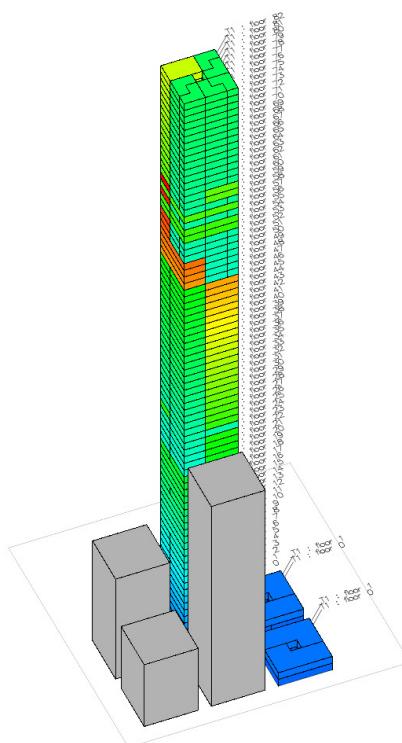
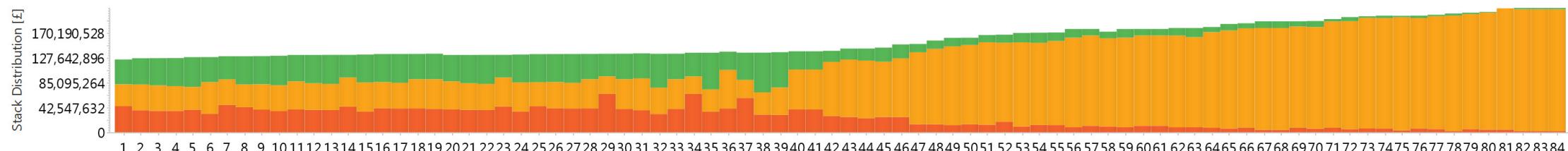
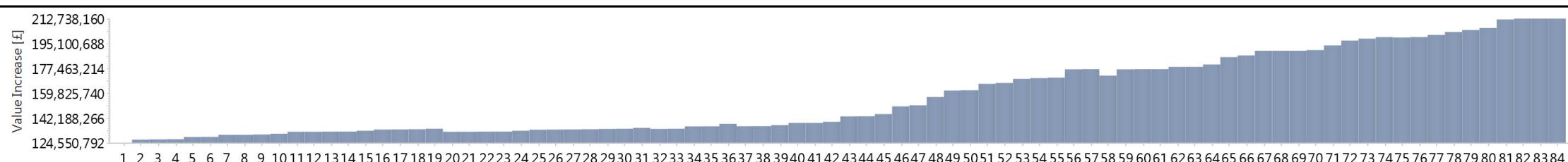


# RESIDENTIAL STACKING EVALUATOR

File Run Settings



## Generations

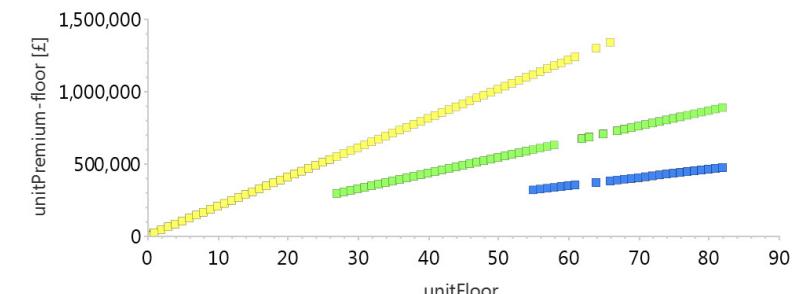


## Performance

### stack :

AREA	52200m2
UNITS	299
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 99 [100]	£190,413,104 [£1,923,364/unit - £6,411/m2]
1BED - 100 [100]	£88,032,376 [£880,323/unit - £11,737/m2]
D4BED - 0 [0]	-
2BED - 100 [100]	£139,924,800 [£1,399,248/unit - £9,328/m2]
PHSINGLE - 0 [0]	-
VALUE	£418,370,304 [£1,399,231/unit - £8,014/m2]
COST	£205,632,160 [£687,733/unit - £3,939/m2]
PROFIT	£212,738,144 [£711,498/unit - £4,075/m2]

### distribution :

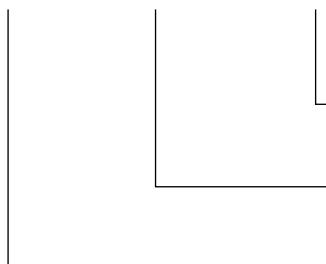


# RESIDENTIAL STACKING EVALUATOR

## INPUTS

### UNIT MIX

	COUNT	VAL	CAP
1BED	100	5100	0
2BED	100	4800	0
3BED	100	4500	0
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0



### CONTEXT

### EVALUATION PARAMETERS

- BASE CONSTRUCTION COST / m<sup>2</sup>
- CONSTRUCTION COST INCREASE PER FLOOR
- UNIT VALUE FLOOR PREMIUM MULTIPLIER
- UNIT VALUE VISIBILITY PREMIUM MULTIPLIER ( + any additional premiums )
- MAX BUILDING AREA ( or FAR )
- MAX BUILDING HEIGHT
- FLOOR TO CEILING HEIGHT

#### unit value cap

represents the maximum allowable value for this unit type

#### unit value per m<sup>2</sup>

represents the base value per m<sup>2</sup> for this unit type

#### unit count

represents the maximum allowable number of units of this type

### GEOMETRY



all possible building floorplates

# RESIDENTIAL STACKING EVALUATOR

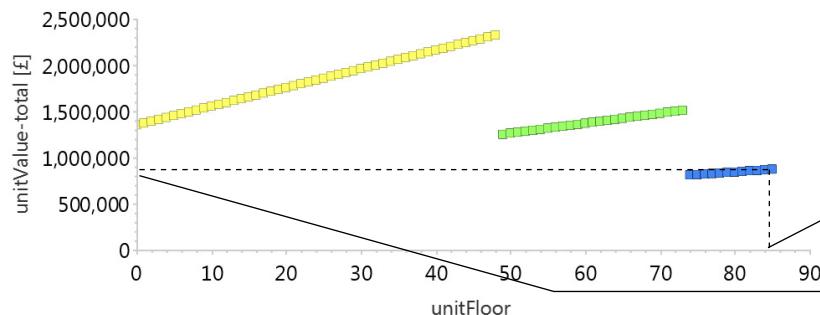
## OUTPUTS

### Performance

**stack :**

AREA	51600m2
UNITS	294
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 98 [100]	£179,928,000 [£1,836,000/unit - £6,120/m2]
1BED - 96 [100]	£80,508,560 [£838,630/unit - £11,181/m2]
D4BED - 0 [0]	-
2BED - 100 [100]	£137,880,000 [£1,378,800/unit - £9,192/m2]
PHSINGLE - 0 [0]	-
VALUE	£398,316,416 [£1,354,817/unit - £7,719/m2]
COST	£207,432,128 [£705,551/unit - £4,020/m2]
PROFIT	£190,884,288 [£649,266/unit - £3,699/m2]

**distribution :**



**unit mix counts**

**unit type contribution to total value**

**unit total [average unit value - average value / m2]**

**total stack outputs**

**unit attribute distribution by floor**

represents the given attribute on an xy chart visualizing the output data by floor to better understand unit distribution metrics (in this case the value of each unit by floor)

**unit floor**

**unit attribute [for example : value]**

**legend : [unitValue-total]**

96 [UNITS]	£807,075 - £958,566
0 [UNITS]	£958,567 - £1,110,059
8 [UNITS]	£1,110,060 - £1,261,551
64 [UNITS]	£1,261,552 - £1,413,044
50 [UNITS]	£1,413,045 - £1,564,537
16 [UNITS]	£1,564,538 - £1,716,029
14 [UNITS]	£1,716,030 - £1,867,522
16 [UNITS]	£1,867,523 - £2,019,014
14 [UNITS]	£2,019,015 - £2,170,507
16 [UNITS]	£2,170,508

**unit attribute distribution by value**

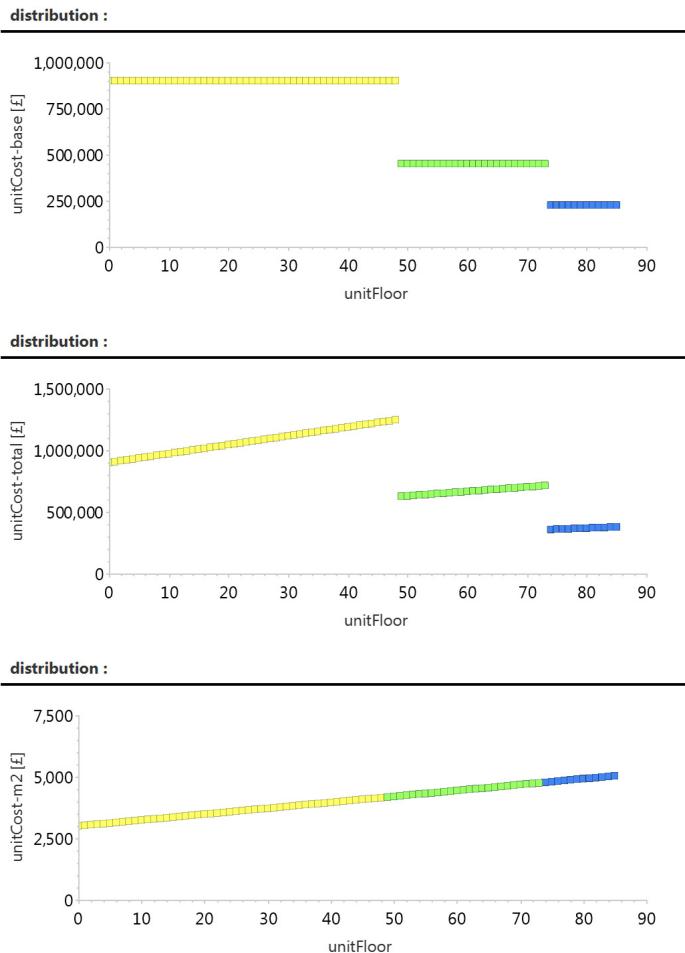
represents the given attribute on an legend visualizing the output data to better understand value distribution metrics (in this case the value of each unit)

**value range**

**number of units in this value range**

# RESIDENTIAL STACKING EVALUATOR

## OUTPUTS - COST



### unit cost [base]

represents the base unit cost for construction, independent of floor level

$$\text{- unit cost [base]} = \text{base cost} * \text{unit area}$$

### unit cost [total]

represents the estimated cost to build this unit, based on the base unit cost and the estimated construction cost per floor increase input parameter

$$\text{- unit cost [total]} = \text{unit cost [base]} * \text{floor height} * \text{floorplate cost floor multiplier}$$

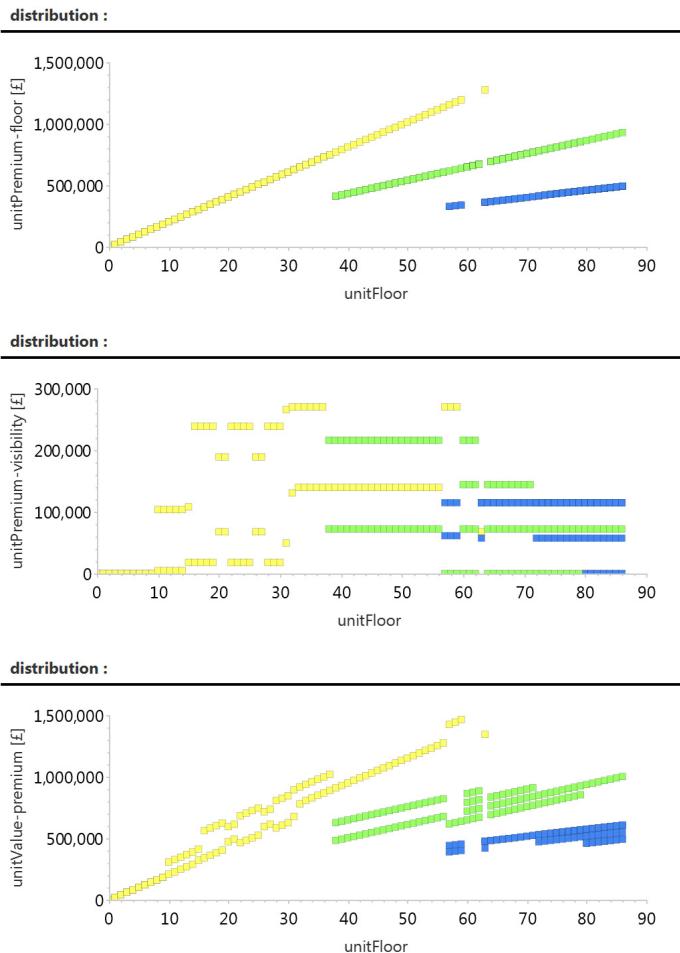
### unit cost [m2]

represents the estimated cost per m<sup>2</sup> of construction per unit

$$\text{- unit cost [m2]} = \text{unit cost [total]} / \text{unit area}$$

# RESIDENTIAL STACKING EVALUATOR

## OUTPUTS - PREMIUM



### unit premium [floor]

represents the premium each unit receives as a factor of their floor level. This increase is a percentage of unit value [base]

$$\text{- unit premium [floor]} =$$

$$\text{unit value [base]} *$$

$$\text{floor height} *$$

$$\text{unit premium floor multiplier}$$

### unit premium [X parameter (here visibility) ]

represents an additional premium attached to a unit based on some specified parameter, such as visibility to target views, solar access, etc. that is calculated during the optimization process.

$$\text{- unit premium [X]} =$$

$$\text{unit value [base]} *$$

$$\text{floor height} *$$

$$\text{unit premium X multiplier}$$

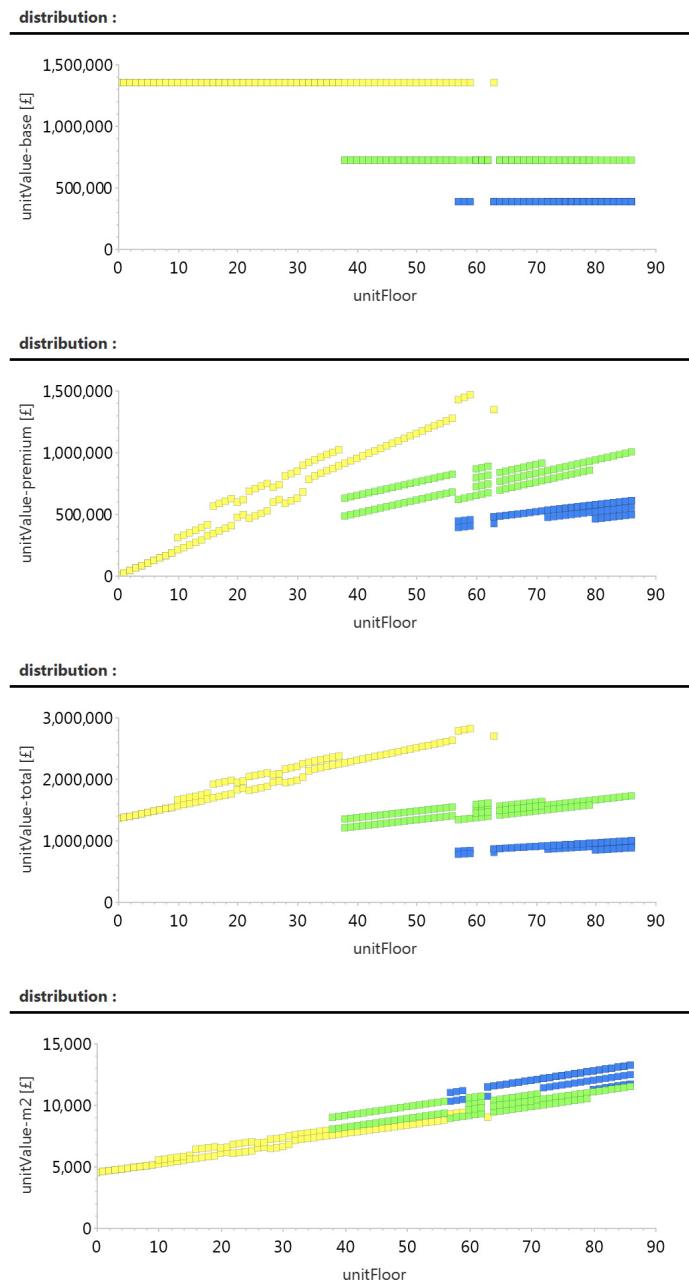
### unit premium [total]

represents the total premium value attached to this unit, as a sum of all calculated premiums

$$\text{- unit premium [total]} =$$

$$\text{unit premium [floor]} + \sum \text{unit premium [X]}$$

# RESIDENTIAL STACKING EVALUATOR



## OUTPUTS - VALUE

### unit value [base]

represents the base unit value independent of floor level. This is determined based on the unit mix input spreadsheet

$$\text{- unit value [base]} = \text{base value} * \text{unit area}$$

### unit value [premium]

represents the total value of the premiums attached to this unit. This is the same as unit premium [total]

$$\text{- unit value [premium]} = \text{unit premium [total]}$$

### unit value [total]

represents the estimated value of this unit. This is the estimated sales value. It is calculated from the base value of the unit, plus any premiums attached to it

$$\text{- unit value [total]} = \text{unit value [base]} + \text{unit value [premium]}$$

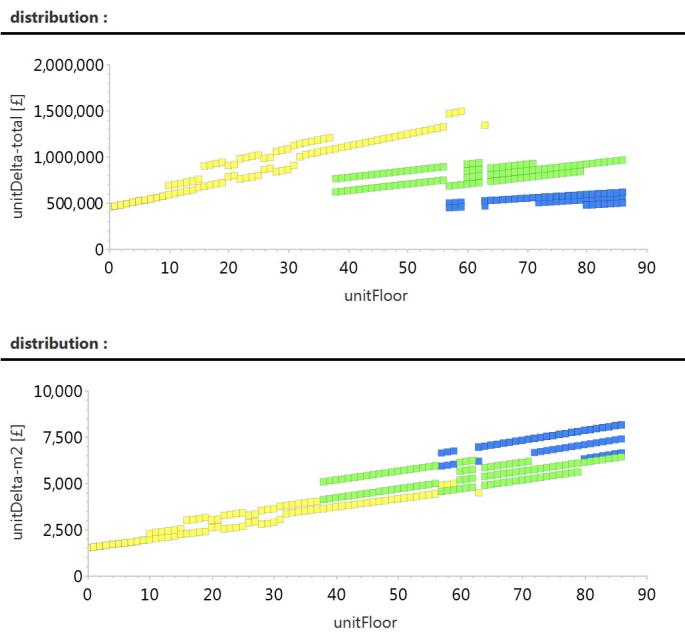
### unit value [m2]

represents the estimated value per m<sup>2</sup> per unit

$$\text{- unit value [m2]} = \text{unit value [total]} / \text{unit area}$$

# RESIDENTIAL STACKING EVALUATOR

## OUTPUTS - PROFIT [ delta ]



### unit delta [total]

represents the total profit margin of each unit. The unit delta is the total value of the unit - the total cost of the unit

$$\begin{aligned}\text{- unit delta [total]} &= \\ \text{unit value [total]} &- \\ \text{unit cost [total]}\end{aligned}$$

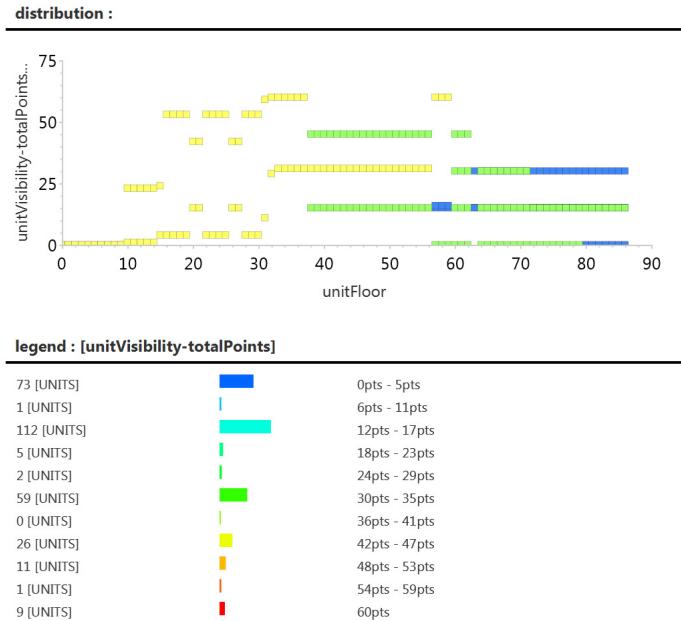
### unit delta [m2]

represents the profit margin of each unit per m<sup>2</sup>.

$$\begin{aligned}\text{- unit delta [m2]} &= \\ \text{unit delta [total]} &/ \\ \text{unit area}\end{aligned}$$

# RESIDENTIAL STACKING EVALUATOR

## OUTPUTS - ANALYSIS METRICS



### unitMetric [X] (here unit visibility)

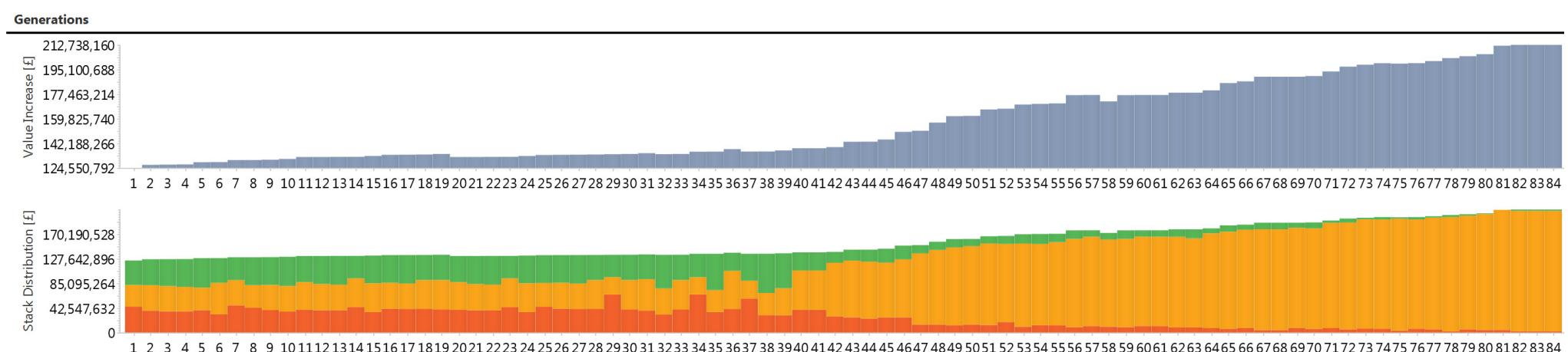
represents the specific driver to the the unit premiums.

