00%	-	35	-	0.00%	0.00%	Y	2,040,000	25,500,000	630,946	27,130,946
D304	-	Commercial2	COM	3,440	400	-	0.00%	-	27	8	Dec-10-Jul-11	438	15,00%	0.00%	289,029	2	340,000	25	0.00%	-	35	-	0.00%	0.00%	Y	1,360,000	17,000,000	360,734	18,360,734
D305	-	Commercial3	COM	2,950	400	-	0.00%	-	29	5	Feb-10-Jul-11	430	15,00%	0.00%	369,329	2	295,000	27	0.00%	-	35	-	0.00%	0.00%	Y	1,020,000	12,750,000	259,810	13,009,810
D306	-	Commercial4	COM	2,850	400	-	0.00%	-	31	4	Apr-10-Jul-11	432	15,00%	0.00%	365,141	2	255,000	29	0.00%	-	35	-	0.00%	0.00%	Y	1,020,000	12,750,000	238,659	13,000,659
D307	-	Commercial5	COM	1,700	400	-	0.00%	-	30	2	Jun-10-Jul-11	434	15,00%	0.00%	390,639	2	170,000	31	0.00%	-	35	-	0.00%	0.00%	Y	680,000	8,500,000	160,239	8,660,239
D308	-	Commercial6	COM	1,700	400	-	0.00%	-	0	-	00-09-Aug-1	400	0.00%	0.00%	-	-	-	-	-	-	-	-	0.00%	Y	680,000	8,500,000	-	8,500,000	
D309	-	-	-	-	-	-	0.00%	-	0	-	-	0.00%	0.00%	-	-	-	0.00%	-	-	-	-	0.00%	Y	-	-	-	-		
D310	-	Commercial1 car space	PAR	60	2,925	-	0.00%	-	25	10	Oct-10-Jul-11	2,825	15,00%	0.00%	29,005	2	-	-	-	-	-	-	0.00%	0.00%	Y	180,000	2,400,000	302,705	2,702,705
D311	-	Commercial2 car space	PAR	45	2,925	-	0.00%	-	27	8	Dec-10-Jul-11	2,825	15,00%	0.00%	18,880	2	-	-	-	-	-	-	0.00%	0.00%	Y	152,600	1,657,500	246,410	1,803,910
D312	-	Commercial3 car space	PAR	34	2,925	-	0.00%	-	29	6	Feb-10-Jul-11	2,825	15,00%	0.00%	14,388	2	-	-	-	-	-	-	0.00%	0.00%	Y	99,450	1,243,025	152,237	1,395,262
D313	-	Commercial4 car space	PAR	34	2,925	-	0.00%	-	31	4	Apr-10-Jul-11	2,825	15,00%	0.00%	14,388	2	-	-	-	-	-	-	0.00%	0.00%	Y	99,450	1,243,025	150	1,243,175
D314	-	Commercial5 car space	PAR	23	2,925	-	0.00%	-	30	2	Jun-10-Jul-11	2,825	15,00%	0.00%	9,345	2	-	-	-	-	-	-	0.00%	0.00%	Y	68,300	828,750	104,845	933,595
D315	-	Commercial6 car space	PAR	23	2,925	-	0.00%	-	0	-	Aug-10-Jul-11	2,925	0.00%	0.00%	-	-	-	-	-	-	-	-	0.00%	Y	68,300	828,750	-	828,750	
D316	-	-	-	-	-	-	0.00%	-	0	-	-	0.00%	0.00%	-	-	-	0.00%	-	-	-	-	0.00%	Y	-	-	-	-		

## Tenancy Schedule

### 1. Outgoings and Vacancies – Total Per Annum

This represents the total Outgoings and Vacancies as an average amount per annum inclusive of any tax, but excluding an escalation.

#### Calculation

	Formula	Example
1	( Current Rent <i>Multiplied by</i>	( 400 x
2①	Rental Rate <i>Multiplied by</i>	1 x
3	Total Area <i>Multiplied by</i>	5,100 x
4	Percentage of Rent ) <i>Divided by</i>	1%) /
①	Taxation Gross Up Factor for Rent <i>Plus</i>	1 +
3	( Total Area <i>Multiplied by</i>	( 5,100 x
5	Amount <i>Multiplied by</i>	10 x
2①	Rental Rate ) <i>Divided by</i>	1) /
①	Taxation Gross Up Factor for Lessing Costs	1
		71,400

Description	Land Use Code	<sup>3</sup> Total Area	<sup>1</sup> Current Rent	<sup>5</sup> Outgoings and Vacancies <sup>4</sup>		
		SqM	<sup>2</sup> /SqM/annum	Amount /SqM/annum	% of Rent	Total Per Annum
Commercial 1	-	5,100	400	10	1.00%	71,400

## 2. Escalated Rent at Lease Start

This displays the escalated rent as at the Lease Start Date on a rate per month/annum, based on the 'Sales and Rental Revenue Escalation' rates entered on the Input sheet for the different Land Use Categories.

