EstateMaster

DF CASE STUDY

STUDENT ACCOMMODATION SCHEME IN THE UK

INTRODUCTION

This case study is designed to demonstrate a Development Appraisal scenario for a 250 unit **Student Accommodation** Scheme, with a particular focus on the variance in Key Performance Indicators caused by changing the Residual Cap Rate within the tenancy schedule, using the consolidation functionality as a means of testing sensitivity.

The assumptions listed are to be considered for illustration purposes only:

- Location: Regional UK (Midlands / Northern England)
- Land Purchase Price: £2.75m
- Sqft per unit: 299
- Total lettable area: 74,750sqft
- Weekly rent: £143.75 per unit (this is a blend of several market rates from £100 to £189 per wk)
- Development will be financed 30% Equity and 70% debt (NB up to 4 sources of finance could be incorporated)

The model assumes a terminal value at the end of 48 months which includes a development period of 24 months and a holding period of 24 months. The development will be let with a blended occupancy (term and holiday) of 86%.

A change in increase in cap rate from 6.5% to 6.75% to 7% provides considerable erosion in development margin and IRR.

Similar sensitivity could be done on any cost or revenue variable, please read below for further instructions and details and contact us for more information.

DEVELOPMENT OF NEW BUILDING

The model assumes a land purchase of £2.75m + £127,000 Stamp Duty (£2.87m in total)

INPUTS AND PREFERENCES

PREFERENCES

- General > Regional Settings
    - Set Stamp Duty to 'Custom' Based on Land Exc VAT
    - Set Taxation Format to VAT
- General > Cash Flow Periods
    - Set cash flow rest periods to 'Monthly'
    - Resize model time periods to 60 months
- Financing > Global Settings
    - Financing Level is set to 'Simple- Equity and Senior Debt only'
- Financing > Equity
    - Facility Limit Calculation Method 'Net Cashflow to be Funded'
    - Equity Injection Method – "Progressively when Required"
    - Equity Repayment Method "Repaid when available- retain cash for future costs"
    - Interest Payment Method is "Capitalised"
    - Check box "Equity to repay any outstanding Debt at End"
- Financing > Senior Debt
    - Loan Type is set to "Debt" '
    - Facility Limit is set to '"No Limit – Acts as Overdraft"
    - Interest Payment Method is "Capitalised"
    - Loan Ratio Calculation Method is "% of Net Cashflow to be Funded"
- Taxes and Duties Tab:
    - Set SDLT thresholds according to UK Commercial banding:

STAMP DUTY RATES

Imported Land Value for Duty Calculations		2,750,000

Summary

UK	127,000

Last Updated: 15/03/2016

date. They are provided for convenience only to assist Estate Master Users and may not be suitable for all mmend that the user seek their own taxation advice before relying on these results.

Rating Land Value Thresholds			Tax Amount	Rate
0	to	150,000	0	0.00%
150,001	to	250,000	0	2.00%
250,001		and above	2,000	5.00%

- Further details can be found at https://www.tax.service.gov.uk/calculate-stamp-duty-land-tax

Detailed calculation

This is a breakdown of how the total amount of SDLT was calculated based on the rules from 17 March 2016

Purchase price bands (£)	Percentage rate (%)	SDLT due (£)
Up to 150,000	0	0
Above 150,000 and up to 250,000	2	2,000
Above 250,000+	5	125,000
	Total SDLT due	127,000

You can print your calculation.

Go to the GOV.UK homepage for SDLT.

PRELIMINARY

- Cash Flow Title = Student Accommodation Sample File V1
- Project Start Date = Jun 2016
- Project Size a = 250 Units
- Project Size b = 74,750 Sq Ft GFA
- Type: Residential
- Status: Under Review

LAND PURCHASE COSTS

- Land Purchase Price = £2,750,000
- Payment 1 – 50% (£1,375,000 automatically calculated as amount) – month 0 span 1 month
- Add Stamp Duty- Month start 0 Span 1
- Other Acquisition Costs: Lang Reg fees lump sum £1000.
- Legal fees 1% all paid in time period 0 and span 1 month