For example, the case is showing the total number of target viewing points that each unit is able to see, affecting its visibility premium. This is the raw metric output type, unweighted by the premium multipliers

Analysis types such as visibility, daylight, etc.. show up like this.

All analysis metrics are mapped onto the stack for visualization, and are linked to the distribution legend.

### generations



represents the amount of optimization that the stack has achieved over time. The upper graph represents the total amount of profit difference since the first generation, and the bottom graph represents the value distribution accross all footprints

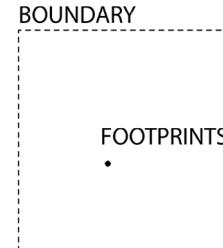
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 1 - UNIT TYPE DISTRIBUTION [ summary ]

### UNIT MIX

	COUNT	VAL	CAP
1BED	100	5100	0
2BED	100	4800	0
3BED	100	4500	0
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

### INPUT PARAMETERS



- max area : none
- max height : none
- unit value cap : NONE**
- floor cost base: £3000 / m<sup>2</sup>
- floor cost multiplier : 8% every 10 floors
- unit value floor multiplier : 1.5% per floor
- unit value visibility multiplier : none
- floor to ceiling height : 4m

### GEOMETRY



### DESCRIPTION

Evaluation 1 examines the relationship between unit value and location in the stack, independent of any premiums other than floor height.

The unit mix affords **no value caps** to unit types, meaning units are free to increase in value based on location in the stack without any cap in estimated value, as would typically be the case.

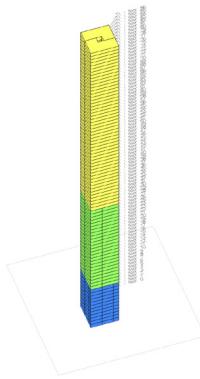
The evaluation does not vary building height, allowing the results to inform the value of the full unit mix, with as many units as possible fitting into the stack configuration at a set height.

Cost and value floor multipliers, as well as floor to ceiling height, are also fixed for all schemes, restricting the output to a pure stack optimization based on unit and floorplate types.

# RESIDENTIAL STACKING EVALUATOR

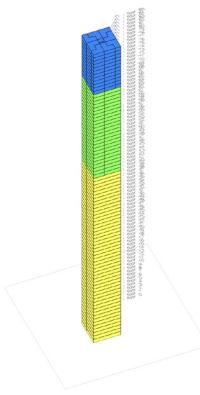
## EVALUATION 1 - UNIT TYPE DISTRIBUTION [ summary ]

### GEOMETRY



### SCHEME 1.1

### GEOMETRY

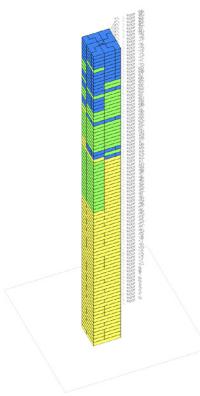


### SCHEME 1.2

Scheme 1.1 is a manual control (non optimized) testing the total profit of a stack that is sorted with the smallest area/value units at the base, and highest value units at the top of the tower, prioritizing large, high value units.

FLOORS : 86  
UNITS : 296  
PROFIT : £186,736,460

### GEOMETRY



### SCHEME 1.3

Scheme 1.2 is an optimized stack using the same geometry as Scheme 1 (single unit type per floor), maximizing total tower profit.

FLOORS : 86  
UNITS : 296  
PROFIT : £194,161,344

Scheme 1.3 is an optimized stack with variable unit types per floor, looking at the potential profit margin gained from mixing unit types per floorplate.

FLOORS : 86  
UNITS : 299  
PROFIT : £194,366,304

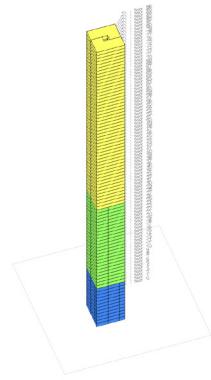
1.1

1.2

1.3

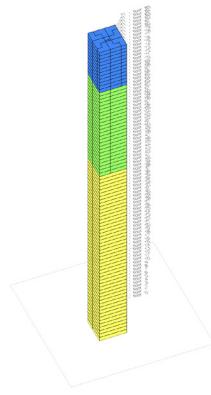
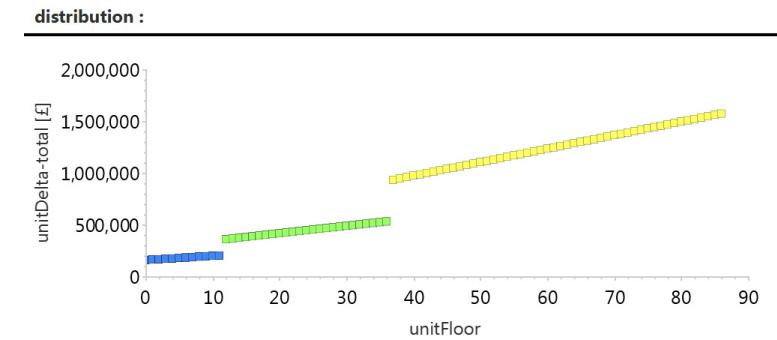
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 1 - UNIT TYPE DISTRIBUTION [ summary ]



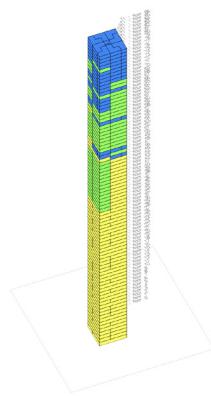
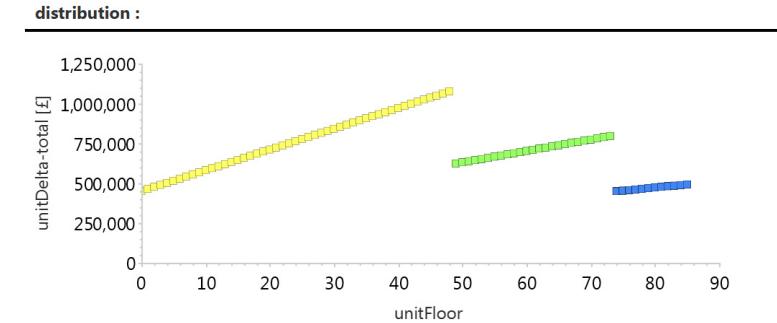
1.1

stack :	
AREA	52200m2
UNITS	296
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	
3BED - 100 [100]	██████████
1BED - 96 [100]	█
D4BED - 0 [0]	
2BED - 100 [100]	████
PHSINGLE - 0 [0]	
VALUE	£397,206,880
COST	£210,470,400
PROFIT	£186,736,480
	[£1,341,915/unit - £7,609/m2]
	[£711,048/unit - £4,032/m2]
	[£630,866/unit - £3,577/m2]



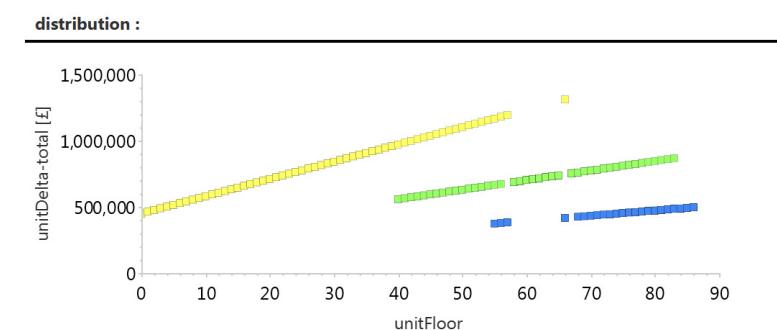
1.2

stack :	
AREA	52200m2
UNITS	296
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	
3BED - 100 [100]	██████████
1BED - 96 [100]	█
D4BED - 0 [0]	
2BED - 100 [100]	████
PHSINGLE - 0 [0]	
VALUE	£404,631,872
COST	£210,470,528
PROFIT	£194,161,344
	[£1,366,999/unit - £7,751/m2]
	[£711,049/unit - £4,032/m2]
	[£655,950/unit - £3,719/m2]



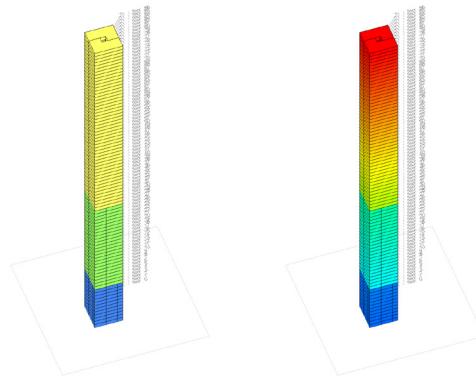
1.3

stack :	
AREA	52200m2
UNITS	299
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	
3BED - 99 [100]	██████████
1BED - 100 [100]	█
D4BED - 0 [0]	
2BED - 100 [100]	████
PHSINGLE - 0 [0]	
VALUE	£404,836,800
COST	£210,470,496
PROFIT	£194,366,304
	[£1,353,969/unit - £7,755/m2]
	[£703,914/unit - £4,032/m2]
	[£650,054/unit - £3,723/m2]



# RESIDENTIAL STACKING EVALUATOR

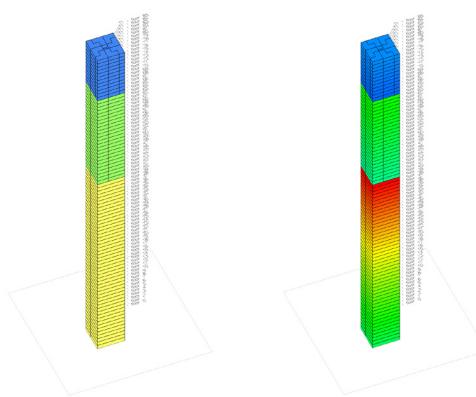
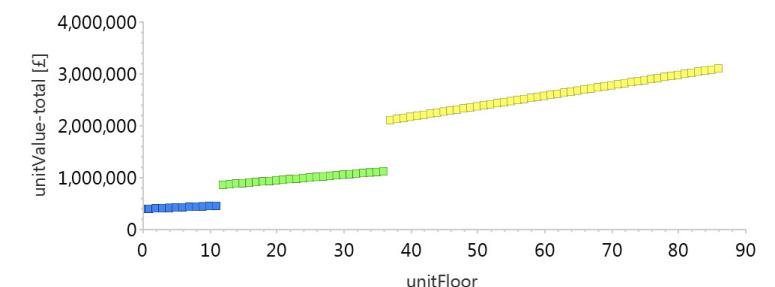
## EVALUATION 1 - UNIT TYPE DISTRIBUTION [ unit value total ]



legend : [unitValue-total]

96 [UNITS]		£382,500 - £653,399
28 [UNITS]		£653,400 - £924,299
72 [UNITS]		£924,300 - £1,195,199
0 [UNITS]		£1,195,200 - £1,466,099
0 [UNITS]		£1,466,100 - £1,736,999
0 [UNITS]		£1,737,000 - £2,007,899
18 [UNITS]		£2,007,900 - £2,278,799
28 [UNITS]		£2,278,800 - £2,549,699
26 [UNITS]		£2,549,700 - £2,820,599
27 [UNITS]		£2,820,600 - £3,091,499
1 [UNITS]		£3,091,500

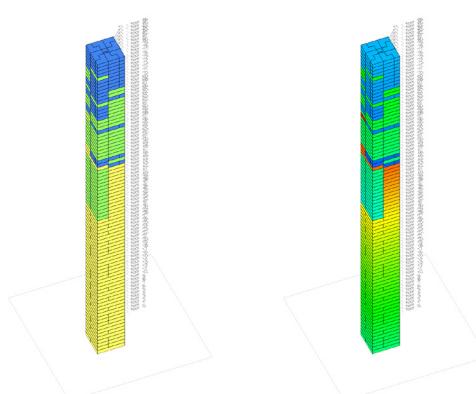
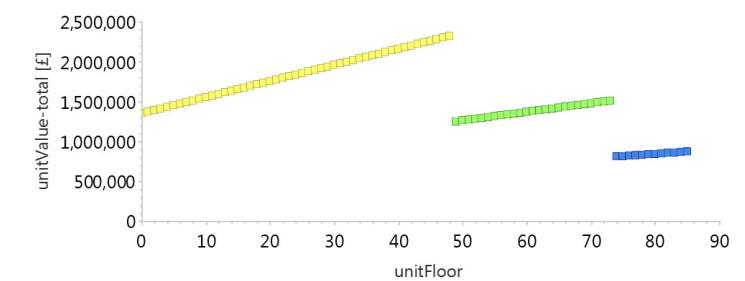
distribution :



legend : [unitValue-total]

96 [UNITS]		£807,075 - £958,566
0 [UNITS]		£958,567 - £1,110,059
8 [UNITS]		£1,110,060 - £1,261,551
64 [UNITS]		£1,261,552 - £1,413,044
50 [UNITS]		£1,413,045 - £1,564,537
16 [UNITS]		£1,564,538 - £1,716,029
14 [UNITS]		£1,716,030 - £1,867,522
16 [UNITS]		£1,867,523 - £2,019,014
14 [UNITS]		£2,019,015 - £2,170,507
16 [UNITS]		£2,170,508

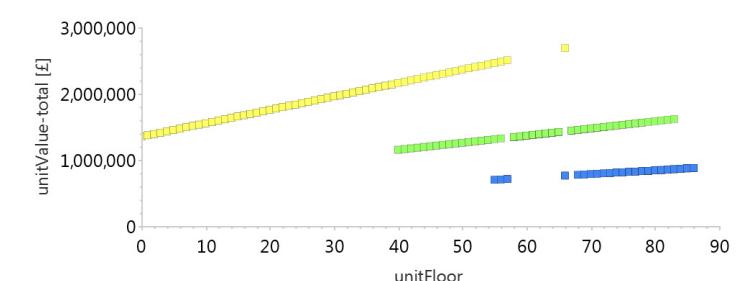
distribution :



legend : [unitValue-total]

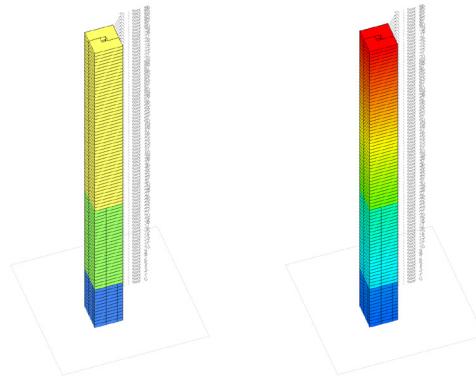
100 [UNITS]		£698,062 - £896,905
0 [UNITS]		£896,906 - £1,095,749
28 [UNITS]		£1,095,750 - £1,294,592
68 [UNITS]		£1,294,593 - £1,493,436
38 [UNITS]		£1,493,437 - £1,692,280
20 [UNITS]		£1,692,281 - £1,891,124
20 [UNITS]		£1,891,125 - £2,089,967
13 [UNITS]		£2,089,968 - £2,288,811
10 [UNITS]		£2,288,812 - £2,487,655
1 [UNITS]		£2,487,656 - £2,686,499
1 [UNITS]		£2,686,500

distribution :



# RESIDENTIAL STACKING EVALUATOR

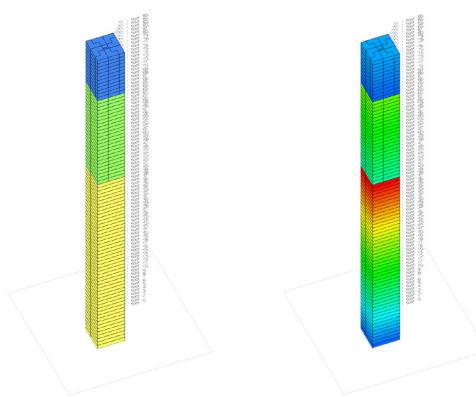
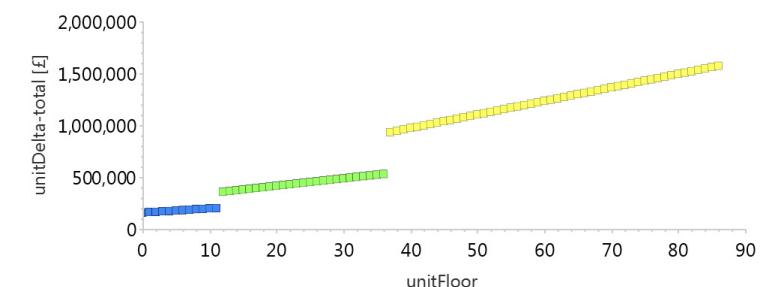
## EVALUATION 1 - UNIT TYPE DISTRIBUTION [ unit profit total ]



legend : [unitDelta-total]

96 [UNITS]		£157,500 - £298,979
48 [UNITS]		£298,980 - £440,459
52 [UNITS]		£440,460 - £581,939
0 [UNITS]		£581,940 - £723,419
0 [UNITS]		£723,420 - £864,899
12 [UNITS]		£864,900 - £1,006,379
22 [UNITS]		£1,006,380 - £1,147,859
22 [UNITS]		£1,147,860 - £1,289,339
22 [UNITS]		£1,289,340 - £1,430,819
21 [UNITS]		£1,430,820 - £1,572,299
1 [UNITS]		£1,572,300

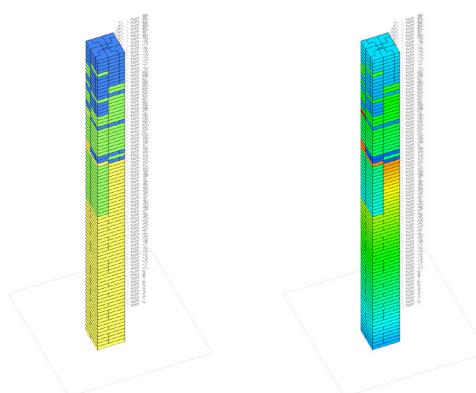
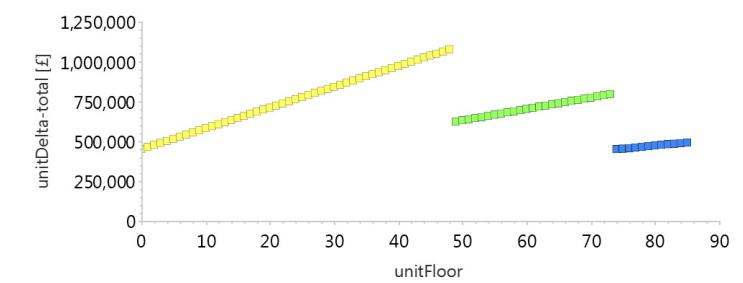
distribution :



legend : [unitDelta-total]

106 [UNITS]		£448,875 - £511,626
10 [UNITS]		£511,627 - £574,379
18 [UNITS]		£574,380 - £637,131
46 [UNITS]		£637,132 - £699,884
44 [UNITS]		£699,885 - £762,636
30 [UNITS]		£762,637 - £825,389
10 [UNITS]		£825,390 - £888,141
10 [UNITS]		£888,142 - £950,894
10 [UNITS]		£950,895 - £1,013,646
9 [UNITS]		£1,013,647 - £1,076,399
1 [UNITS]		£1,076,400

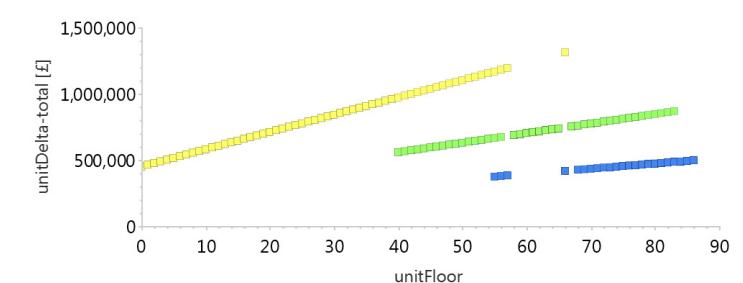
distribution :



legend : [unitDelta-total]

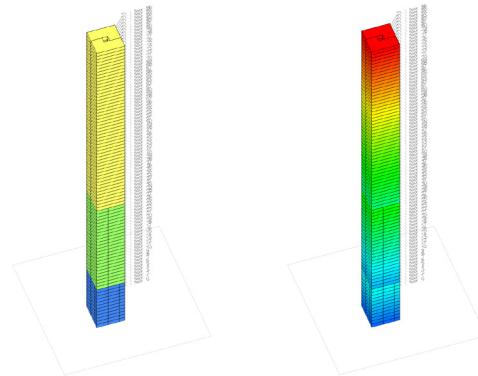
50 [UNITS]		£374,062 - £467,785
70 [UNITS]		£467,786 - £561,509
40 [UNITS]		£561,510 - £655,232
50 [UNITS]		£655,233 - £748,956
48 [UNITS]		£748,957 - £842,680
18 [UNITS]		£842,681 - £936,404
9 [UNITS]		£936,405 - £1,030,127
7 [UNITS]		£1,030,128 - £1,123,851
6 [UNITS]		£1,123,852 - £1,217,575
0 [UNITS]		£1,217,576 - £1,311,299
1 [UNITS]		£1,311,300

distribution :