### Calculation

Formula	Example
$(( \text{Current Rent}^1 \times \text{Total Area}^2 \times \text{Rental Rate}^3$	$(( 400 \times 5,100 \times 1$
<i>Divided by</i>	<i>/</i>
① Term )	12 )
<i>Divided by</i>	<i>/</i>
① Taxation Gross Up Factor on Rents )	1 )
<i>Multiplied by</i>	<i>x</i>
①4 Leas Start Escalation Factor	1.050398
<i>Multiplied by</i>	<i>x</i>
① Term	12
<i>Divided by</i>	<i>/</i>
1 Total Area	5,100
	420

Description	Land Use Code	④	②	①	Outgoings and Vacancies			Pre-Commit Month	Lease Month Start	Lease Month Span	Cash Flow Period	Escalated Rent at Lease Start /SqM/annum
		Total Area SqM	③	Current Rent /SqM/annum	Amount /SqM/annum	% of Rent	Total Per Annum					
Commercial 1	COM	5,100	400	10	1.00%	71,400	-	18	24	Mar-10 - Feb-12	420	

Sales and Rental Revenue Escalation		Escalation Rates (Monthly Compounded Escalation) based on Cashflow Period Years commencing									
Code	Category	Sep-08	Sep-09	Sep-10	Sep-11	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17
RSA	Apartments	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
RSV	Villas	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RSH	Houses	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
RSM	McMansions	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
RET	Retail	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
④ COM	Commercial	3.00%	4.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
IND	Industrial	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MAR	Marina	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
PAR	Parking	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OTH	Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

## 3. Letting Fee – Total Amount

This represents the letting fees payable at the Lease Start date, based on a percentage of the escalated Gross Rent at that point in time.

### Calculation

Formula	Example
$(( \text{Current Rent}^1 \times \text{Total Area}^2 \times \text{Rental Rate}^3$	$(( 400 \times 5,100 \times 1$
<i>Divided by</i>	<i>/</i>
① Term )	12 )
<i>Divided by</i>	<i>/</i>
① Taxation Gross Up Factor on Rents )	1 )
<i>Multiplied by</i>	<i>x</i>
① Escalation Factor	1.050398
<i>Multiplied by</i>	<i>x</i>
5 ( Letting Fee %	( 15%
<i>Divided by</i>	<i>/</i>
① Taxation Gross Up Factor for Lessing Costs )	1 )
<i>Multiplied by</i>	<i>x</i>
Term	12
	321,421

Description	Land Use Code	④		③	①	Outgoings and Vacancies			Pre-Commit Month	④
		Total Area	SqM			Current Rent	/SqM/annum	Amount		
Commercial 1	COM	5,100			400	10	1.00%	71,400	-	18

Description	⑤		
	% of Gross Rent	% paid at PreCommit	Total Amount
Commercial 1	15.00%	0.00%	321,422

## 4. Current Net Annual Rent

This represents the Current Annual Rental, net of Outgoings (if assumed) and any Tax Liability to be paid (if assumed).

### Calculation

Formula	Example
1 ( Current Rent <i>Multiplied by</i>	( 400 x
2 Total Area <i>Multiplied by</i>	5,100 x
3 ① Rental Rate ) <i>Multiplied by</i>	1 ) x
① (Taxation Factor for Rents <i>Less</i>	1 -
4 Outgoings and Vacancies – Total Per Annum	71,400
	<u>1,968,600</u>

Description	2	1	4			Add GST		Current Net Annual Rent
	Total Area SqM	3 Current Rent /SqM/annum	Amount /SqM/annum	% of Rent	Total Per Annum	on Costs	on Rents	
Commercial 1	5,100	400	10	1.00%	71,400	y	n	1,968,600

## 5. Current End Sale Value

This represents the Current Net Rental Income divided by the Residual Capitalisation Rate.