1000 LAND PURCHASE & ACQUISITION COSTS

Land Purchase Price — 2,750,000.00

Code	Stage		% of Land Purchase Price % paid	Amount	AND/OR Lump Amount	Month Start	Month Span	Cash Flow Period
1002	-	Deposit In Trust Account ¹	0.00%	-	-	0	-	-
1003	-	Payment 1	50.00%	1,375,000	-	0	1	Jun-16 - Jun-16
1004	-	Payment 2	0.00%	-	-	0	-	-
1005	-	Payment 3	0.00%	-	-	0	-	-
1006	-	Payment 4	0.00%	-	-	0	-	-
1007	-	Settlement (Balance)	50.00%		1,375,000	6	1	Dec-16 - Dec-16
1008	-	Stamp Duty ¹ UK			127,000	0	1	Jun-16 - Jun-16 (S
		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.				

Code	Stage	Other Acquisition Costs	% of Land Price exc Tax % paid	Amount	AND/OR Lump Amount	Month Start	Month Span	Cash Flow Period
1011	-	Land Registration Fees	0.00%	-	1,000.00	0	1	Jun-16 - Jun-16
1012	-	Legals	1.00%	27,500	-	0	1	Jun-16 - Jun-16
1013	-		0.00%	-	-	0	-	-

COST ESCALATION AND PROJECT CONTINGENCY

- Cost escalations are not being applied in this model.
- Project contingency = Fixed amount of £200,000

PROFESSIONAL FEES

- All professional fees in this model are based on the cost schedule below:

Description	Amount £	Month Start	Month Span
Fire Consultant	22,250.00	0	6
Acoustic Consultant	9,250.00	0	6
Architect to planning - 2%	39,000.00	0	6
Architect to tender	60,000.00	0	6
Architect (novated fee)	80,000.00	0	6
Structural Engineer	65,000.00	6	
M & E	65,000.00	6	18
CDM	21,860.00	6	18
Flood Risk Consultant	5,000.00	6	18
Project Management fee	150,000.00	6	18
Sundry Consultants	54,650.00	6	18
QS	50,000.00	6	18

- All Professional Fees are not escalated, and are s-curved using the base 'S' profile
- A development management fee of 3% of Project Costs (inc Land exc Finance and Tax) is applied.

PROFESSIONAL FEES

Description	% of Construct.¹	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)	S-Curve	Month Start²	Month Span	Cash Flow Period
Fire Consultant	0.00%	1.00	22,250.00	N	S	0	6	Jun-16 - Nov-16
Acoustic Consultant	0.00%	1.00	9,250.00	N	S	0	6	Jun-16 - Nov-16
Architect to planning - based on 2%	0.00%	1.00	39,000.00	N	S	0	6	Jun-16 - Nov-16
Architect to tender	0.00%	1.00	60,000.00	N	S	0	6	Jun-16 - Nov-16
Architect (novated fee)	0.00%	1.00	80,000.00	N	S	0	6	Jun-16 - Nov-16
Structural Engineer	0.00%	1.00	65,000.00	N	S	6	18	Dec-16 - May-18
M & E	0.00%	1.00	65,000.00	N	S	6	18	Dec-16 - May-18
CDM	0.00%	1.00	21,860.00	N	S	6	18	Dec-16 - May-18
Flood Risk Consultant	0.00%	1.00	5,000.00	N	S	6	18	Dec-16 - May-18
Project Management fee	0.00%	1.00	150,000.00	N	S	6	18	Dec-16 - May-18
Sundry Consultants	0.00%	1.00	54,650.00	N	S	6	18	Dec-16 - May-18
QS	0.00%	1.00	50,000.00	N	S	6	18	Dec-16 - May-18
.	0.00%	-	-	-	-	0	-	-
.	0.00%	-	-	-	-	0	-	-
.	0.00%	-	-	-	S	0	-	-

¹ % Based on Net Costs   ² Pro-rata with Construction ('C')

Development Management	3.00%	% of Project Costs (inc Land but exc Finance & Tax)	-	P1	-	Jun-16 - May-18

CONSTRUCTION COSTS

- Month start for all construction is 6 and span is 18 months
- 5% construction contingency