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 1 - UNIT TYPE DISTRIBUTION [ unit profit m2 ]

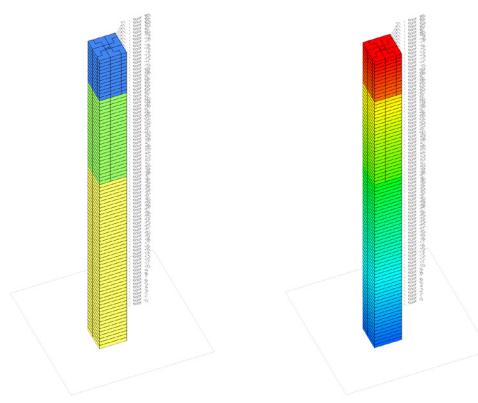
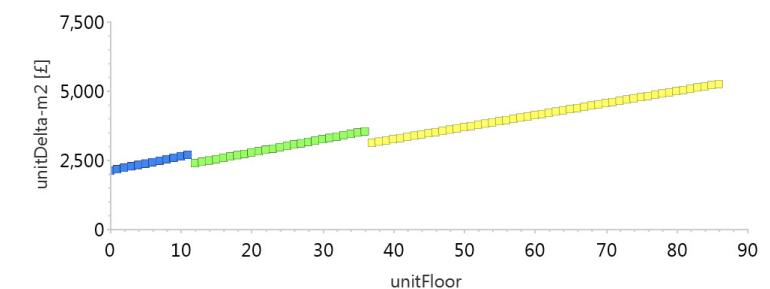


1.1

legend : [unitDelta-m2]

52 [UNITS]	£2,100 - £2,413
76 [UNITS]	£2,414 - £2,727
24 [UNITS]	£2,728 - £3,041
40 [UNITS]	£3,042 - £3,355
30 [UNITS]	£3,356 - £3,669
16 [UNITS]	£3,670 - £3,983
14 [UNITS]	£3,984 - £4,297
14 [UNITS]	£4,298 - £4,611
14 [UNITS]	£4,612 - £4,925
16 [UNITS]	£4,926

distribution :

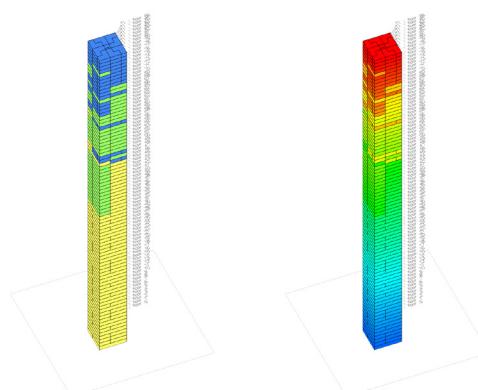
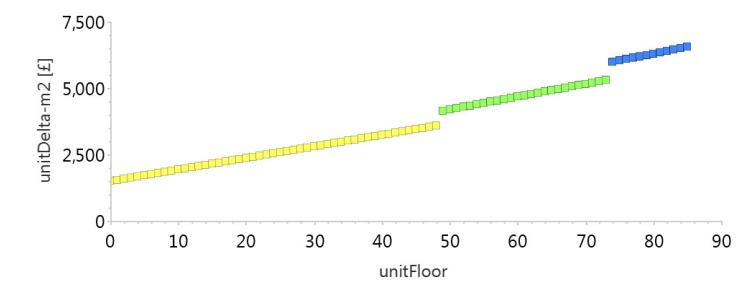


1.2

legend : [unitDelta-m2]

24 [UNITS]	£1,499 - £2,005
24 [UNITS]	£2,006 - £2,511
22 [UNITS]	£2,512 - £3,017
24 [UNITS]	£3,018 - £3,523
4 [UNITS]	£3,524 - £4,030
36 [UNITS]	£4,031 - £4,536
40 [UNITS]	£4,537 - £5,042
24 [UNITS]	£5,043 - £5,549
16 [UNITS]	£5,550 - £6,055
72 [UNITS]	£6,056 - £6,561
8 [UNITS]	£6,562

distribution :

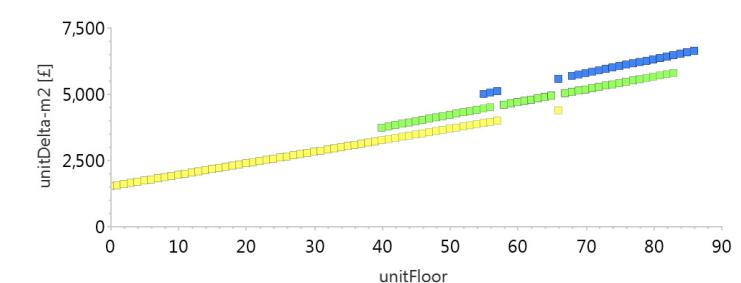


1.3

legend : [unitDelta-m2]

24 [UNITS]	£1,499 - £2,010
24 [UNITS]	£2,011 - £2,521
24 [UNITS]	£2,522 - £3,033
16 [UNITS]	£3,034 - £3,544
26 [UNITS]	£3,545 - £4,056
17 [UNITS]	£4,057 - £4,568
43 [UNITS]	£4,569 - £5,079
32 [UNITS]	£5,080 - £5,591
31 [UNITS]	£5,592 - £6,102
54 [UNITS]	£6,103 - £6,614
8 [UNITS]	£6,615

distribution :



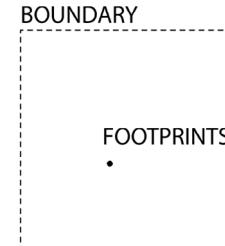
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 2 - UNIFORM VALUE CAP [ summary ]

### UNIT MIX

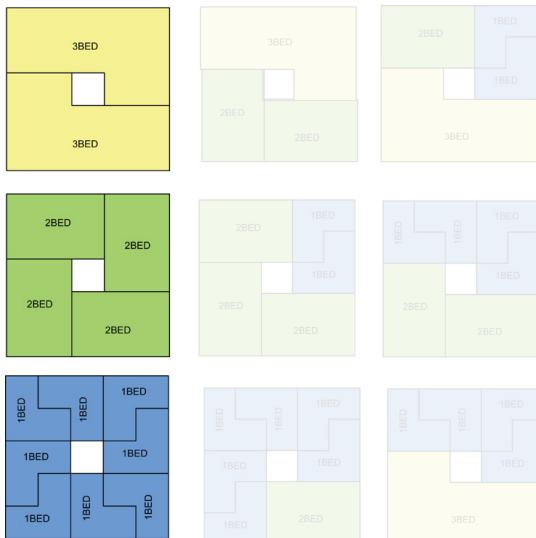
	COUNT	VAL	CAP
1BED	100	5100	1000000
2BED	100	4800	1000000
3BED	100	4500	1000000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

### INPUT PARAMETERS



- max area : none
- max height : none
- **unit value cap : £1 000 000 for all unit types**
- floor cost base: £3000 / m<sup>2</sup>
- floor cost multiplier : 8% every 10 floors
- unit value floor multiplier : 1.5% per floor
- unit value visibility multiplier : none
- floor to ceiling height : 4m

### GEOMETRY



### DESCRIPTION

Evaluation 2 examines the relationship between unit value and stack height, independent of any premiums other than floor height.

The unit mix affords **a singular value cap** to unit all types, meaning units are free to increase in value based on location in the stack until a certain value, after which their value remains the same regardless of floor increase.

The evaluation also does not take into account a max FAR or building height restriction, allowing the results to inform the value of the full unit mix, with as many units as possible fitting into the stack configuration while still maintaining a maximum profit margin.

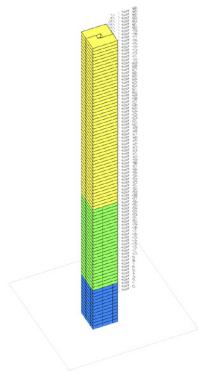
Cost and value floor multipliers, as well as floor to ceiling height, are also fixed for all schemes, restricting the output to a pure stack optimization based on unit and floorplate types.

# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 2 - UNIFORM VALUE CAP [ summary ]

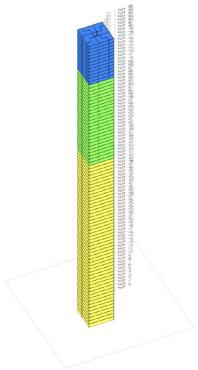
2.1

### GEOMETRY



### SCHEME 2.1

### GEOMETRY



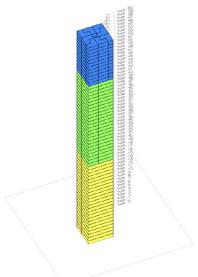
### SCHEME 2.2

Scheme 2.1 the same control stack as Scheme 1.1, but with the applied unit caps as a means to evaluate the change in profit based on max value.

FLOORS : 86  
UNITS : 296  
PROFIT : £24,787,792

2.2

### GEOMETRY



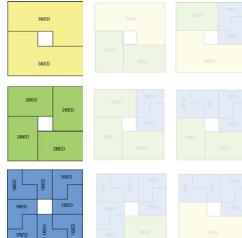
### SCHEME 2.3

Scheme 2.2 is the same stack as Scheme 1.2, but with the applied unit caps as a means to evaluate the change in profit based on max value on the previously optimized single unit type per floor stack.

FLOORS : 86  
UNITS : 296  
PROFIT : £70,588,960

2.3

### GEOMETRY



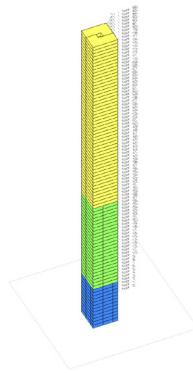
Scheme 3 is an optimized stack with a single unit type per floor, looking at maximizing the potential profit margin gained from changes in total building height by weighing cost vs value to construct additional units

FLOORS : 60  
UNITS : 244  
PROFIT : £78,463,520

# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 2 - UNIFORM VALUE CAP [ summary ]

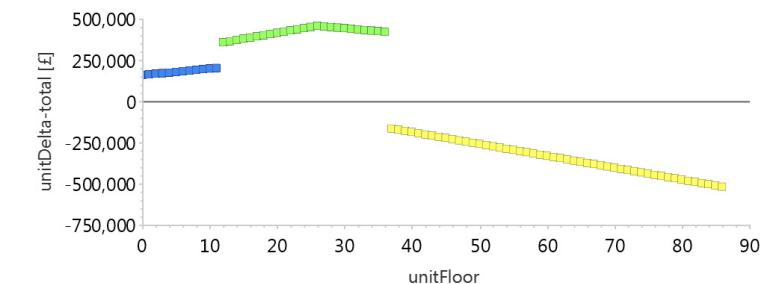
2.1



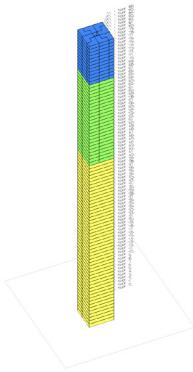
**stack :**

AREA	52200m2
UNITS	296
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 100 [100]	£100,000,000 [£1,000,000/unit - £3,333/m2]
1BED - 96 [100]	£39,749,396 [£414,056/unit - £5,520/m2]
D4BED - 0 [0]	-
2BED - 100 [100]	£95,508,800 [£955,088/unit - £6,367/m2]
PHSINGLE - 0 [0]	-
VALUE	£235,258,192 [£794,791/unit - £4,506/m2]
COST	£210,470,400 [£711,048/unit - £4,032/m2]
PROFIT	£24,787,792 [£83,742/unit - £474/m2]

**distribution :**



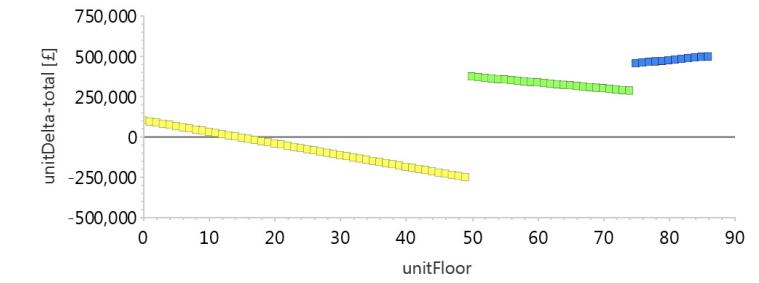
2.2



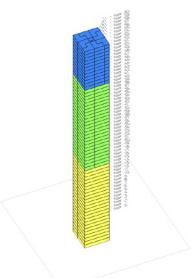
**stack :**

AREA	52200m2
UNITS	296
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 100 [100]	£100,000,000 [£1,000,000/unit - £3,333/m2]
1BED - 96 [100]	£81,059,368 [£844,368/unit - £11,258/m2]
D4BED - 0 [0]	-
2BED - 100 [100]	£100,000,000 [£1,000,000/unit - £6,666/m2]
PHSINGLE - 0 [0]	-
VALUE	£281,059,488 [£949,525/unit - £5,384/m2]
COST	£210,470,528 [£711,049/unit - £4,032/m2]
PROFIT	£70,588,960 [£238,476/unit - £1,352/m2]

**distribution :**



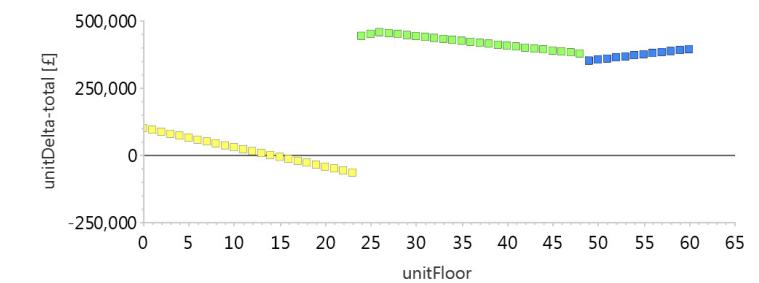
2.3



**stack :**

AREA	36600m2
UNITS	244
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 48 [100]	£48,000,000 [£1,000,000/unit - £3,333/m2]
1BED - 96 [100]	£66,738,608 [£695,193/unit - £9,269/m2]
D4BED - 0 [0]	-
2BED - 100 [100]	£99,876,800 [£998,768/unit - £6,658/m2]
PHSINGLE - 0 [0]	-
VALUE	£214,615,488 [£879,571/unit - £5,863/m2]
COST	£136,151,968 [£557,999/unit - £3,719/m2]
PROFIT	£78,463,520 [£321,571/unit - £2,143/m2]

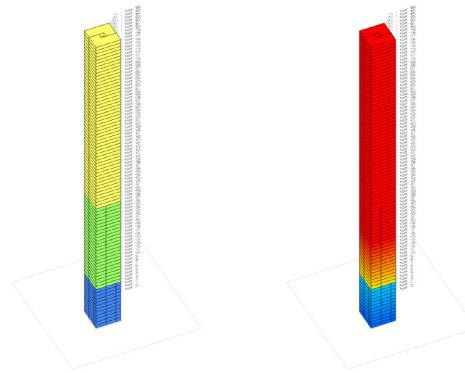
**distribution :**



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 2 - UNIFORM VALUE CAP [ unit value total ]

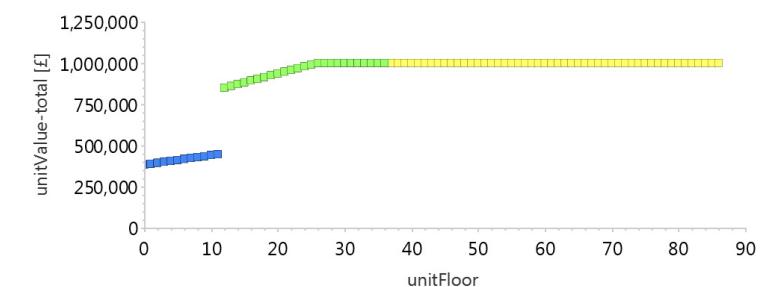
2.1



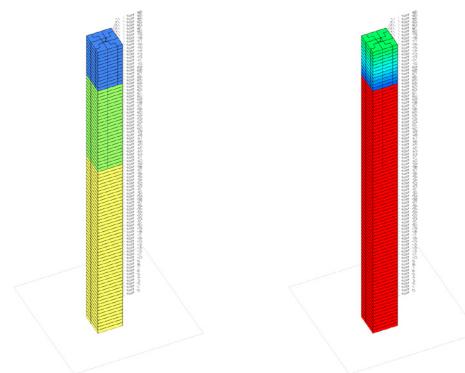
legend : [unitValue-total]

88 [UNITS]		£382,500 - £444,249
8 [UNITS]		£444,250 - £505,999
0 [UNITS]		£506,000 - £567,749
0 [UNITS]		£567,750 - £629,499
0 [UNITS]		£629,500 - £691,249
0 [UNITS]		£691,250 - £752,999
0 [UNITS]		£753,000 - £814,749
12 [UNITS]		£814,750 - £876,499
24 [UNITS]		£876,500 - £938,249
20 [UNITS]		£938,250 - £999,999
144 [UNITS]		£1,000,000

distribution :



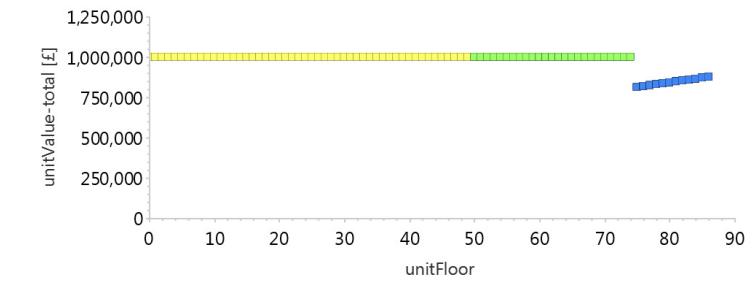
2.2



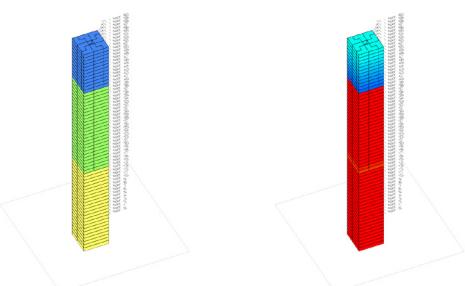
legend : [unitValue-total]

32 [UNITS]		£812,812 - £831,530
24 [UNITS]		£831,531 - £850,249
24 [UNITS]		£850,250 - £868,967
16 [UNITS]		£868,968 - £887,686
0 [UNITS]		£887,687 - £906,405
0 [UNITS]		£906,406 - £925,124
0 [UNITS]		£925,125 - £943,842
0 [UNITS]		£943,843 - £962,561
0 [UNITS]		£962,562 - £981,280
0 [UNITS]		£981,281 - £999,999
200 [UNITS]		£1,000,000

distribution :



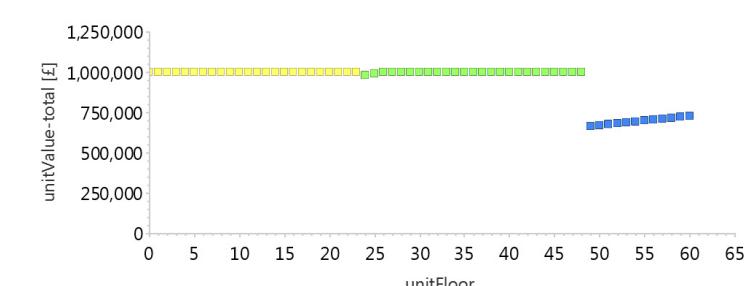
2.3



legend : [unitValue-total]

48 [UNITS]		£663,637 - £697,272
48 [UNITS]		£697,273 - £730,909
0 [UNITS]		£730,910 - £764,545
0 [UNITS]		£764,546 - £798,181
0 [UNITS]		£798,182 - £831,817
0 [UNITS]		£831,818 - £865,454
0 [UNITS]		£865,455 - £899,090
0 [UNITS]		£899,091 - £932,726
0 [UNITS]		£932,727 - £966,362
8 [UNITS]		£966,363 - £999,999
140 [UNITS]		£1,000,000

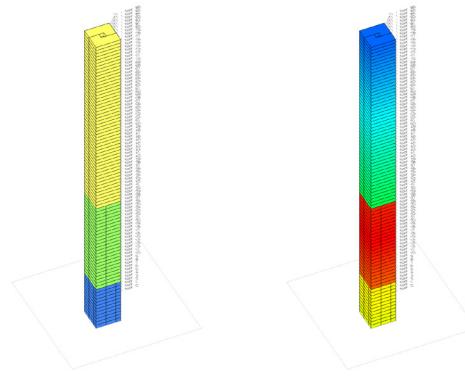
distribution :



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 2 - UNIFORM VALUE CAP [ unit profit total ]

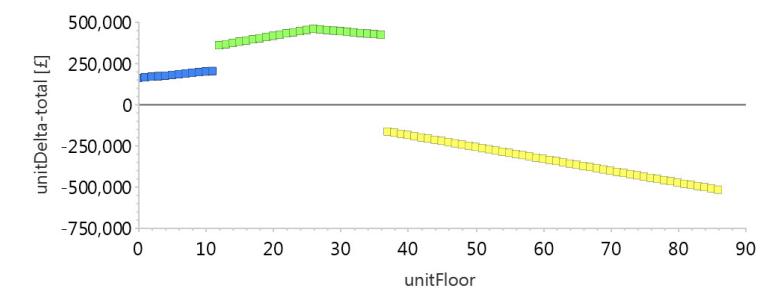
2.1



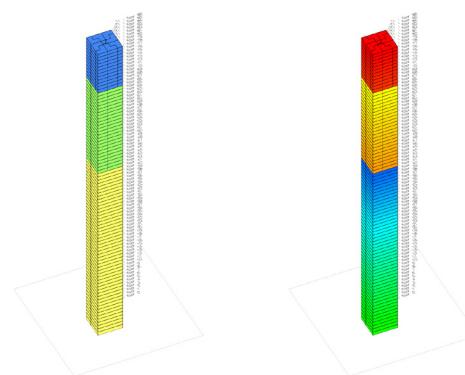
legend : [unitDelta-total]