### Calculation

Formula		Example
1	Current Net Annual Rent	1,968,600
	<i>Divided by</i>	/
2	Residual Cap Rate	8%
		<hr/>
		24,607,500

2						1	
Residual Cap. Rate	Pre-Sale Exchange Month	Settlement Month	Leasing Up Period		Purchaser's Costs	Current Net Annual Rent	Current End Sale Value*
			Months Vacant	Discount Rate			
8.00%	-	-	-	0.00%	0.00%	1,968,600	24,607,500



## 📘 Notes on Formulas

### Term

- If 'Cash Flow Rest Periods' = Monthly: 12
- If 'Cash Flow Rest Periods' = Quarterly: 4
- If 'Cash Flow Rest Periods' = Half-Yearly: 2
- If 'Cash Flow Rest Periods' = Yearly: 1

### Rental Rate

- If 'Current Rent' rate selection = / <area measurement>/annum: 1
- If 'Current Rent' rate selection = / <area measurement>/month: 12

### Taxation Factor on Rents

- If Preference 'Taxation > Cost and Revenue Inputs > Enter Rents and Leasing Costs' = Inclusive of Tax AND  
'Add Tax on Rents' for that line item <> 0 or N
  - $(1 - (1 - 1 / (1 + \text{Tax Rate}))) = 0.909090909$  (Assuming a 10% Rate is being used)
- If Preference 'Taxation > Cost and Revenue Inputs > Enter Rents and Leasing Costs' = Exclusive of Tax:
  - $(1 - 0) = 1$

### Taxation Gross Up Factor on Rents

- If Preference 'Taxation > Cost and Revenue Inputs > Enter Rents and Leasing Costs' = Exclusive of Tax AND  
'Add Tax on Rents' for that line item <> 0 or N
  - $(1 - (1 - 1 / (1 + \text{Tax Rate}))) = 0.909090909$  (Assuming a 10% Rate is being used)
- If Preference 'Taxation > Cost and Revenue Inputs > Enter Rents and Leasing Costs' = Inclusive of Tax:
  - $(1 - 0) = 1$

### Taxation Gross Up Factor on Leasing Costs

- If Preference 'Taxation > Cost and Revenue Inputs > Enter Rents and Leasing Costs' = Exclusive of Tax AND  
'Add Tax on Costs' for that line item <> 0 or N
  - $(1 - (1 - 1 / (1 + \text{Tax Rate}))) = 0.909090909$  (Assuming a 10% Rate is being used)
- If Preference 'Taxation > Cost and Revenue Inputs > Enter Rents and Leasing Costs' = Inclusive of Tax:
  - $(1 - 0) = 1$

#### Preference



#### Add Tax on Costs/Rents Inputs on Tenancy Schedule

Description	Add GST	
	on Costs	on Rents
Commercial 1	Y	Y

## Leas Start Escalation Factor

- The Escalation factor is based on several inputs in the model:
  - The 'Land Use Code' selected for a tenancy as entered on the 'Tenants' sheet.
  - The 'Rental Revenue Escalation' rate entered for that 'Land Use' on the 'Input' sheet.
  - The Start of the Lease entered on the 'Tenants' sheet.

Description	Land Use Code	Total Area SqM	Current Rent /SqM/annum	Outgoings and Vacancies			Pre-Commit Month	Lease Month Start	Lease Month Span
				Amount /SqM/annum	% of Rent	Total Per Annum			
Commercial 1	COM	5,100	400	10	1.00%	71,400	-	18	24

Sales and Rental Revenue Escalation		Escalation Rates (Monthly Compounded Escalation) based on Cashflow Period Years commencing									
Code	Category	Sep-08	Sep-09	Sep-10	Sep-11	Sep-12	Sep-13	Sep-14	Sep-15	Sep-16	Sep-17
RSA	Apartments	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
RSV	Villas	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
RSH	Houses	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
RSM	McMansions	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
RET	Retail	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
COM	Commercial	3.00%	4.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%
IND	Industrial	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
MAR	Marina	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
PAR	Parking	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
OTH	Other	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

The Future Value function is used to work out the escalation factor, but since there are multiple rates in the escalation table (one for each year), a separate calculation is required to work out the factor for each year.

Based on the example above:

- The tenancy has a 'Land Use Code' of COM, which means that it will apply the escalation rates entered for the 'Commercial' Land Use Category. This is 3% for year 1, 4% for year 2 and 5% for year 3 onwards.
- The Lease Start is month 18
- So year 1, the Future Value function calculates the following rate:
 
$$=FV(\text{annual rate for yr 1, number of periods (i.e years), payments, present value} * -1)$$

$$=FV(3\%, 12/12, 0, -1) = 1.03$$
- The using the factor calculated at the end of year 1, the Future Value function calculates the following rate for the remaining 6 months using the rate entered for year 2:
 
$$=FV(\text{annual rate for yr 2, number of periods (i.e years), payments, year 1 factor} * -1)$$

$$=FV(4\%, 6/12, 0, -1.03) = 1.050398$$