CONSTRUCTION COSTS

Description	Cost Type	Units	Base Rate / Units	Escalate (E,R,N)1	S-Curve	Month Start	Month Span	Cash Flow Period
Building base cost	-	1.00	10,000,000.00	N	-	6	18	Dec-16 - May-18
Scheme signage	-	1.00	10,000.00	N	-	6	18	Dec-16 - May-18
Demolition	-	1.00	112,025.00	N	-	0	-	-
	-	-	-	-	-	0	-	-
.	-	-	-	-	-	0	-	-
.	-	-	-	-	-	0	-	-
.	-	-	-	-	-	0	-	-
.	-	-	-	-	-	0	-	-
.	-	-	-	-	-	0	-	-
.	-	-	-	-	-	0	-	-

¹ Escalation ('N' = no escalation, 'E' = escalation to start period, 'R' = escalation to start period and through span)

Construction Contingency	-	And / Or	5.00% of Construction Costs (inc VAT)

ANCILLARY COSTS

- Allow for Ancillary Costs, month start 6 and spam for 6months

Ancillary Costs

Description	Units	Base Rate / Units	Escalate (E,R,N)	S-Curve	Month Start	Month Span	Cash Flow Period
Planning Consultant	1.00	30,000.00	N	S	0	6	Jun-16 - Nov-16
Planning Application Fees	1.00	30,000.00	N	S	0	6	Jun-16 - Nov-16
Building Regs	1.00	10,000.00	N	S	0	6	Jun-16 - Nov-16
Party wall surveyors	1.00	5,000.00	N	S	0	6	Jun-16 - Nov-16
Construction legals	1.00	10,000.00	N	S	0	6	Jun-16 - Nov-16
Site investigation	1.00	10,000.00	N	S	0	6	Jun-16 - Nov-16
Surveys	1.00	7,500.00	N	S	0	6	Jun-16 - Nov-16
Topographic Survey - Incl Surveys	1.00	570.00	N	S	0	6	Jun-16 - Nov-16
Highways(inc green travel) - TA	1.00	10,000.00	N	S	0	6	Jun-16 - Nov-16
Independent Design Review	1.00	2,500.00	N	S	0	6	Jun-16 - Nov-16
Air Quality Assessment	1.00	5,000.00	N	S	0	6	Jun-16 - Nov-16
Acoustic Report	1.00	2,500.00	N	S	0	6	Jun-16 - Nov-16
Heritage Asset Statement	1.00	1,000.00	N	S	0	6	Jun-16 - Nov-16
Contingency & other costs	1.00	20,000.00	N	S	0	6	Jun-16 - Nov-16
.	-	-	-	-	0	-	-

SECTION 106 AND S278 COSTS

- Allow for section 106 and S278 Costs, start month 6 span 12 months

Section 106 TCPA and S278 Costs

Description	%of Construction¹	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)	S-Curve	Month Start²	Month Span	Cash Flow Period
Section 106	0.00%	1.00	100,000.00	N	-	6	12	Dec-16 - Nov-17
S 278	0.00%	1.00	15,000.00	N	-	6	12	Dec-16 - Nov-17
.	0.00%	-	-	-	-	0	-	-

MARKETING

- Allow for marketing, month start 18, span 6 months:

Marketing							Month Start²	Month Span	Cash Flow Period
Description	%of Construction¹	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)	S-Curve		Month Start²	Month Span	Cash Flow Period
General	0.00%	1.00	20,000.00	N	E		18	6	Dec-17 - May-18
.	0.00%	-	-	-	-		0	-	-

SALES & RENTAL REVENUE ESCALATIONS

- Revenue category codes have been set up as follows:
  - SA1 – Student Accommodation
- No Items have been escalated

SALES & RENTAL REVENUE ESCALATION										
		Escalation Rates (Monthly Compounded Escalation) based on Cashflow Period Years commencing								
Code	Category	Jun-16	Jun-17	Jun-18	Jun-19	Jun-20	Jun-21	Jun-22	Jun-23	
SA1	Student Accomodation	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
FHS	Freehold	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	

OTHER SELLING COSTS

- Selling costs are included as follows:

Other Selling Costs	% of Gross Sales	AND / OR No. Units	Base Rate / Unit	Escalate (E,R,N)		Month Start	Month Span	Cash Flow Period
Legals	0.00%	1.00	157,000.00	-		24	6	Jun-18 - Nov-18
Puchasers Costs	0.00%	1.00	129,257.00	-		48	1	Jun-20 - Jun-20
Purchasers Agents Fees	0.00%	1.00	22,286.00	-		48	1	Jun-20 - Jun-20
Purchasers Legal Fees	0.00%	1.00	22,286.00	-		48	1	Jun-20 - Jun-20
	0.00%	-	-	-		0	-	-

FINANCING

- Set Equity at 50% of "Net Cash Flow to be funded"
- Senior Debt
  - Set as 'No limit' – use as overdraft facility, this will finance the remaining 50% required

PROJECT HURDLES

- Set the Discount Rate at 15% to represent a commercial return inclusive of inflation and 25% for Development Margin

TENANCY SCHEDULE - RENT AND OTHER ASSUMPTIONS

- There are a number of options for calculating rental income which can be chosen from the drop down menu within the tenancy schedule. This model uses rent per unit per week

RENTAL INCOME & CAPITALISED SALES					
Land Use Code	Units	Total Area SqFt	Current Rent /Unit/week	Outgoings a Amount /Unit/week	% R
SA1	250	74,750.00	/SqFt/annum	-	14
-	-	-	/SqFt/month	-	0
-	-	-	/SqFt/week	-	0
-	-	-	/Unit/annum	-	0
-	-	-	/Unit/month	-	0
-	-	-	/Unit/week	-	0

- Enter: Units (250), Lettable Area (74,750 SqFt) and 'Rent per unit per week (£143.75) amounts to the relevant cells on the 'Tenants' sheet.

Land Use Code	Units	Total Area SqFt	Current Rent /Unit/week
SA1	250	74,750.00	143.75

- Set the remaining inputs:
  - Rental increment is set at 5% per annum
  - Assume a vacancy rate of 14% - this assumes a blended occupancy of 86% taking into account both term time and holiday
  - Lease Up as follows
  - Start month 24 span 24 months to Dec May 20
  - Enter Residual Cap Rate of 6%. This will automatically capitalise the Tenancy at the end of the span of lease – May 20.

The below is an extract of how it should appear:

Land Use Code	Units	Total Area SqFt	Current Rent /Unit/week	Outgoings and Vacancies			Pre-Commit Month	Lease Month Start	Lease Month Span	Cash Flow Period	Escalated Rent at Lease Start /Unit/annum
				Amount /Unit/week	% of Rent	Total Per Annum					
SA1	250	74,750.00	143.75	-	14.00%	261,625	-	24	24	Jun-18 - May-20	7,475

Rental Review Escalation Rates by Year (Commence 1 year after Lease Start)										Letting Fee			Incentives			Residual
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	Rent Free Months	Fitout Cost	Month Start	Cap. Rate
5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%	0.00%	0.00%	-	-	-	-	7.00%

SUMMARY REPORT

The modeling results are as follows, the project demonstrates a 27% Equity IRR at a 6.5% cap rate. We can compare the effects of change in cap rate using the consolidation functionality in the next section.

EstateMaster | Development Feasibility — **SUMMARY OF PROJECT RETURNS**

Student Accomodation Sample File
Student Accomodation Sample File V1
6.5% residual cap rate assumption

Estate Master Licensed to: Estate Master Administration

Time Span:	Jun-16 to Jun-20			
Type:	Residential			
Status:	Under Review			
Site Area:				
#N/A	:1			
Project Size:	250 Units	1 per 0 of Site Area		
	74,750 GFA	1 per 0 of Site Area		