28 [UNITS]	£-519,200 - £-421,641
28 [UNITS]	£-421,640 - £-324,081
26 [UNITS]	£-324,080 - £-226,521
18 [UNITS]	£-226,520 - £-128,961
0 [UNITS]	£-128,960 - £-31,401
0 [UNITS]	£-31,400 - £66,158
16 [UNITS]	£66,159 - £163,718
80 [UNITS]	£163,719 - £261,278
4 [UNITS]	£261,279 - £358,838
92 [UNITS]	£358,839 - £456,399
4 [UNITS]	£456,400

distribution :



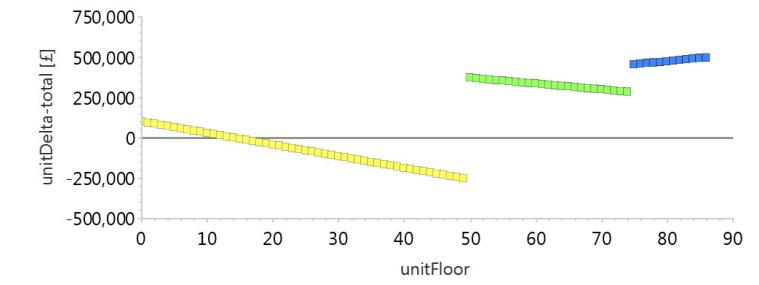
2.2



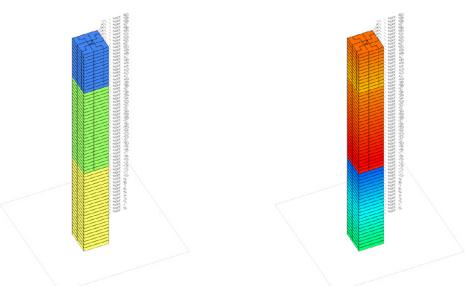
legend : [unitDelta-total]

22 [UNITS]	£-252,800 - £-177,908
20 [UNITS]	£-177,907 - £-103,016
22 [UNITS]	£-103,015 - £-28,123
20 [UNITS]	£-28,122 - £46,768
16 [UNITS]	£46,769 - £121,661
0 [UNITS]	£121,662 - £196,553
0 [UNITS]	£196,554 - £271,446
72 [UNITS]	£271,447 - £346,338
28 [UNITS]	£346,339 - £421,231
88 [UNITS]	£421,232 - £496,124
8 [UNITS]	£496,125

distribution :



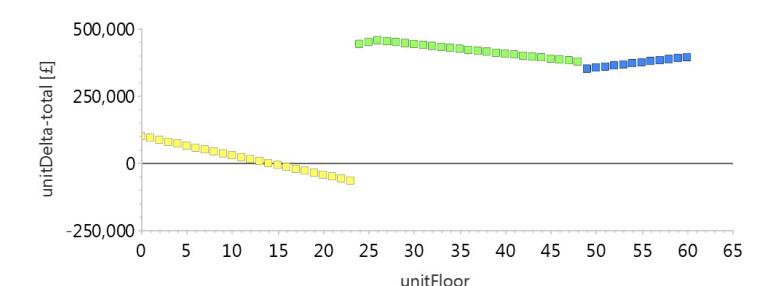
2.3



legend : [unitDelta-total]

16 [UNITS]	£-65,600 - £-13,401
14 [UNITS]	£-13,400 - £38,798
14 [UNITS]	£38,799 - £90,998
4 [UNITS]	£90,999 - £143,198
0 [UNITS]	£143,199 - £195,398
0 [UNITS]	£195,399 - £247,598
0 [UNITS]	£247,599 - £299,798
8 [UNITS]	£299,799 - £351,998
120 [UNITS]	£351,999 - £404,198
68 [UNITS]	£404,199

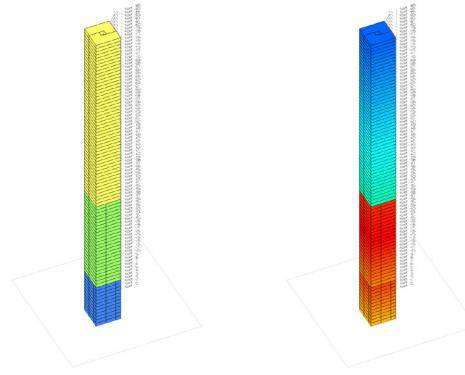
distribution :



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 2 - UNIFORM VALUE CAP [ unit profit m<sup>2</sup> ]

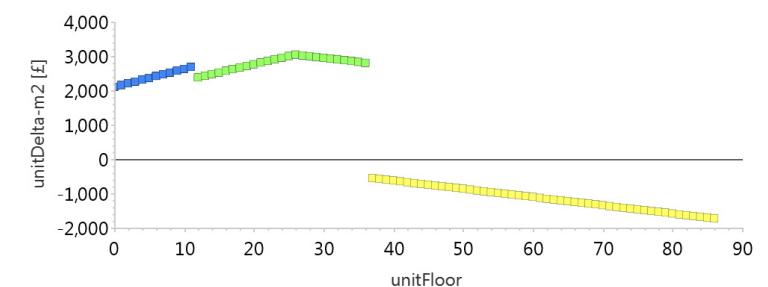
2.1



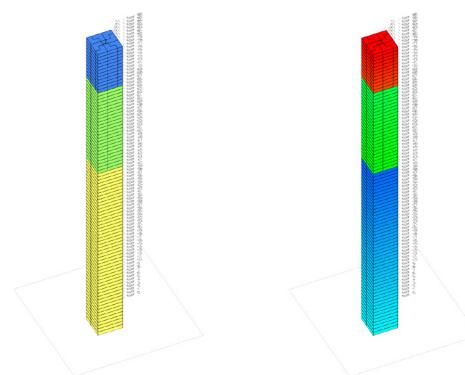
legend : [unitDelta-m<sup>2</sup>]

40 [UNITS]	£-1,730 - £-1,254
40 [UNITS]	£-1,253 - £-777
20 [UNITS]	£-776 - £-299
0 [UNITS]	£-298 - £177
0 [UNITS]	£178 - £654
0 [UNITS]	£655 - £1,132
0 [UNITS]	£1,133 - £1,609
0 [UNITS]	£1,610 - £2,087
88 [UNITS]	£2,088 - £2,564
108 [UNITS]	£2,565

distribution :



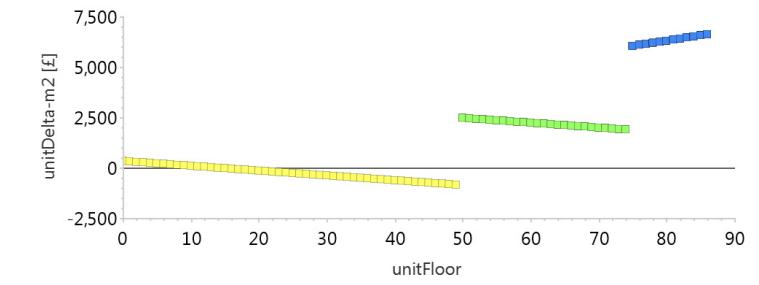
2.2



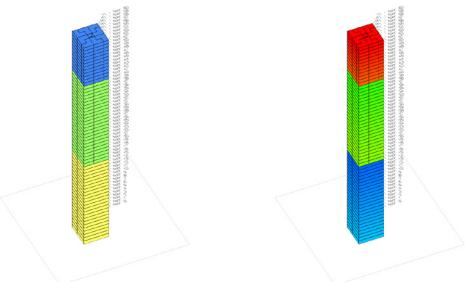
legend : [unitDelta-m<sup>2</sup>]

64 [UNITS]	£-842 - £-97
36 [UNITS]	£-96 - £647
0 [UNITS]	£648 - £1,393
44 [UNITS]	£1,394 - £2,139
56 [UNITS]	£2,140 - £2,885
0 [UNITS]	£2,886 - £3,630
0 [UNITS]	£3,631 - £4,376
0 [UNITS]	£4,377 - £5,122
0 [UNITS]	£5,123 - £5,868
88 [UNITS]	£5,869 - £6,613
8 [UNITS]	£6,614

distribution :



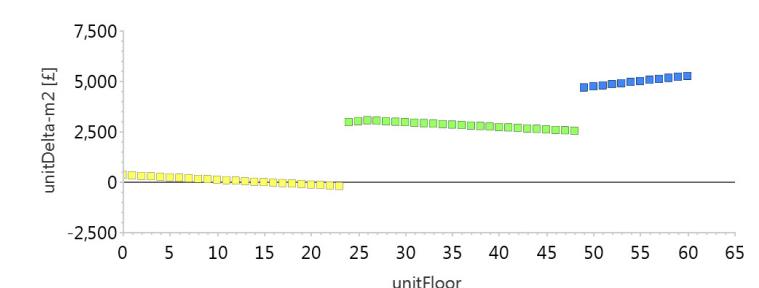
2.3



legend : [unitDelta-m<sup>2</sup>]

46 [UNITS]	£-218 - £327
2 [UNITS]	£328 - £874
0 [UNITS]	£875 - £1,420
0 [UNITS]	£1,421 - £1,967
4 [UNITS]	£1,968 - £2,514
96 [UNITS]	£2,515 - £3,061
0 [UNITS]	£3,062 - £3,608
0 [UNITS]	£3,609 - £4,155
8 [UNITS]	£4,156 - £4,702
80 [UNITS]	£4,703 - £5,248
8 [UNITS]	£5,249

distribution :



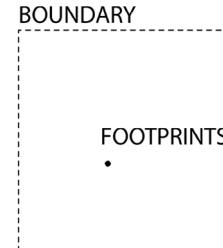
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 3 - VARYING VALUE CAP [ summary ]

### UNIT MIX

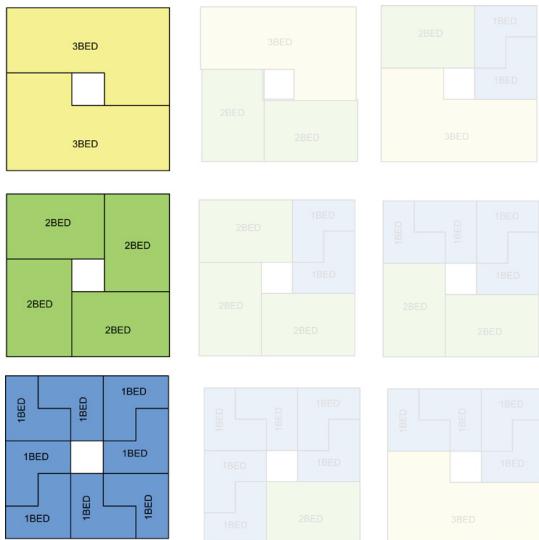
	COUNT	VAL
1BED	100	5100
2BED	100	4800
3BED	100	4500
PHSINGLE	0	0
PHDOUBLI	0	0
D3BED	0	0
D4BED	0	0

### INPUT PARAMETERS



- max area : none
- max height : none
- **unit value cap :**  
**VARIED for all unit types / schemes**
- floor cost base: £3000 / m<sup>2</sup>
- floor cost multiplier : 8% every 10 floors
- unit value floor multiplier : 1.5% per floor
- unit value visibility multiplier : none
- floor to ceiling height : 4m

### GEOMETRY



### DESCRIPTION

Evaluation 3 examines the relationship between varied unit value caps, and unit placement within the stack

The unit mix affords **a varied value cap** to unit all types, differing for each scheme. meaning units are free to increase in value based on location in the stack until a certain value **specific to that unit type**, after which their value remains the same regardless of floor increase.

This evaluation is meant to inform stack unit locations in a manner closer to the approximate market value of the desired unit mix. If the developer knows the estimated sales values for units of a specific type, these can be input as parameters for the stack optimization process.

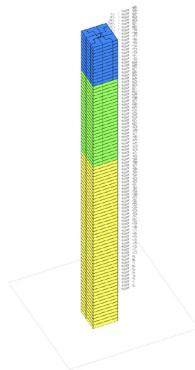
Cost and value floor multipliers, as well as floor to ceiling height, are also fixed for all schemes, restricting the output to a pure stack optimization based on unit and floorplate types.

# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 3 - VARYING VALUE CAP [ summary ]

### UNIT MIX

	COUNT	VAL	CAP
1BED	100	5100	1000000
2BED	100	4800	1500000
3BED	100	4500	2000000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0



3.1

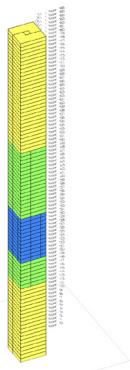
### SCHEME 3.1

Scheme 3.1 is an example of a varied cap for each unit type in which the 2BED and 2BED units max out at low floors based on their square footage, resulting in the placement of the 1BED units at higher floors

FLOORS : 86  
UNITS : 296  
PROFIT : £197,992,368

### UNIT MIX

	COUNT	VAL	CAP
1BED	100	5100	600000
2BED	100	4800	1300000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0



3.2

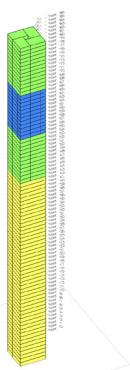
### SCHEME 3.2

Scheme 3.2 is an example of a varied cap for each unit type in which the 1BED and 2BED units max out at low floors based on their square footage, resulting in the placement of the 3BED units at higher floors

FLOORS : 86  
UNITS : 296  
PROFIT : £171,564,576

### UNIT MIX

	COUNT	VAL	CAP
1BED	100	5100	800000
2BED	100	4800	1800000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0



3.3

### SCHEME 3.3

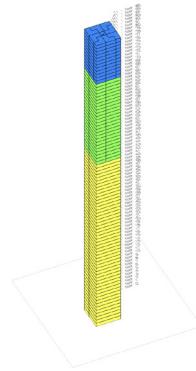
Scheme 3.3 is an example of a varied cap for each unit type in which the 1BED, and 3BED units max out at low floors based on their square footage, resulting in the placement of the 2BED units at higher floors

FLOORS : 86  
UNITS : 296  
PROFIT : £193,729,408

# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 3 - VARYING VALUE CAP [ summary ]

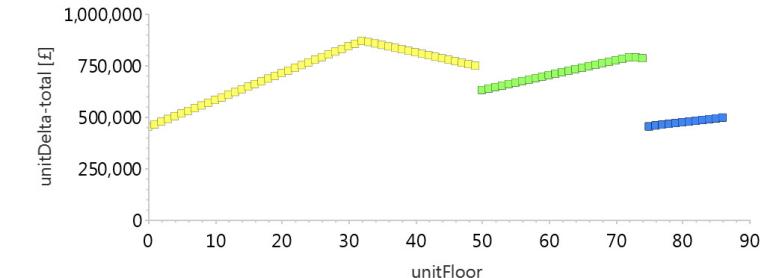
3.1



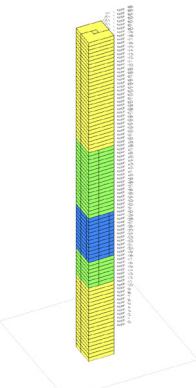
**stack :**

AREA	52200m <sup>2</sup>
UNITS	296
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 100 [100]	£178,484,000 [£1,784,840/unit - £5,949/m <sup>2</sup> ]
1BED - 96 [100]	£81,059,368 [£844,368/unit - £11,258/m <sup>2</sup> ]
D4BED - 0 [0]	-
2BED - 100 [100]	£138,849,600 [£1,388,496/unit - £9,256/m <sup>2</sup> ]
PHSINGLE - 0 [0]	-
VALUE	£398,392,896 [£1,345,922/unit - £7,632/m <sup>2</sup> ]
COST	£210,470,528 [£711,049/unit - £4,032/m <sup>2</sup> ]
PROFIT	£187,922,368 [£634,872/unit - £3,600/m <sup>2</sup> ]

**distribution :**



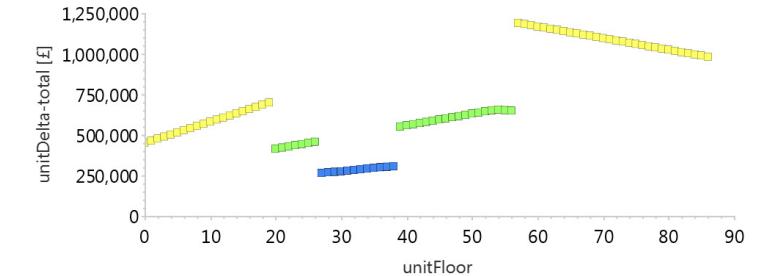
3.2



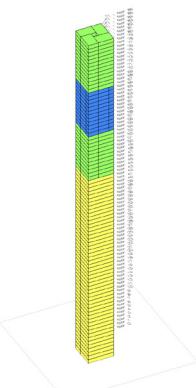
**stack :**

AREA	52200m <sup>2</sup>
UNITS	296
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 100 [100]	£211,695,008 [£2,116,950/unit - £7,056/m <sup>2</sup> ]
1BED - 96 [100]	£54,616,800 [£568,925/unit - £7,585/m <sup>2</sup> ]
D4BED - 0 [0]	-
2BED - 100 [100]	£115,723,200 [£1,157,232/unit - £7,714/m <sup>2</sup> ]
PHSINGLE - 0 [0]	-
VALUE	£382,034,976 [£1,290,658/unit - £7,318/m <sup>2</sup> ]
COST	£210,470,400 [£711,048/unit - £4,032/m <sup>2</sup> ]
PROFIT	£171,564,576 [£579,610/unit - £3,286/m <sup>2</sup> ]

**distribution :**



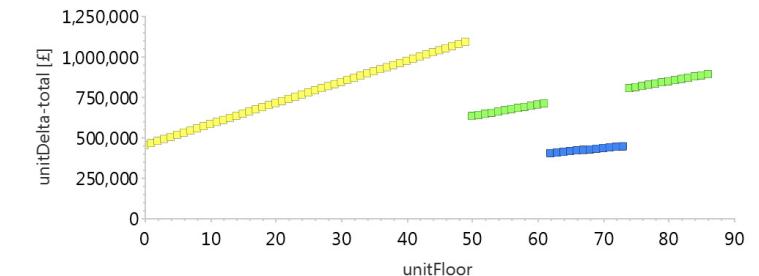
3.3



**stack :**

AREA	52200m <sup>2</sup>
UNITS	296
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 100 [100]	£184,612,512 [£1,846,125/unit - £6,153/m <sup>2</sup> ]
1BED - 96 [100]	£73,888,296 [£769,669/unit - £10,262/m <sup>2</sup> ]
D4BED - 0 [0]	-
2BED - 100 [100]	£145,699,200 [£1,456,992/unit - £9,713/m <sup>2</sup> ]
PHSINGLE - 0 [0]	-
VALUE	£404,199,936 [£1,365,540/unit - £7,743/m <sup>2</sup> ]
COST	£210,470,528 [£711,049/unit - £4,032/m <sup>2</sup> ]
PROFIT	£193,729,408 [£654,491/unit - £3,711/m <sup>2</sup> ]

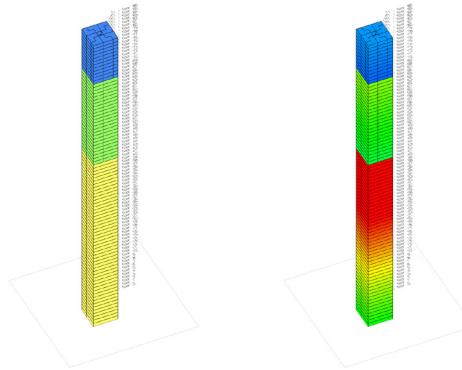
**distribution :**



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 3 - VARYING VALUE CAP [ unit value total ]

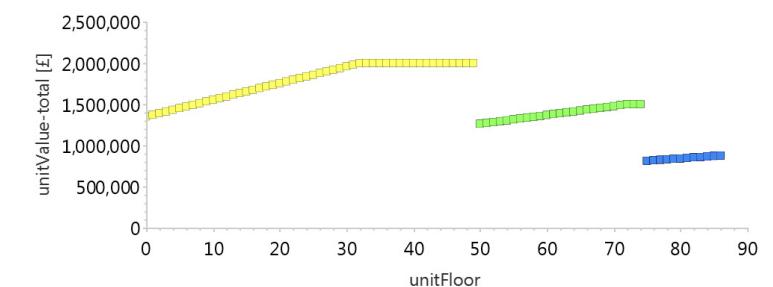
3.1



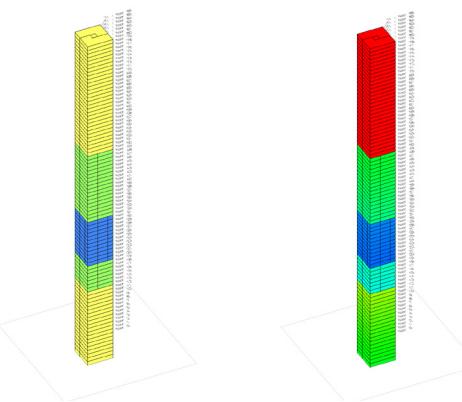
legend : [unitValue-total]

96 [UNITS]		£812,812 - £931,530
0 [UNITS]		£931,531 - £1,050,249
0 [UNITS]		£1,050,250 - £1,168,967
12 [UNITS]		£1,168,968 - £1,287,686
50 [UNITS]		£1,287,687 - £1,406,405
56 [UNITS]		£1,406,406 - £1,525,124
12 [UNITS]		£1,525,125 - £1,643,842
12 [UNITS]		£1,643,843 - £1,762,561
12 [UNITS]		£1,762,562 - £1,881,280
12 [UNITS]		£1,881,281 - £1,999,999
34 [UNITS]		£2,000,000

distribution :



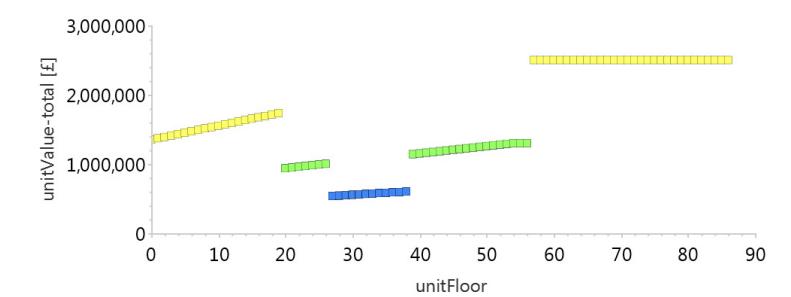
3.2



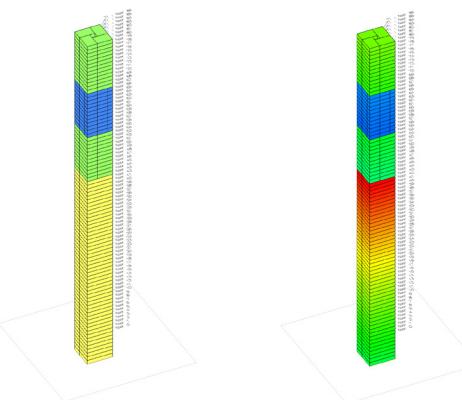
legend : [unitValue-total]

96 [UNITS]		£537,412 - £733,670
0 [UNITS]		£733,671 - £929,929
28 [UNITS]		£929,930 - £1,126,187
72 [UNITS]		£1,126,188 - £1,322,446
18 [UNITS]		£1,322,447 - £1,518,705
20 [UNITS]		£1,518,706 - £1,714,964
2 [UNITS]		£1,714,965 - £1,911,222
0 [UNITS]		£1,911,223 - £2,107,481
0 [UNITS]		£2,107,482 - £2,303,740
0 [UNITS]		£2,303,741 - £2,499,999
60 [UNITS]		£2,500,000

distribution :



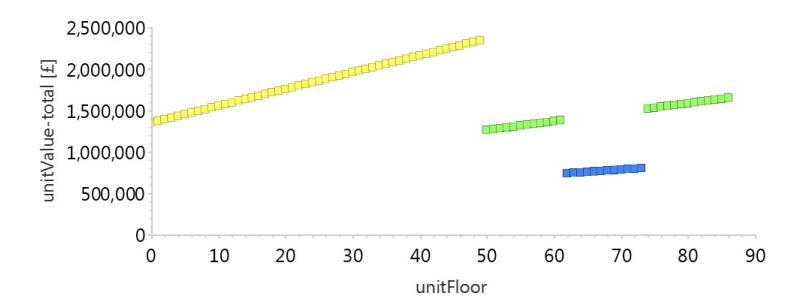
3.3



legend : [unitValue-total]

96 [UNITS]		£738,225 - £898,626
0 [UNITS]		£898,627 - £1,059,029
0 [UNITS]		£1,059,030 - £1,219,431
52 [UNITS]		£1,219,432 - £1,379,834
24 [UNITS]		£1,379,835 - £1,540,237
60 [UNITS]		£1,540,238 - £1,700,639
16 [UNITS]		£1,700,640 - £1,861,042
16 [UNITS]		£1,861,043 - £2,021,444
16 [UNITS]		£2,021,445 - £2,181,847
16 [UNITS]		£2,181,848

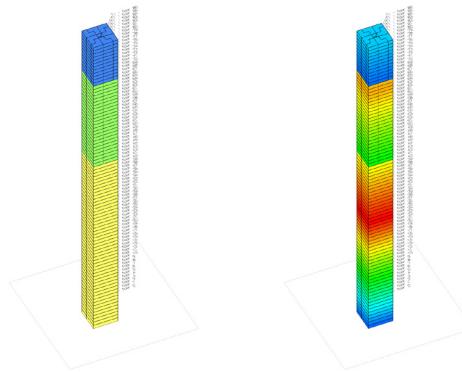
distribution :



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 3 - VARYING VALUE CAP [ unit profit total ]

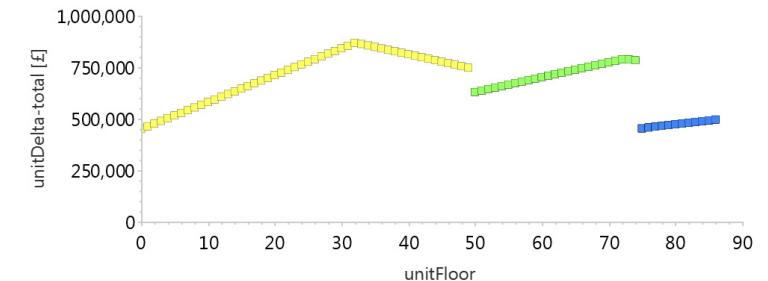
3.1



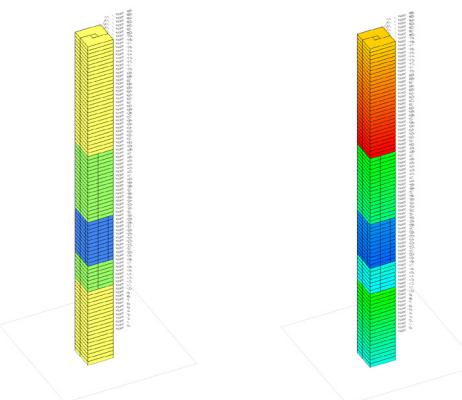
legend : [unitDelta-total]

88 [UNITS]	£449,999 - £491,758
22 [UNITS]	£491,759 - £533,518
6 [UNITS]	£533,519 - £575,279
6 [UNITS]	£575,280 - £617,039
27 [UNITS]	£617,040 - £658,799
27 [UNITS]	£658,800 - £700,559
30 [UNITS]	£700,560 - £742,319
46 [UNITS]	£742,320 - £784,079
24 [UNITS]	£784,080 - £825,839
20 [UNITS]	£825,840

distribution :



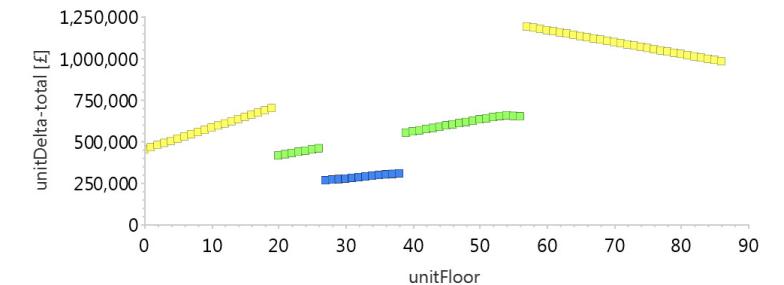
3.2



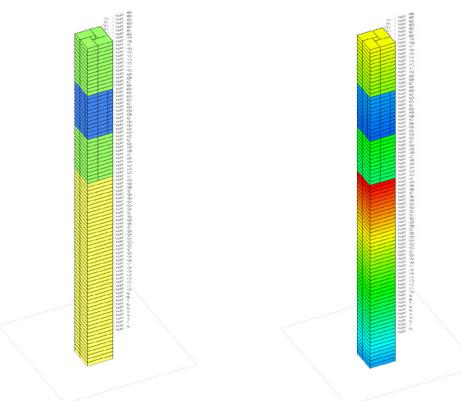
legend : [unitDelta-total]

96 [UNITS]	£263,812 - £356,390
20 [UNITS]	£356,391 - £448,969
24 [UNITS]	£448,970 - £541,547
62 [UNITS]	£541,548 - £634,126
34 [UNITS]	£634,127 - £726,705
0 [UNITS]	£726,706 - £819,284
0 [UNITS]	£819,285 - £911,863
8 [UNITS]	£911,864 - £1,004,442
26 [UNITS]	£1,004,443 - £1,097,020
25 [UNITS]	£1,097,021 - £1,189,599
1 [UNITS]	£1,189,600

distribution :



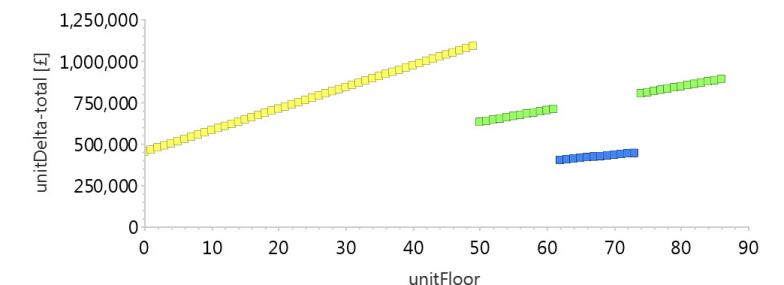
3.3



legend : [unitDelta-total]

100 [UNITS]	£401,625 - £470,406
10 [UNITS]	£470,407 - £539,189
12 [UNITS]	£539,190 - £607,971
38 [UNITS]	£607,972 - £676,754
30 [UNITS]	£676,755 - £745,536
18 [UNITS]	£745,537 - £814,319
52 [UNITS]	£814,320 - £883,101
14 [UNITS]	£883,102 - £951,884
10 [UNITS]	£951,885 - £1,020,666
11 [UNITS]	£1,020,667 - £1,089,449
1 [UNITS]	£1,089,450

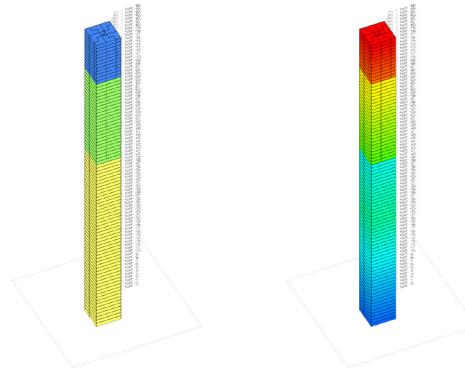
distribution :



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 3 - VARYING VALUE CAP [ unit profit m2 ]

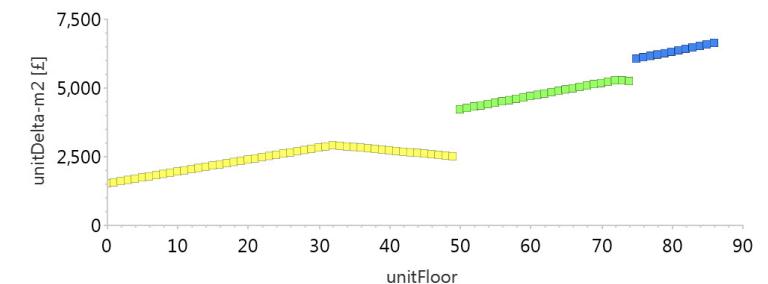
3.1



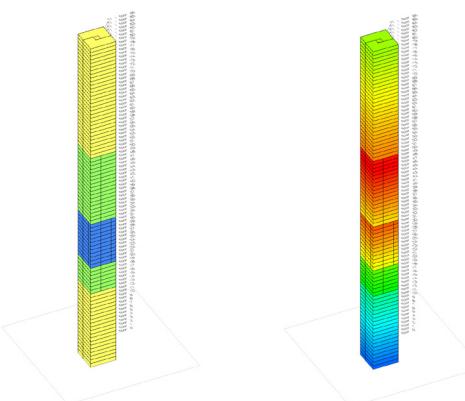
legend : [unitDelta-m2]

24 [UNITS]	£1,499 - £2,010
28 [UNITS]	£2,011 - £2,521
48 [UNITS]	£2,522 - £3,033
0 [UNITS]	£3,034 - £3,544
0 [UNITS]	£3,545 - £4,056
32 [UNITS]	£4,057 - £4,568
44 [UNITS]	£4,569 - £5,079
24 [UNITS]	£5,080 - £5,591
16 [UNITS]	£5,592 - £6,102
72 [UNITS]	£6,103 - £6,614
8 [UNITS]	£6,615

distribution :



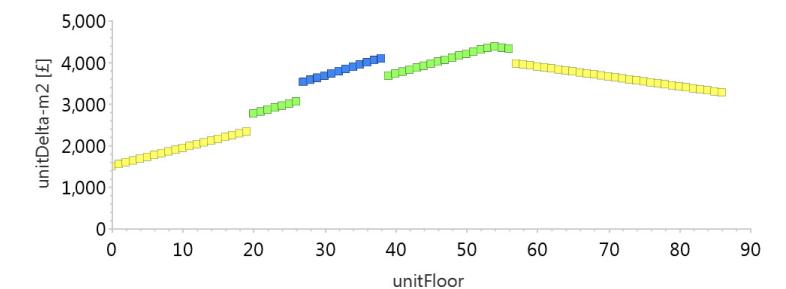
3.2



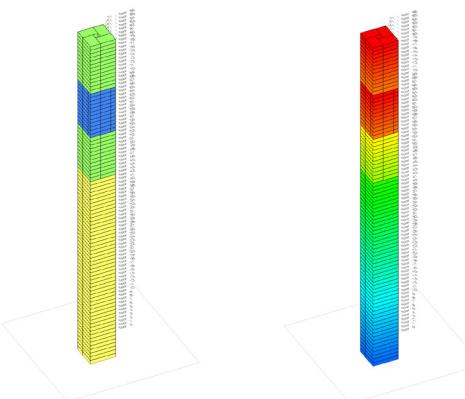
legend : [unitDelta-m2]

14 [UNITS]	£1,499 - £1,786
14 [UNITS]	£1,787 - £2,073
12 [UNITS]	£2,074 - £2,360
0 [UNITS]	£2,361 - £2,647
16 [UNITS]	£2,648 - £2,934
12 [UNITS]	£2,935 - £3,221
22 [UNITS]	£3,222 - £3,508
82 [UNITS]	£3,509 - £3,795
80 [UNITS]	£3,796 - £4,082
40 [UNITS]	£4,083 - £4,369
4 [UNITS]	£4,370

distribution :



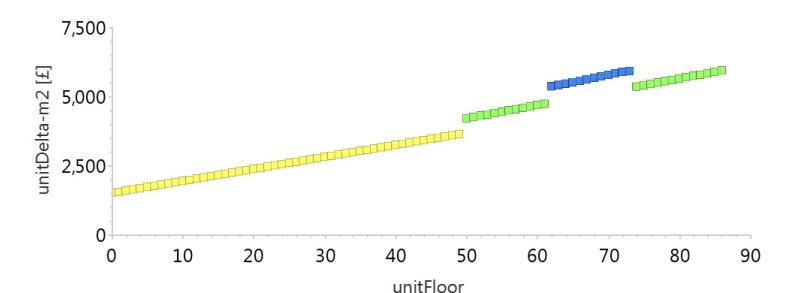
3.3



legend : [unitDelta-m2]

22 [UNITS]	£1,499 - £1,941
20 [UNITS]	£1,942 - £2,384
20 [UNITS]	£2,385 - £2,827
20 [UNITS]	£2,828 - £3,270
18 [UNITS]	£3,271 - £3,713
0 [UNITS]	£3,714 - £4,155
36 [UNITS]	£4,156 - £4,598
12 [UNITS]	£4,599 - £5,041
36 [UNITS]	£5,042 - £5,484
108 [UNITS]	£5,485 - £5,926
4 [UNITS]	£5,927

distribution :



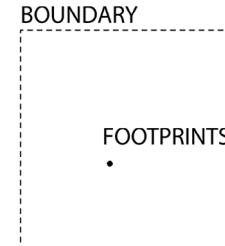
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 4 - VARYING CONSTRUCTION COSTS [ summary ]

### UNIT MIX

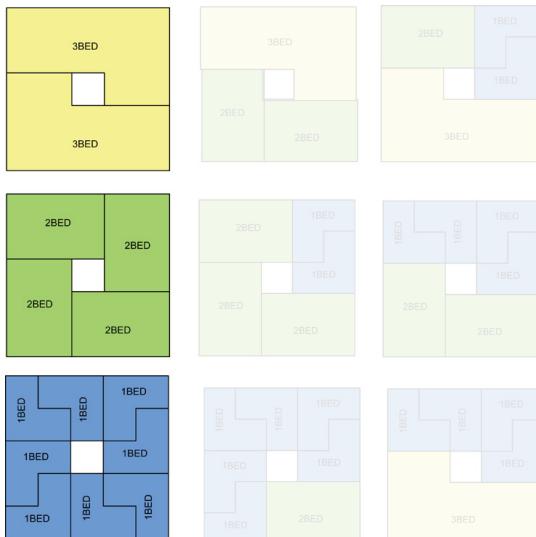
	COUNT	VAL	CAP
1BED	100	5100	600000
2BED	100	4800	1300000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

### INPUT PARAMETERS



- max area : none
- max height : none
- **unit value cap :**
  - VARIED** for all unit types
  - FIXED** for all schemes
- **floor cost base:** **VARIED** for all schemes
- **floor cost multiplier :** **VARIED** for all schemes
- unit value floor multiplier : 1.5% per floor
- unit value visibility multiplier : none
- floor to ceiling height : 4m

### GEOMETRY



### DESCRIPTION

Evaluation 4 examines the relationship between construction costs and profit margins.

The unit mix affords **a varied value cap** to unit all types, identical in each scheme. Scheme 3.2 serves here as a control for the changes due to construction costs.

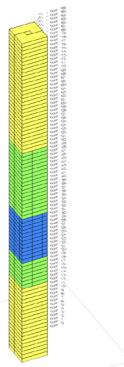
This evaluation is meant to inform the effects of different cost considerations when determining the optimal stack for a particular unit mix.

With the increasing cost of construction per floor, and capped unit values at their simulated market values, each stack eventually reaches a point at which the construction costs of building another floor outweigh the potential profit gained from the sale of units on that floor.

# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 4 - VARYING CONSTRUCTION COSTS [ summary ]

### UNIT MIX



### SCHEME 4.1

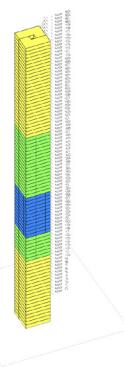
	COUNT	VAL	CAP
1BED	100	5100	600000
2BED	100	4800	1300000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

Scheme 4.1 is the same as scheme 3.2, used here as a control.

- floor cost base: £3000 / m<sup>2</sup>
- floor cost multiplier : 8% every 10 floors

FLOORS : 86  
UNITS : 296  
PROFIT : £171,564,576

### UNIT MIX



### SCHEME 4.2

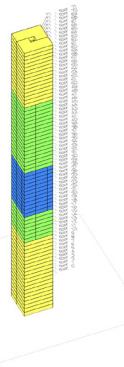
	COUNT	VAL	CAP
1BED	100	5100	600000
2BED	100	4800	1300000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

Scheme 4.2 increases the base value of construction per m<sup>2</sup>, but maintains the construction cost increase per floor

- floor cost base: £5000 / m<sup>2</sup>
- floor cost multiplier : 8% every 10 floors

FLOORS : 83  
UNITS : 290  
PROFIT : £31,370,976

### UNIT MIX



### SCHEME 4.3

	COUNT	VAL	CAP
1BED	100	5100	600000
2BED	100	4800	1300000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

Scheme 4.2 maintains the base cost of construction per m<sup>2</sup>, but increases construction cost increase per floor.