				Total GBP	GBP Per GFA	GBP Per GFA	GBP Per Total Net Revenue
Revenues							
	Quantity	SqFt	GBP/Quantity				
Gross Sales Revenue	250	74,750.00	103,845.00	25,961,250	347	347	94.7%
Student Accomodation	250	74,750.00	103,845.00	25,961,250			
Less Selling Costs				(330,829)	4	4	-1.2%
Less Purchasers Costs				(1,505,753)	20	20	-5.5%
NET SALES REVENUE				24,124,669	323	323	88.0%
	Average Yield	SqFt	GBP/SqFt/annum				
Gross Rental Income	6.50%	74,750.00	25.00	3,830,938	51	51	14.0%
Student Accomodation	6.50%	74,750.00	25.00	3,830,938			
Less Outgoings & Vacancies				(536,331)	7	7	-2.0%
Less Letting Fees				-	-	-	0.0%
Less Incentives (Rent Free and Fitout Costs)				-	-	-	0.0%
Less Other Leasing Costs				-	-	-	0.0%
NET RENTAL INCOME				3,294,606	44	44	12.0%
Interest Received				-	-	-	0.0%
Other Income				-	-	-	0.0%
TOTAL REVENUE (before VAT paid)				27,419,275	367	367	100.0%
Less VAT paid on all Revenue				-	-	-	0.0%
TOTAL REVENUE (after VAT paid)				**27,419,275**	**367**	**367**	**100.0%**
Costs							
Land Purchase Cost				2,750,000	37	37	10.0%
Land Acquisition Costs				155,500	2	2	0.6%
Construction Costs (inc. Contingency)				10,510,500	141	141	38.3%
Other Construction Costs				10,010,000	134	134	36.5%
Contingency				500,500	7	7	1.8%
Professional Fees				1,057,522	14	14	3.9%
Ancillary Costs				144,070	2	2	0.5%
Section 106 TCPA and S278 Costs				115,000	2	2	0.4%
Marketing				20,000	0	0	0.1%
Other				-	-	-	0.0%
Project Contingency (Reserve)				200,000	3	3	0.7%
Land Holding Costs				-	-	-	0.0%
Pre-Sale Commissions				-	-	-	0.0%
Finance Charges (inc. Fees)				-	-	-	0.0%
Interest Expense				1,073,010	14	14	3.9%
TOTAL COSTS (before VAT reclaimed)				16,025,602	214	214	58.4%
Less VAT reclaimed				-	-	-	0.0%
Plus Corporate Tax				-	-	-	0.0%
TOTAL COSTS (after VAT reclaimed)				**16,025,602**	**214**	**214**	**58.4%**

Performance Indicators			Per GFA	Per GFA
[1] Net Development Profit		**11,393,672**	152	152
[3] Development Margin (Profit/Risk Margin)	Based on total costs (inc selling costs)	**63.79%**		
[4] Residual Land Value	Based on Target Margin of 25%	7,322,322	98	98
[5] Net Present Value	Based on Discount Rate of 15% p.a. Nominal	**1,883,871**		
[6] Benefit Cost Ratio		1.1378		
[7] Project Internal Rate of Return (IRR)	Per annum Nominal	**19.73%**		
[8] Residual Land Value	Based on NPV	4,409,974	59	59
Equity IRR	Per annum Nominal	27.20%		
Equity Contribution		7,563,211		
Peak Debt Exposure		7,602,443		
Equity to Debt Ratio		102.35%		
[9] Weighted Average Cost of Capital (WACC)		3.21%		
[10] Breakeven Date for Cumulative Cash Flow	Month 47	May-2020		
[11] Yield on Cost		9.00%		
[12] Rent Cover		7 Yrs, 1 Mths		
[13] Profit Erosion		0 Yrs, 0 Mths		