- floor cost base: £3000 / m<sup>2</sup>
- floor cost multiplier : 25% every 10 floors

FLOORS : 71  
UNITS : 266  
PROFIT : £62,414,848

4.1

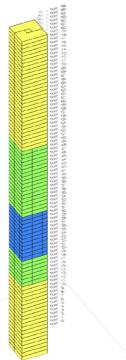
4.2

4.3

# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 4 - VARYING CONSTRUCTION COSTS [ summary ]

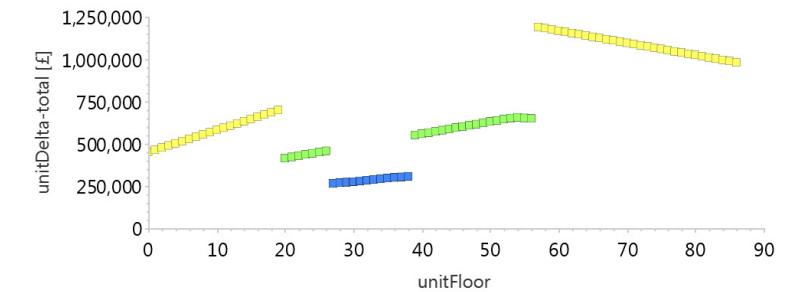
4.1



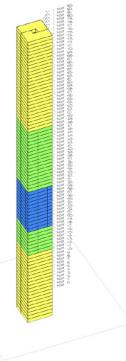
### stack :

AREA	52200m <sup>2</sup>
UNITS	296
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 100 [100]	£211,695,008 [£2,116,950/unit - £7,056/m <sup>2</sup> ]
1BED - 96 [100]	£54,616,800 [£568,925/unit - £7,585/m <sup>2</sup> ]
D4BED - 0 [0]	-
2BED - 100 [100]	£115,723,200 [£1,157,232/unit - £7,714/m <sup>2</sup> ]
PHSINGLE - 0 [0]	-
VALUE	£382,034,976 [£1,290,658/unit - £7,318/m <sup>2</sup> ]
COST	£210,470,400 [£711,048/unit - £4,032/m <sup>2</sup> ]
PROFIT	£171,564,576 [£579,610/unit - £3,286/m <sup>2</sup> ]

### distribution :



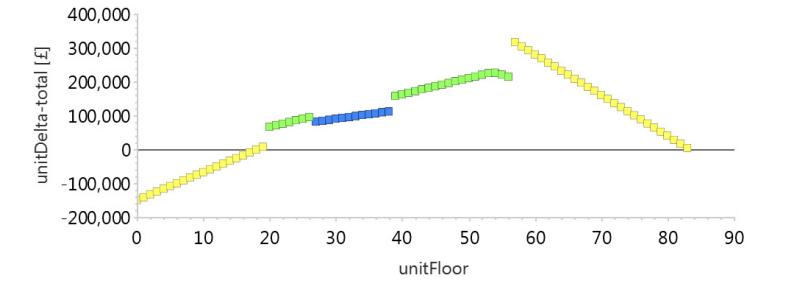
4.2



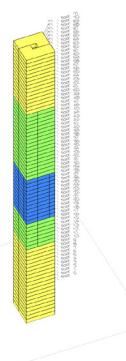
### stack :

AREA	50400m <sup>2</sup>
UNITS	290
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 94 [100]	£196,695,008 [£2,092,500/unit - £6,975/m <sup>2</sup> ]
1BED - 96 [100]	£54,616,800 [£568,925/unit - £7,585/m <sup>2</sup> ]
D4BED - 0 [0]	-
2BED - 100 [100]	£115,723,200 [£1,157,232/unit - £7,714/m <sup>2</sup> ]
PHSINGLE - 0 [0]	-
VALUE	£367,034,976 [£1,265,637/unit - £7,282/m <sup>2</sup> ]
COST	£335,664,000 [£1,157,462/unit - £6,660/m <sup>2</sup> ]
PROFIT	£31,370,976 [£108,175/unit - £622/m <sup>2</sup> ]

### distribution :



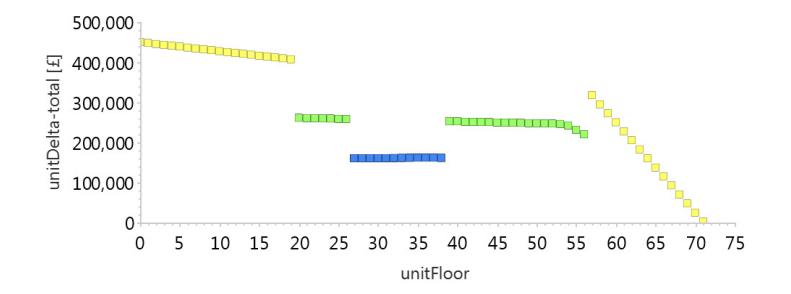
4.3



### stack :

AREA	43200m <sup>2</sup>
UNITS	266
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 70 [100]	£136,695,008 [£1,952,785/unit - £6,509/m <sup>2</sup> ]
1BED - 96 [100]	£54,616,800 [£568,925/unit - £7,585/m <sup>2</sup> ]
D4BED - 0 [0]	-
2BED - 100 [100]	£115,723,200 [£1,157,232/unit - £7,714/m <sup>2</sup> ]
PHSINGLE - 0 [0]	-
VALUE	£307,034,976 [£1,154,266/unit - £7,107/m <sup>2</sup> ]
COST	£244,620,128 [£919,624/unit - £5,662/m <sup>2</sup> ]
PROFIT	£62,414,848 [£234,642/unit - £1,444/m <sup>2</sup> ]

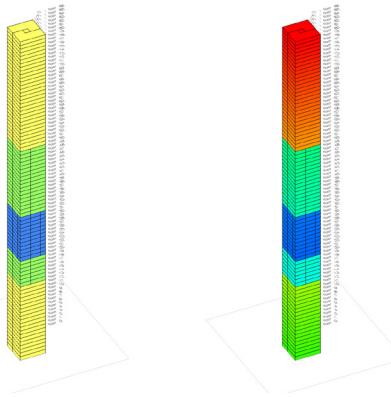
### distribution :



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 4 - VARYING CONSTRUCTION COSTS [ unit cost total ]

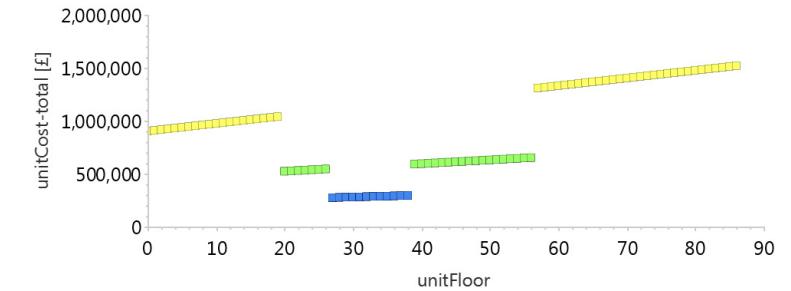
4.1



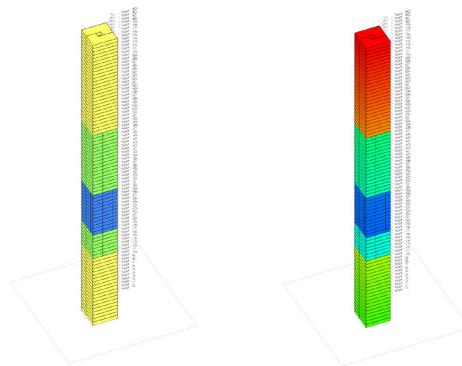
legend : [unitCost-total]

96 [UNITS]	£273,600 - £398,159
4 [UNITS]	£398,160 - £522,719
88 [UNITS]	£522,720 - £647,279
8 [UNITS]	£647,280 - £771,839
0 [UNITS]	£771,840 - £896,399
34 [UNITS]	£896,400 - £1,020,959
6 [UNITS]	£1,020,960 - £1,145,519
0 [UNITS]	£1,145,520 - £1,270,079
24 [UNITS]	£1,270,080 - £1,394,639
35 [UNITS]	£1,394,640 - £1,519,199
1 [UNITS]	£1,519,200

distribution :



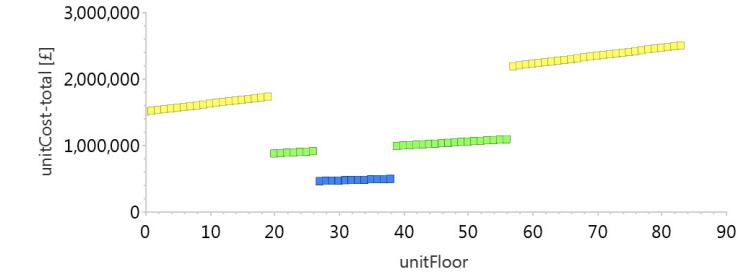
4.2



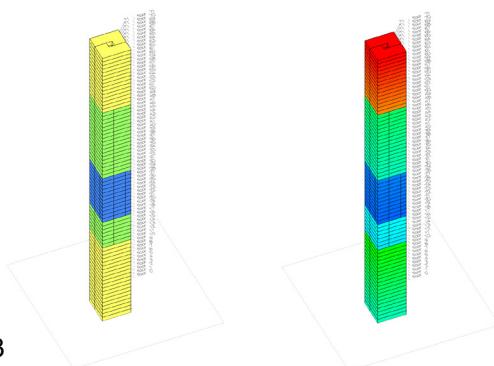
legend : [unitCost-total]

96 [UNITS]	£456,000 - £659,999
0 [UNITS]	£660,000 - £863,999
88 [UNITS]	£864,000 - £1,067,999
12 [UNITS]	£1,068,000 - £1,271,999
0 [UNITS]	£1,272,000 - £1,475,999
31 [UNITS]	£1,476,000 - £1,679,999
9 [UNITS]	£1,680,000 - £1,883,999
0 [UNITS]	£1,884,000 - £2,088,000
19 [UNITS]	£2,088,001 - £2,292,000
34 [UNITS]	£2,292,001 - £2,496,000
1 [UNITS]	£2,496,001

distribution :



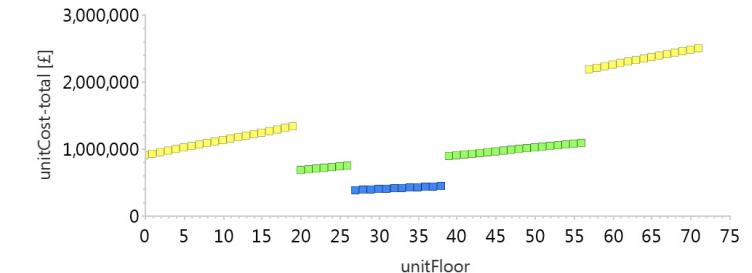
4.3



legend : [unitCost-total]

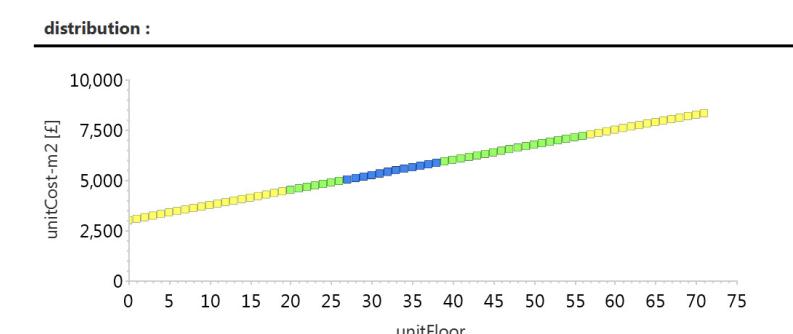
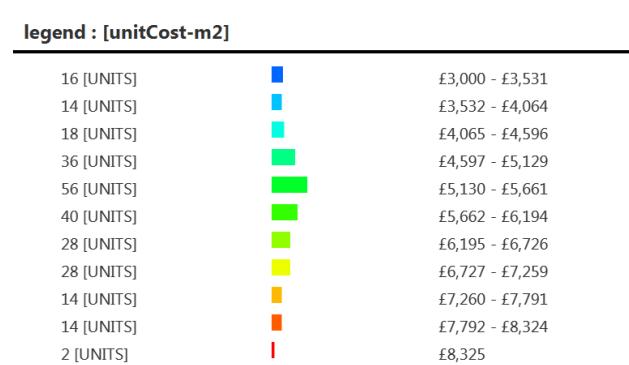
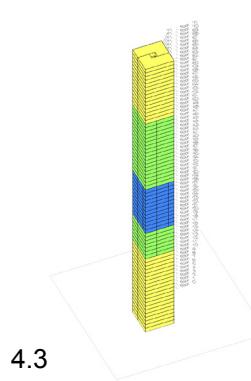
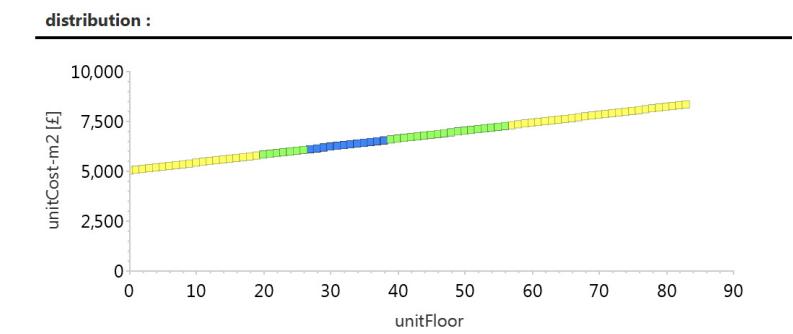
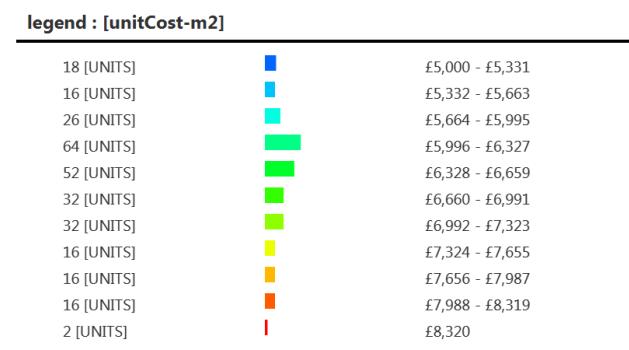
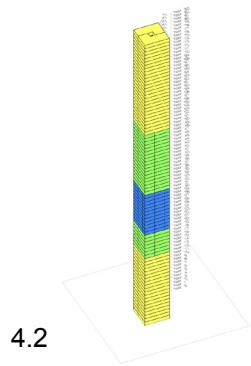
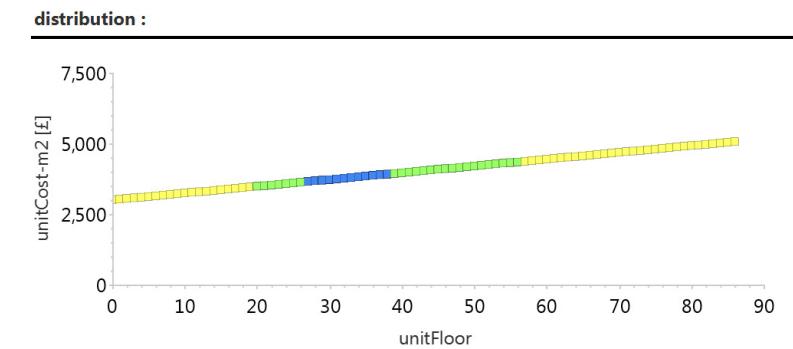
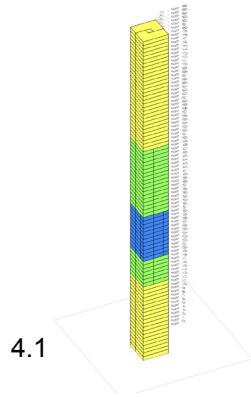
96 [UNITS]	£376,875 - £588,936
28 [UNITS]	£588,937 - £800,999
60 [UNITS]	£801,000 - £1,013,061
42 [UNITS]	£1,013,062 - £1,225,124
10 [UNITS]	£1,225,125 - £1,437,187
0 [UNITS]	£1,437,188 - £1,649,249
0 [UNITS]	£1,649,250 - £1,861,312
0 [UNITS]	£1,861,313 - £2,073,375
10 [UNITS]	£2,073,376 - £2,285,437
19 [UNITS]	£2,285,438 - £2,497,500
1 [UNITS]	£2,497,501

distribution :



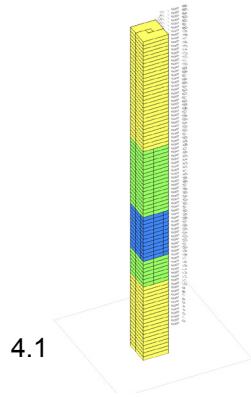
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 4 - VARYING CONSTRUCTION COSTS [ unit cost total ]



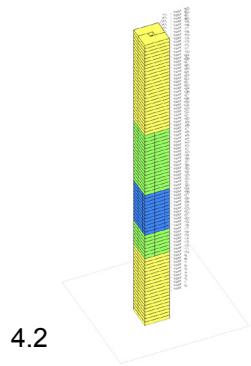
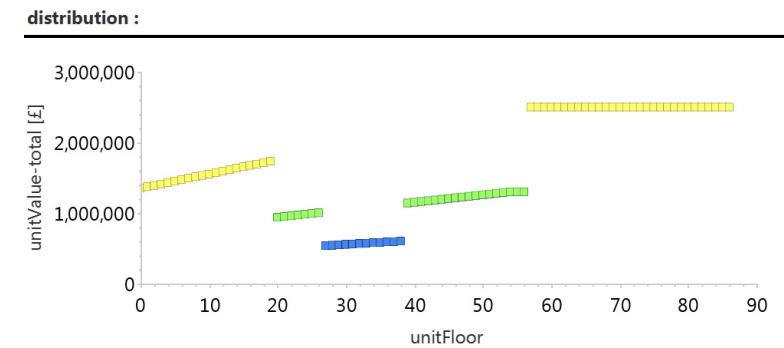
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 4 - VARYING CONSTRUCTION COSTS [ unit value total ]



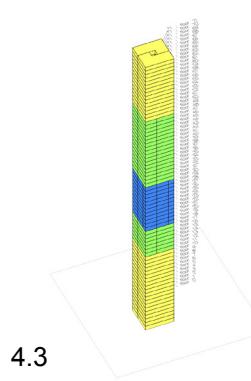
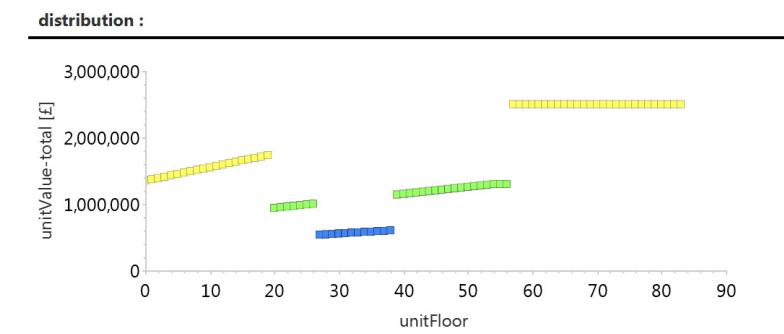
**legend : [unitValue-total]**

96 [UNITS]	£537,412 - £733,670
0 [UNITS]	£733,671 - £929,929
28 [UNITS]	£929,930 - £1,126,187
72 [UNITS]	£1,126,188 - £1,322,446
18 [UNITS]	£1,322,447 - £1,518,705
20 [UNITS]	£1,518,706 - £1,714,964
2 [UNITS]	£1,714,965 - £1,911,222
0 [UNITS]	£1,911,223 - £2,107,481
0 [UNITS]	£2,107,482 - £2,303,740
0 [UNITS]	£2,303,741 - £2,499,999
60 [UNITS]	£2,500,000



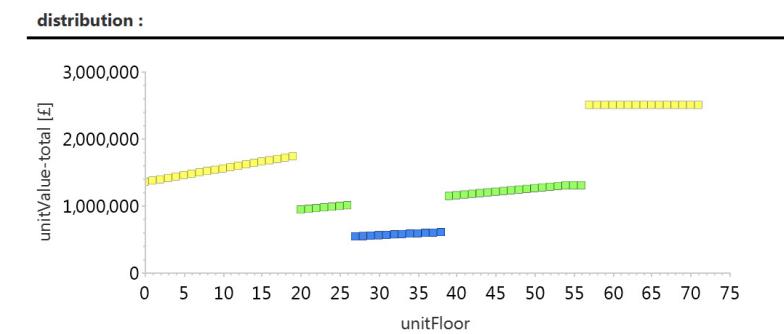
**legend : [unitValue-total]**

96 [UNITS]	£537,412 - £733,670
0 [UNITS]	£733,671 - £929,929
28 [UNITS]	£929,930 - £1,126,187
72 [UNITS]	£1,126,188 - £1,322,446
18 [UNITS]	£1,322,447 - £1,518,705
20 [UNITS]	£1,518,706 - £1,714,964
2 [UNITS]	£1,714,965 - £1,911,222
0 [UNITS]	£1,911,223 - £2,107,481
0 [UNITS]	£2,107,482 - £2,303,740
0 [UNITS]	£2,303,741 - £2,499,999
54 [UNITS]	£2,500,000



**legend : [unitValue-total]**

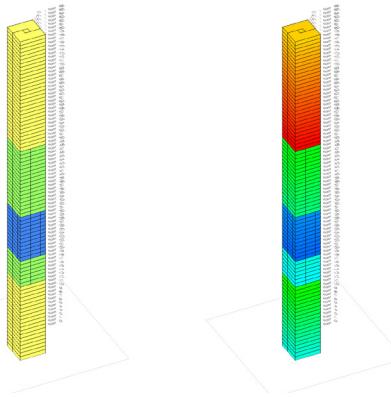
96 [UNITS]	£537,412 - £733,670
0 [UNITS]	£733,671 - £929,929
28 [UNITS]	£929,930 - £1,126,187
72 [UNITS]	£1,126,188 - £1,322,446
18 [UNITS]	£1,322,447 - £1,518,705
20 [UNITS]	£1,518,706 - £1,714,964
2 [UNITS]	£1,714,965 - £1,911,222
0 [UNITS]	£1,911,223 - £2,107,481
0 [UNITS]	£2,107,482 - £2,303,740
0 [UNITS]	£2,303,741 - £2,499,999
30 [UNITS]	£2,500,000



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 4 - VARYING CONSTRUCTION COSTS [ unit profit total ]

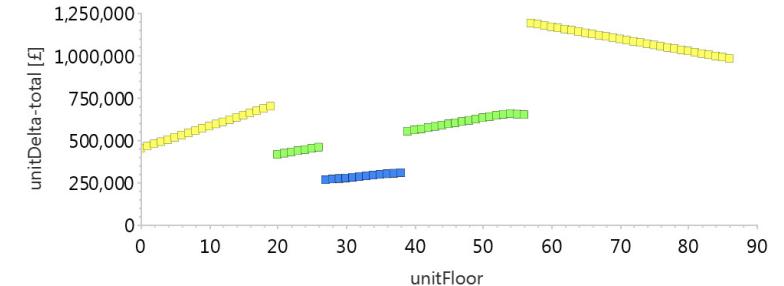
4.1



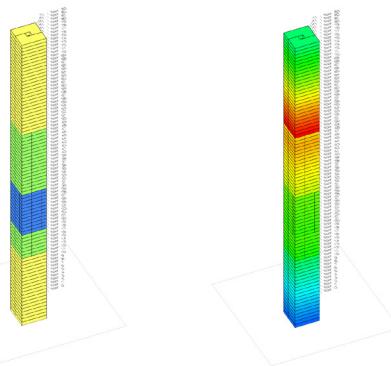
legend : [unitDelta-total]

96 [UNITS]	£263,812 - £356,390
20 [UNITS]	£356,391 - £448,969
24 [UNITS]	£448,970 - £541,547
62 [UNITS]	£541,548 - £634,126
34 [UNITS]	£634,127 - £726,705
0 [UNITS]	£726,706 - £819,284
0 [UNITS]	£819,285 - £911,863
8 [UNITS]	£911,864 - £1,004,442
26 [UNITS]	£1,004,443 - £1,097,020
25 [UNITS]	£1,097,021 - £1,189,599
1 [UNITS]	£1,189,600

distribution :



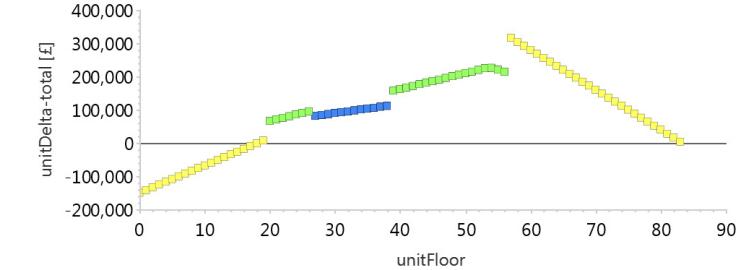
4.2



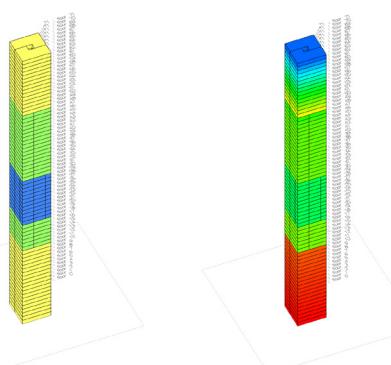
legend : [unitDelta-total]

12 [UNITS]	£-150,000 - £-103,401
12 [UNITS]	£-103,400 - £-56,800
10 [UNITS]	£-56,799 - £-10,200
12 [UNITS]	£-10,199 - £36,399
32 [UNITS]	£36,400 - £82,999
108 [UNITS]	£83,000 - £129,599
24 [UNITS]	£129,600 - £176,199
56 [UNITS]	£176,200 - £222,799
16 [UNITS]	£222,800 - £269,399
7 [UNITS]	£269,400 - £315,999
1 [UNITS]	£316,000

distribution :



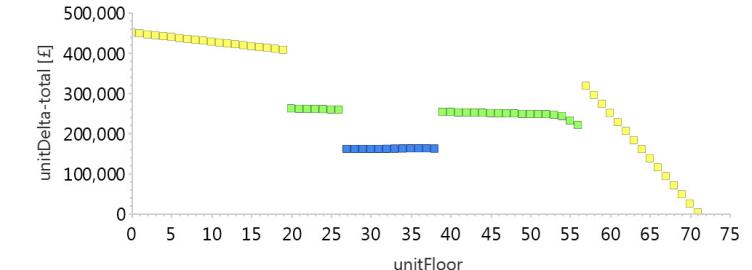
4.3



legend : [unitDelta-total]

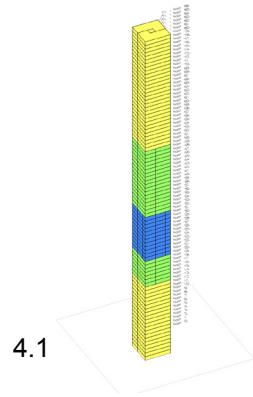
4 [UNITS]	£2,498 - £47,247
4 [UNITS]	£47,248 - £91,998
4 [UNITS]	£91,999 - £136,748
100 [UNITS]	£136,749 - £181,498
8 [UNITS]	£181,499 - £226,248
100 [UNITS]	£226,249 - £270,998
4 [UNITS]	£270,999 - £315,748
2 [UNITS]	£315,749 - £360,498
0 [UNITS]	£360,499 - £405,248
39 [UNITS]	£405,249 - £449,999
1 [UNITS]	£450,000

distribution :



# RESIDENTIAL STACKING EVALUATOR

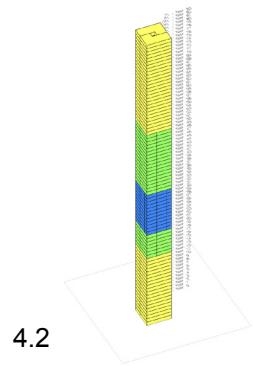
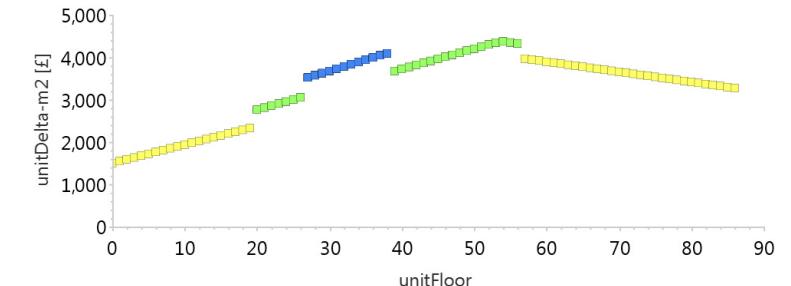
## EVALUATION 4 - VARYING CONSTRUCTION COSTS [ unit profit m<sup>2</sup> ]



legend : [unitDelta-m2]

14 [UNITS]	£1,499 - £1,786
14 [UNITS]	£1,787 - £2,073
12 [UNITS]	£2,074 - £2,360
0 [UNITS]	£2,361 - £2,647
16 [UNITS]	£2,648 - £2,934
12 [UNITS]	£2,935 - £3,221
22 [UNITS]	£3,222 - £3,508
82 [UNITS]	£3,509 - £3,795
80 [UNITS]	£3,796 - £4,082
40 [UNITS]	£4,083 - £4,369
4 [UNITS]	£4,370

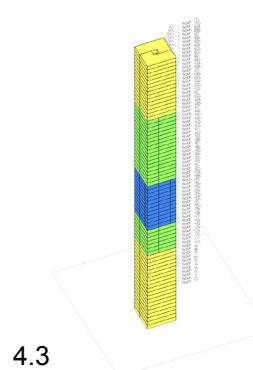
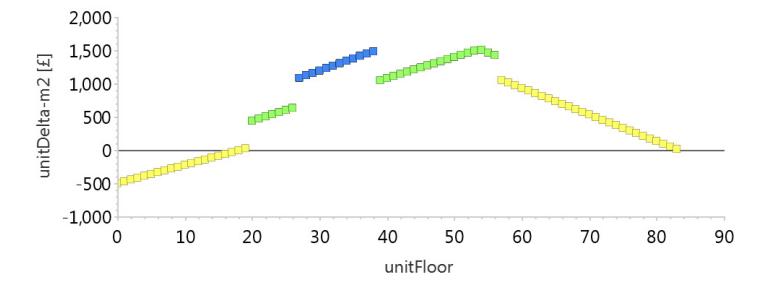
distribution :



legend : [unitDelta-m2]

16 [UNITS]	£-500 - £-300
14 [UNITS]	£-299 - £-99
16 [UNITS]	£-98 - £100
10 [UNITS]	£101 - £301
18 [UNITS]	£302 - £502
30 [UNITS]	£503 - £702
10 [UNITS]	£703 - £903
24 [UNITS]	£904 - £1,104
76 [UNITS]	£1,105 - £1,305
76 [UNITS]	£1,306

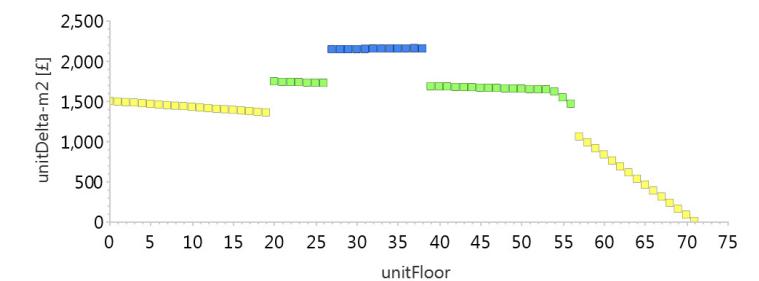
distribution :



legend : [unitDelta-m2]

6 [UNITS]	£8 - £222
6 [UNITS]	£223 - £436
6 [UNITS]	£437 - £651
6 [UNITS]	£652 - £866
6 [UNITS]	£867 - £1,080
0 [UNITS]	£1,081 - £1,295
44 [UNITS]	£1,296 - £1,510
76 [UNITS]	£1,511 - £1,725
20 [UNITS]	£1,726 - £1,939
88 [UNITS]	£1,940 - £2,154
8 [UNITS]	£2,155

distribution :



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ summary ]

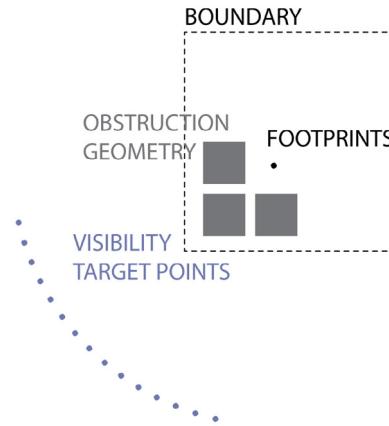
### UNIT MIX

	COUNT	VAL
1BED	100	5100
2BED	100	4800
3BED	100	4500
PHSINGLE	0	0
PHDOUBLI	0	0
D3BED	0	0
D4BED	0	0

### GEOMETRY



### INPUT PARAMETERS



- max area : none
- max height : none
- **unit value cap :**  
**VARIED for all unit types / schemes**
- floor cost base: £3000 / m<sup>2</sup>
- floor cost multiplier : 8% every 10 floors
- unit value floor multiplier : 1.5% per floor
- **unit value visibility multiplier :**  
**MAX 30% of base unit value**
- floor to ceiling height : 4m

### DESCRIPTION

Evaluation 5 is a case study of applied additional premiums to units based on visibility to outside points, while taking into account contextual buildings as visibility obstructions. The visibility premium assigned to the units is based on two variables - the percentage of target points visible from the unit, and the percentage of that unit's facade that is visible to the target points.

All three tests maintain the same respective schemes from evaluation 3 (unit mix, values per m<sup>2</sup> and unit value caps) but allow multiple unit types per floor distribution.

Maintaining a value cap to this evaluation ensures that rather than strictly placing units higher up on the tower, the premiums only affect unit pricing for units that have not yet met the cap (so units still max out at their respective caps even taking into account the added premiums).

# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ summary ]

**UNIT MIX**

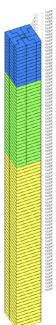
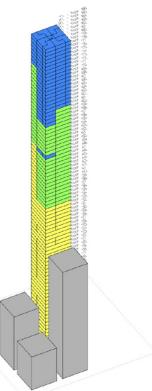
	COUNT	VAL	CAP
1BED	100	5100	1000000
2BED	100	4800	1500000
3BED	100	4500	2000000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

**SCHEME 5.1**

Scheme 5.1 is the same as scheme 3.1, with variable unit mix per floor and added visibility premiums

FLOORS : 86  
UNITS : 299 [vs 296]  
PROFIT : £207,294,304 [vs £197,992,368]

5.1



3.1

**UNIT MIX**

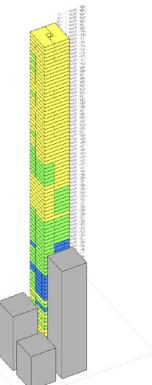
	COUNT	VAL	CAP
1BED	100	5100	600000
2BED	100	4800	1300000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

**SCHEME 5.2**

Scheme 5.2 is the same as scheme 3.2, with variable unit mix per floor and added visibility premiums

FLOORS : 86  
UNITS : 299 [vs 296]  
PROFIT : £183,483,552 [vs £171,564,576]

5.2



3.2

**UNIT MIX**

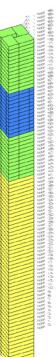
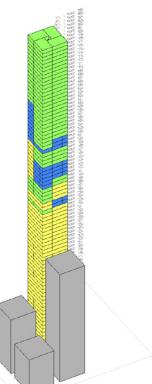
	COUNT	VAL	CAP
1BED	100	5100	800000
2BED	100	4800	1800000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

**SCHEME 5.3**

Scheme 5.3 is the same as scheme 3.3, with variable unit mix per floor and added visibility premiums

FLOORS : 86  
UNITS : 299 [vs 296]  
PROFIT : £221,275,936 [vs £193,729,408]

5.3

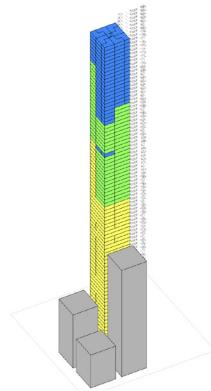


3.3

# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ summary ]

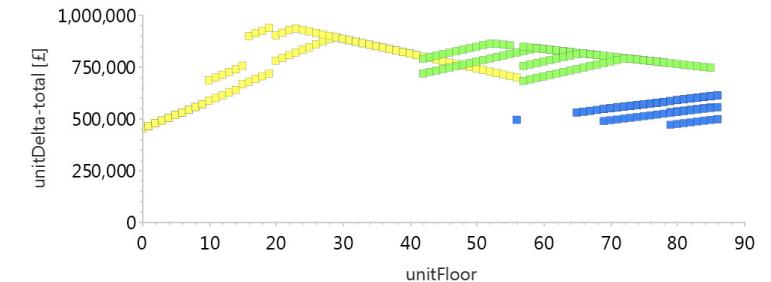
5.1



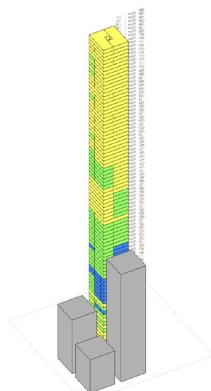
**stack :**

AREA	52200m2
UNITS	299
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 99 [100]	£180,411,248 [£1,822,335/unit - £6,074/m2]
1BED - 100 [100]	£91,383,056 [£913,830/unit - £12,184/m2]
D4BED - 0 [0]	-
2BED - 100 [100]	£145,970,400 [£1,459,704/unit - £9,731/m2]
PHSINGLE - 0 [0]	-
VALUE	£417,764,864 [£1,397,206/unit - £8,003/m2]
COST	£210,470,560 [£703,914/unit - £4,032/m2]
PROFIT	£207,294,304 [£693,292/unit - £3,971/m2]

**distribution :**



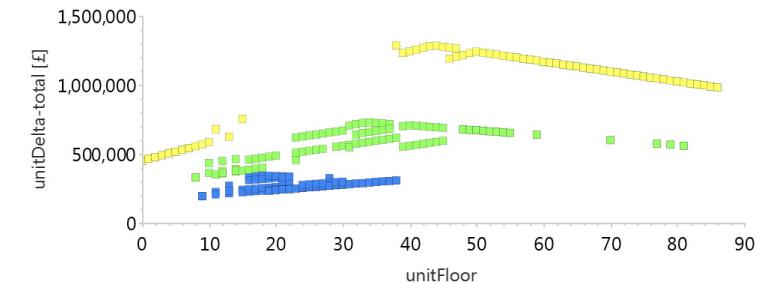
5.2



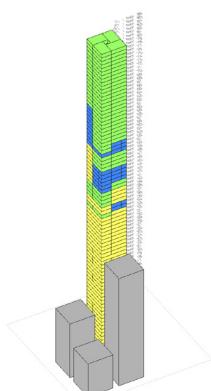
**stack :**

AREA	52200m2
UNITS	299
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 99 [100]	£224,386,752 [£2,266,532/unit - £7,555/m2]
1BED - 100 [100]	£53,698,792 [£536,987/unit - £7,159/m2]
D4BED - 0 [0]	-
2BED - 100 [100]	£115,868,400 [£1,158,684/unit - £7,724/m2]
PHSINGLE - 0 [0]	-
VALUE	£393,953,952 [£1,317,571/unit - £7,547/m2]
COST	£210,470,400 [£703,914/unit - £4,032/m2]
PROFIT	£183,483,552 [£613,657/unit - £3,515/m2]

**distribution :**



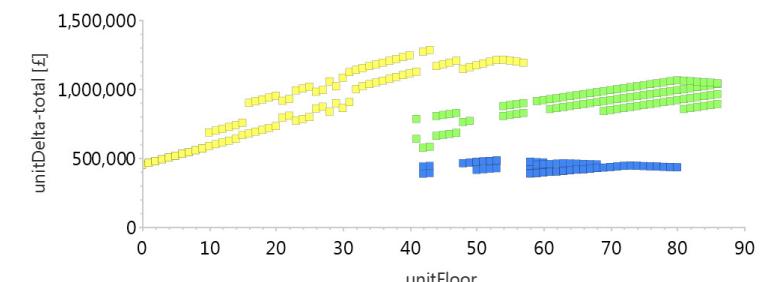
5.3



**stack :**

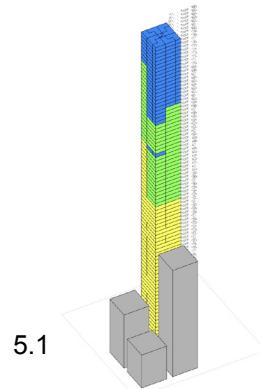
AREA	52200m2
UNITS	299
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 99 [100]	£193,980,240 [£1,959,396/unit - £6,531/m2]
1BED - 100 [100]	£77,119,688 [£771,196/unit - £10,282/m2]
D4BED - 0 [0]	-
2BED - 100 [100]	£160,646,400 [£1,606,464/unit - £10,709/m2]
PHSINGLE - 0 [0]	-
VALUE	£431,746,400 [£1,443,967/unit - £8,271/m2]
COST	£210,470,464 [£703,914/unit - £4,032/m2]
PROFIT	£221,275,936 [£740,053/unit - £4,239/m2]

**distribution :**



# RESIDENTIAL STACKING EVALUATOR

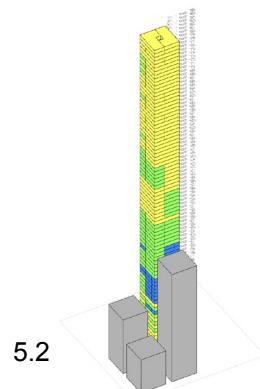
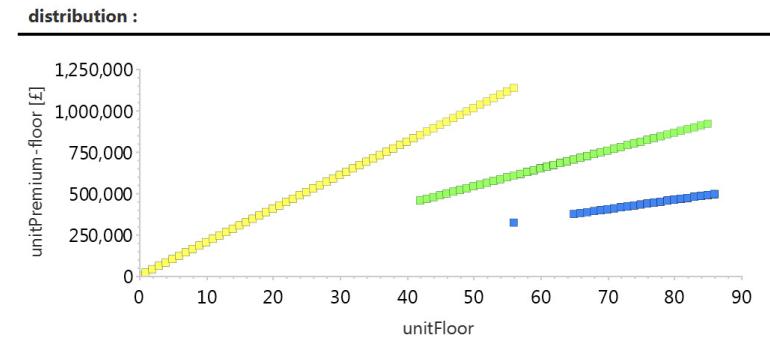
## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ unit premium floor ]



legend : [unitPremium-floor]

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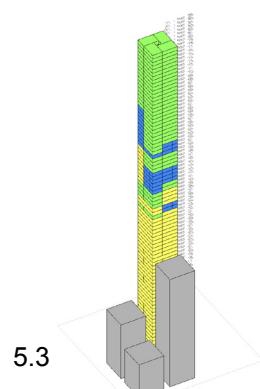
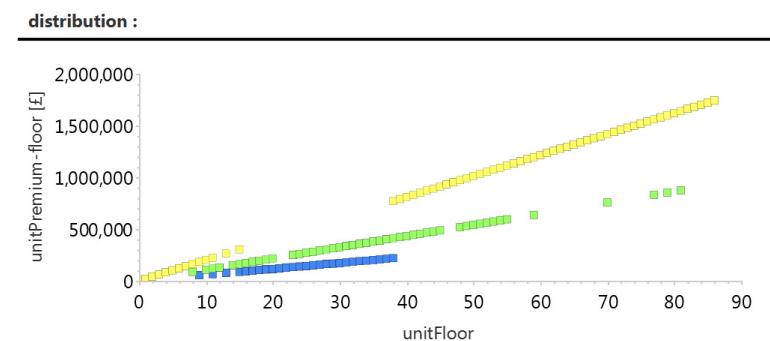
12 [UNITS]	£0 - £113,399
12 [UNITS]	£113,400 - £226,799
12 [UNITS]	£226,800 - £340,199
66 [UNITS]	£340,200 - £453,599
77 [UNITS]	£453,600 - £566,999
42 [UNITS]	£567,000 - £680,399
42 [UNITS]	£680,400 - £793,799
22 [UNITS]	£793,800 - £907,199
8 [UNITS]	£907,200 - £1,020,599
5 [UNITS]	£1,020,600 - £1,133,999
1 [UNITS]	£1,134,000



legend : [unitPremium-floor]

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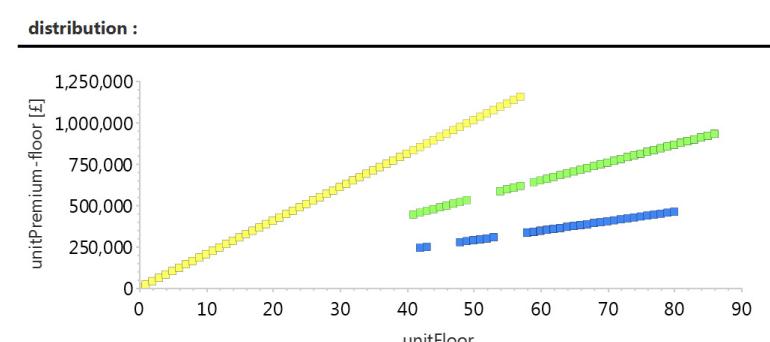
117 [UNITS]	£0 - £174,149
49 [UNITS]	£174,150 - £348,299
32 [UNITS]	£348,300 - £522,449
16 [UNITS]	£522,450 - £696,599
11 [UNITS]	£696,600 - £870,749
13 [UNITS]	£870,750 - £1,044,899
13 [UNITS]	£1,044,900 - £1,219,049
16 [UNITS]	£1,219,050 - £1,393,199
16 [UNITS]	£1,393,200 - £1,567,349
14 [UNITS]	£1,567,350 - £1,741,499
2 [UNITS]	£1,741,500



legend : [unitPremium-floor]