Returns on Funds Invested	Developer's Equity		Senior Loan Debt HSBC	Total Equity	Total Debt
[1] Funds Invested (Cash Outlay)	7,563,211		7,389,382	7,563,211	7,389,382
% of Total Funds Invested	50.58%		49.42%	50.58%	49.42%
[2] Peak Exposure	7,563,211		7,602,443	7,563,211	7,602,443
Date of Peak Exposure	Jun-17		May-18	Jun-17	May-18
Month of Peak Exposure	Month 12		Month 23	Month 12	Month 23
Weighted Average Interest Rate	N.A.		6.50%	N.A.	6.50%
Interest Charged	-		1,073,010	-	1,073,010
[3] Total Profit to Funders	11,393,672		1,073,010	11,393,672	1,073,010
[4] Margin on Funds Invested	150.65%		14.52%	150.65%	14.52%
[5] Payback Date	May-20		May-20	May-20	May-20
Month of Payback	Month 47		Month 47	Month 47	Month 47
[6] IRR on Funds Invested	27.20%		6.50%	27.20%	6.50%
[7] Equity to Debt Ratio			102.35%		102.35%
[8] Loan to Value Ratio	29.13%		29.28%	29.13%	29.28%
[9] Loan Ratio	50.00%		55.94%	50.00%	55.94%
	of Net Cash Flow to be Funded		of Net Cash Flow to be Funded	of Net Cash Flow to be Funded	of Net Cash Flow to be Funded

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RESIDUAL CAP RATE COMPARISION WITHIN CONSOLIDATION TAB

- Using the Consolidation functionality we can change the Residual cap rate within the Tenants section and compare side by side with to examine the effect on the project profitability.

- Within Tenants section, change residual cap rate from 6.5% to 6.75%

Residual Cap. Rate	Pre-Sale Exchange Month	Settlement Month
6.75%	-	-
0.00%	-	-
0.00%	-	-

- Go to "Preliminary" heading within Inputs tab, change Description of Option/Stage to: 6.75% residual cap rate assumption

PRELIMINARY

Cash Flow Title	Student Accomodation Sampl	Description of Option/Stage	6.75% residual cap rate assumption
Date of First Period:	Jun-2016		
Cash Flow Rest Period:	Monthly		
Enter Project Size (a)	250.00	Units	

- Within Options and Stages, store info as option 2

- Repeat process to change residual cap rate in tenants section from 6.75% to 7%, provide unique and relevant description in Description of Option/Stage - save as option 3.

- Go to Consolidate tab: Here we can see that a seemingly small shift in residual cap rate from 6.5% to 6.75% to 7% has a significant impact (negatively) on performance indicators and returns.

- It is possible to quickly and thoroughly examine and compare risks using the consolidate feature. In this instance we have compared the change in residual cap rate, however comparisons could be made on any variable.

EstateMaster Development Feasibility

COMPARISON OF OPTIONS

Performance Indicators	1 Student Accomodation Sample File V1	2 Student Accomodation Sample File 2	3 Student Accomodation Sample File V3
	1	2	3
Gross Development Profit	11,393,672	9,813,267	8,972,205
Net Developer's Profit after Profit Share	11,393,672	9,813,267	8,972,205
Development Margin (Profit/Risk Margin)	63.79%	53.10%	48.68%
Target Development Margin	25.00%	25.00%	25.00%
Residual Land Value (Target Margin)	7,322,322	5,995,789	5,477,628
Breakeven Date for Cumulative Cash Flow	May-2020	May-2020	May-2020
Discount Rate (Target IRR)	15.00%	15.00%	15.00%
Net Present Value	1,883,871	906,625	437,529
Benefit Cost Ratio	1.138	1.064	1.031
Project Internal Rate of Return (IRR)	19.73%	17.32%	16.14%
Residual Land Value (NPV)	4,409,974	3,514,236	3,118,916
Peak Debt Exposure	7,602,443	10,852,476	10,852,476
Date of Peak Debt Exposure	May-2018	May-2018	May-2018
Breakeven Date for Project Overdraft	May-2020	May-2020	May-2020
Total Equity Contribution	7,563,211	4,537,926	4,537,926
Peak Equity Exposure	7,563,211	4,537,926	4,537,926
Date of Peak Equity Exposure	Jun-2017	Jan-2017	Jan-2017
IRR on Equity	27.20%	32.31%	30.60%
Weighted Average Cost of Capital (WACC)	3.21%	4.53%	4.53%

Yield Analysis		1		2		3	
Sales	Qty	SqFt	Qty	SqFt	Qty	SqM	
Student Accomodation	-	74,750	250	74,750	250	6,945	
TOTAL	-	74,750	250	74,750	250	6,945	
Tenancies		SqFt		Units		Units	
Student Accomodation		74,750		250		250	
TOTAL		74,750		250		250	