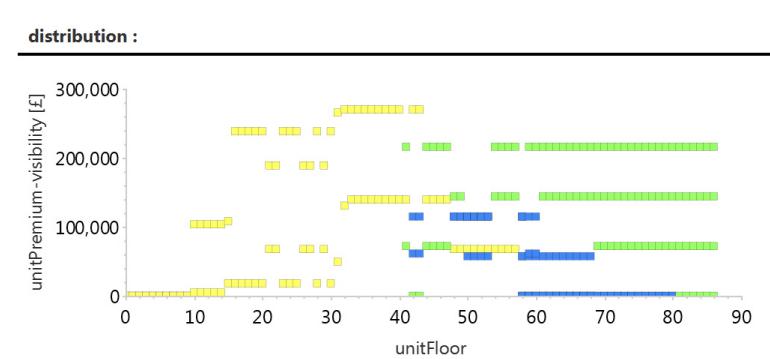
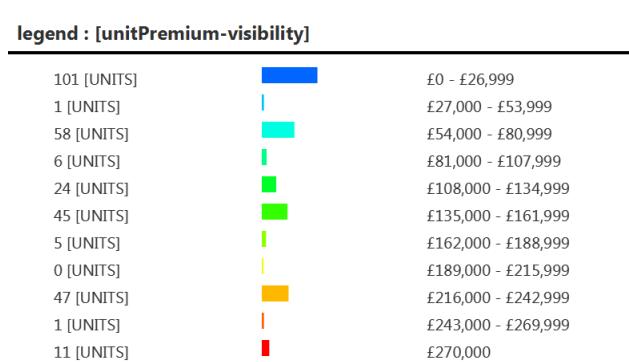
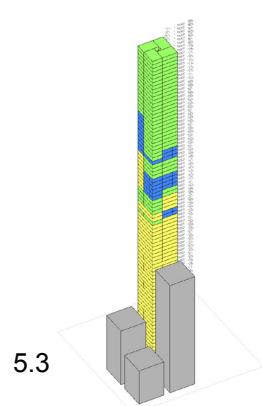
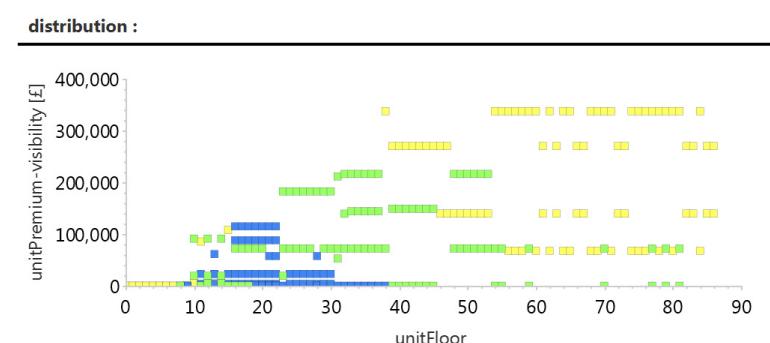
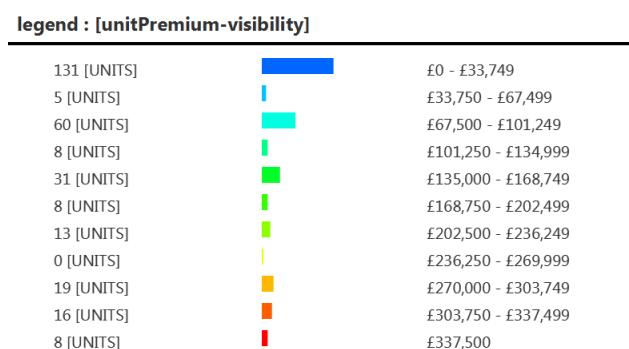
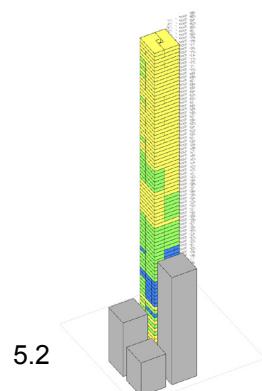
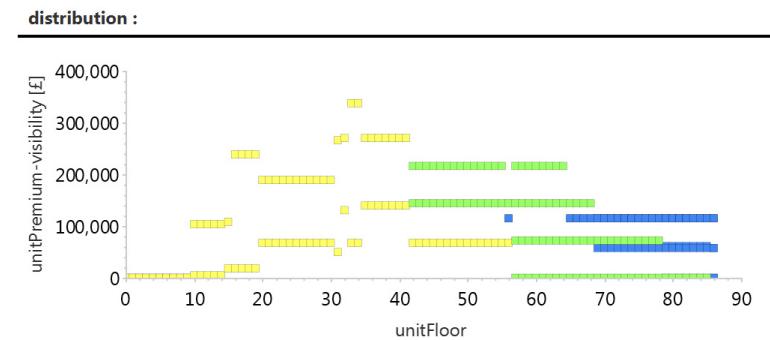
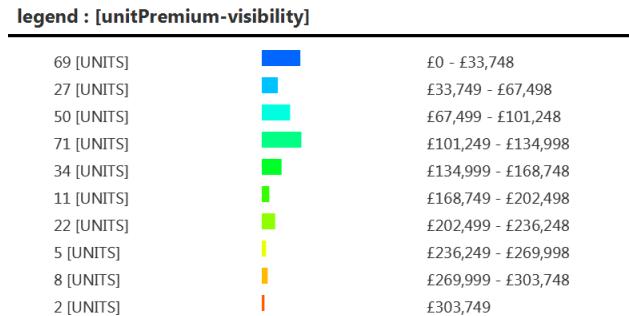
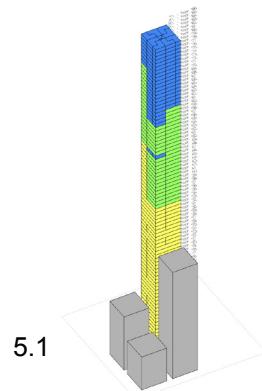
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12 [UNITS]	£0 - £115,424
12 [UNITS]	£115,425 - £230,849
56 [UNITS]	£230,850 - £346,274
69 [UNITS]	£346,275 - £461,699
23 [UNITS]	£461,700 - £577,124
30 [UNITS]	£577,125 - £692,549
36 [UNITS]	£692,550 - £807,974
45 [UNITS]	£807,975 - £923,399
10 [UNITS]	£923,400 - £1,038,824
5 [UNITS]	£1,038,825 - £1,154,249
1 [UNITS]	£1,154,250



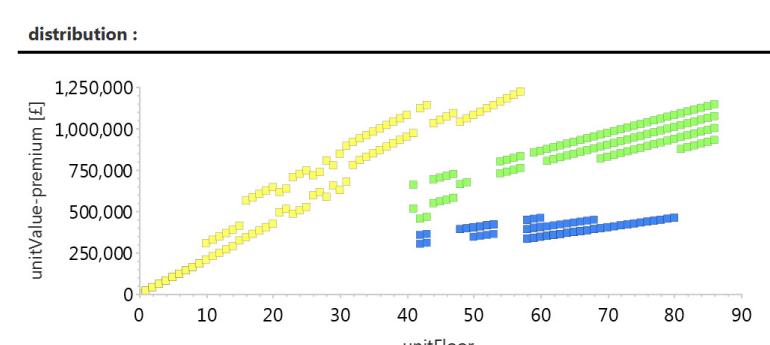
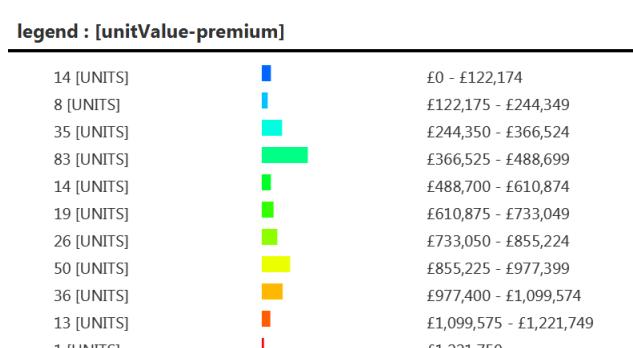
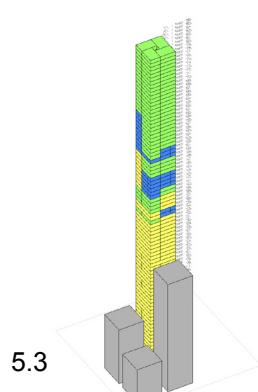
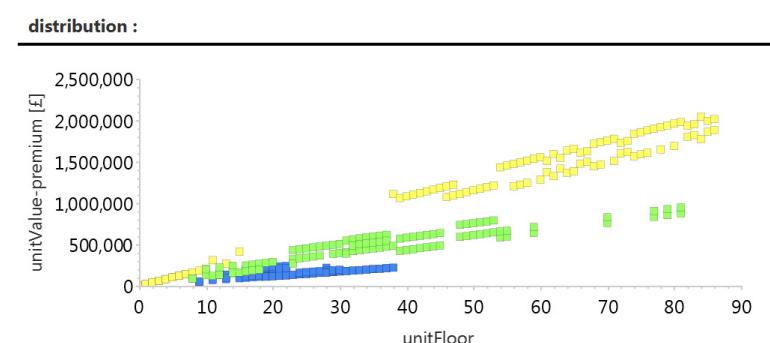
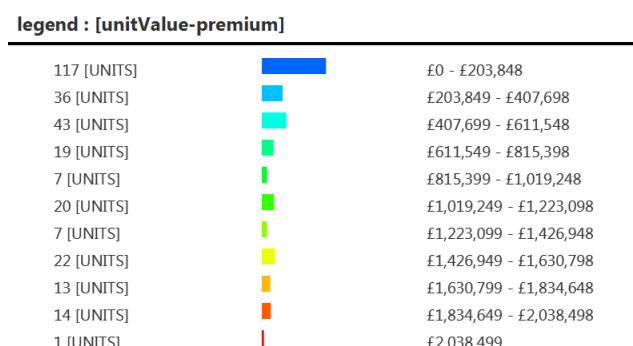
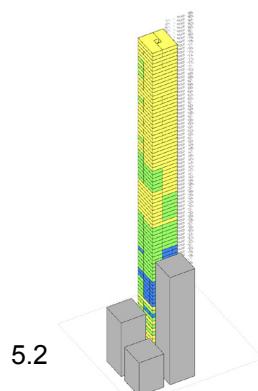
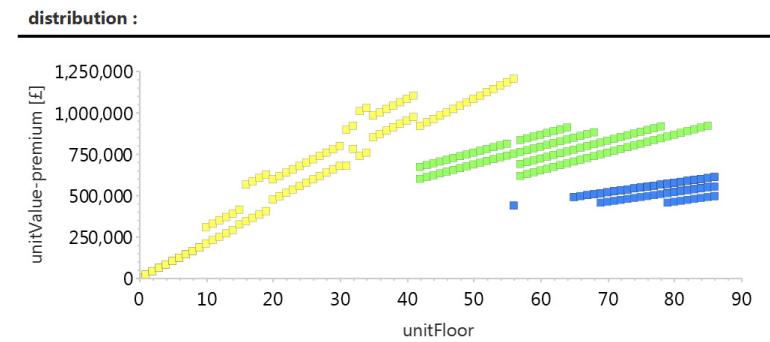
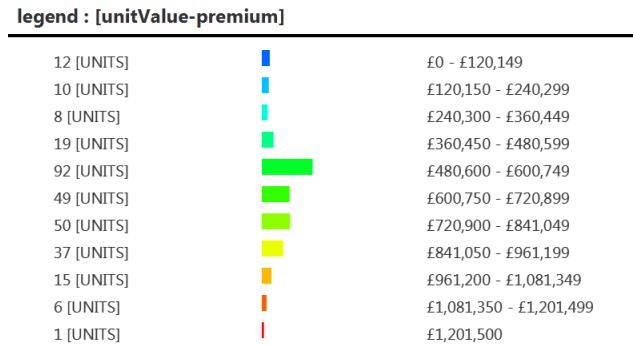
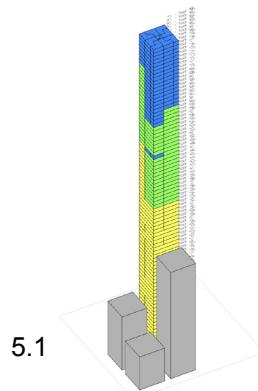
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ unit premium visibility ]



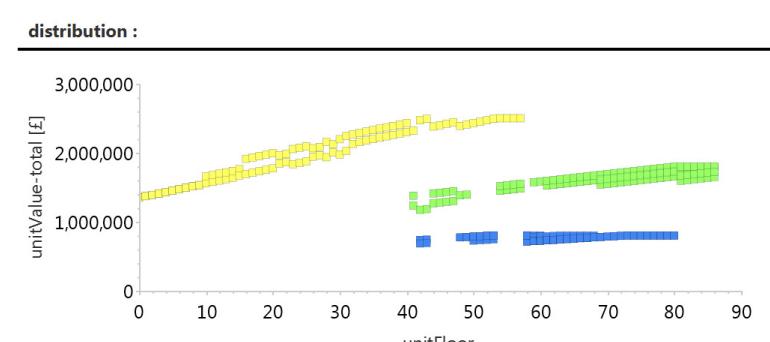
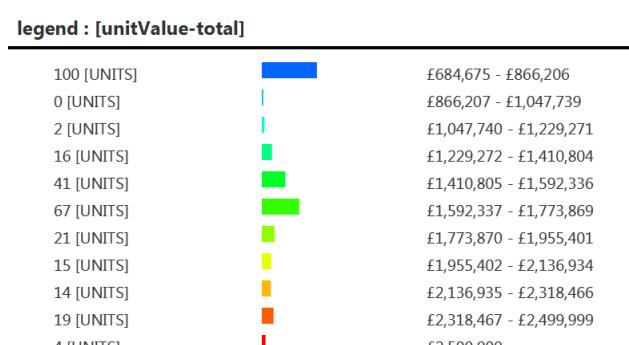
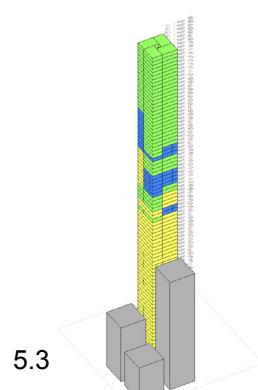
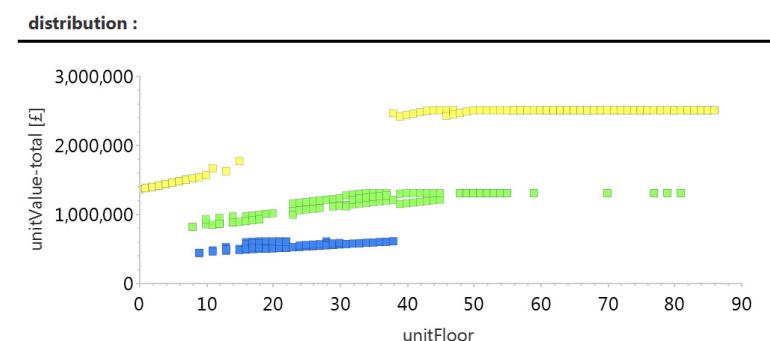
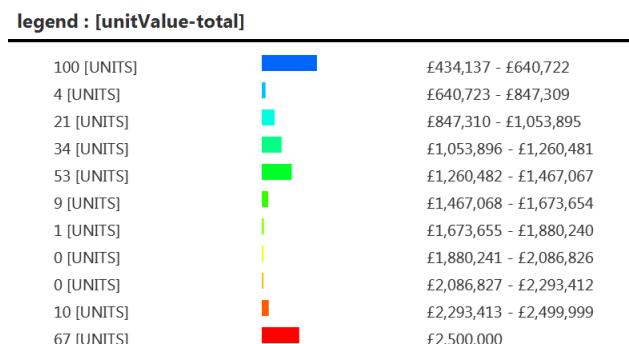
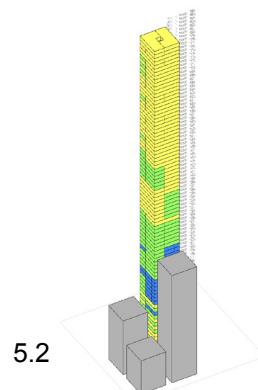
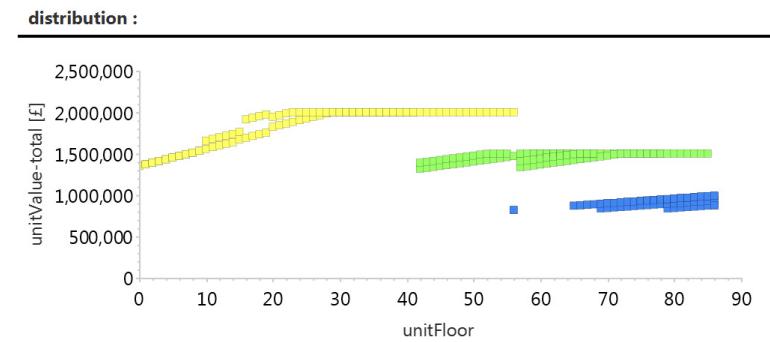
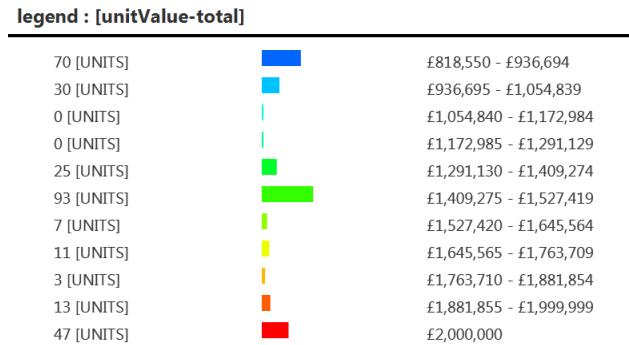
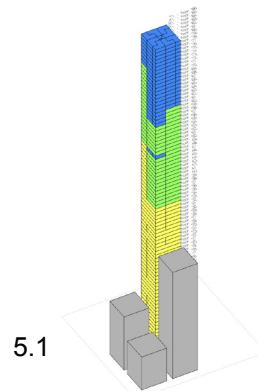
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ unit premium total ]



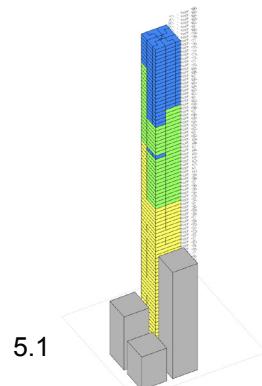
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ unit value total ]



# RESIDENTIAL STACKING EVALUATOR

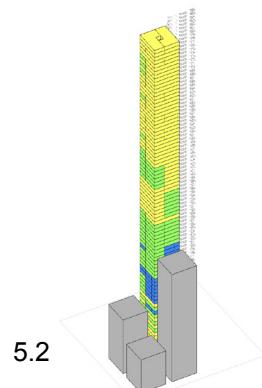
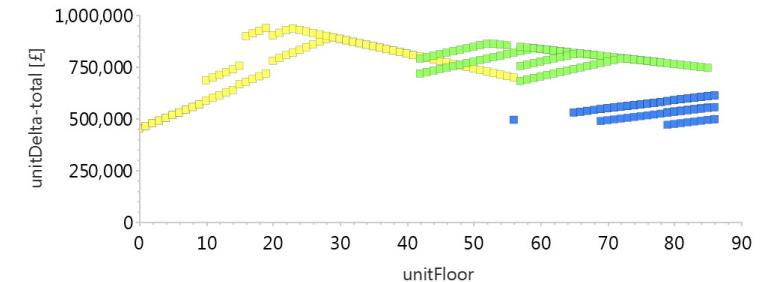
## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ unit profit total ]



legend : [unitDelta-total]

24 [UNITS]	£449,999 - £498,643
36 [UNITS]	£498,644 - £547,288
49 [UNITS]	£547,289 - £595,933
16 [UNITS]	£595,934 - £644,578
6 [UNITS]	£644,579 - £693,223
24 [UNITS]	£693,224 - £741,868
49 [UNITS]	£741,869 - £790,513
54 [UNITS]	£790,514 - £839,158
26 [UNITS]	£839,159 - £887,803
14 [UNITS]	£887,804 - £936,448
1 [UNITS]	£936,449

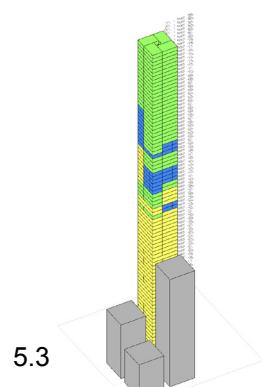
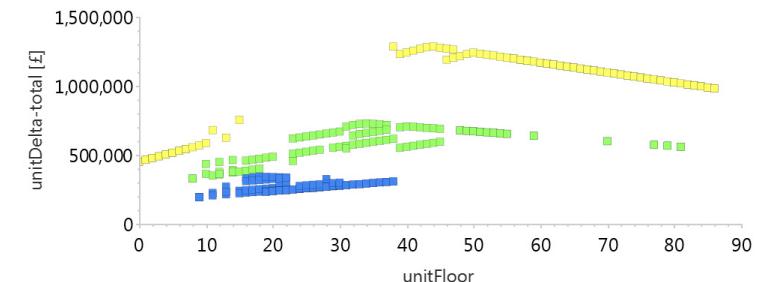
distribution :



legend : [unitDelta-total]

81 [UNITS]	£192,937 - £301,982
33 [UNITS]	£301,983 - £411,029
23 [UNITS]	£411,030 - £520,075
39 [UNITS]	£520,076 - £629,121
45 [UNITS]	£629,122 - £738,167
1 [UNITS]	£738,168 - £847,214
0 [UNITS]	£847,215 - £956,260
21 [UNITS]	£956,261 - £1,065,306
29 [UNITS]	£1,065,307 - £1,174,352
26 [UNITS]	£1,174,353 - £1,283,399
1 [UNITS]	£1,283,400

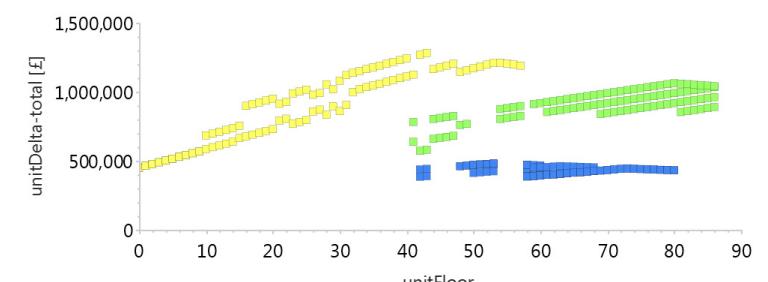
distribution :



legend : [unitDelta-total]

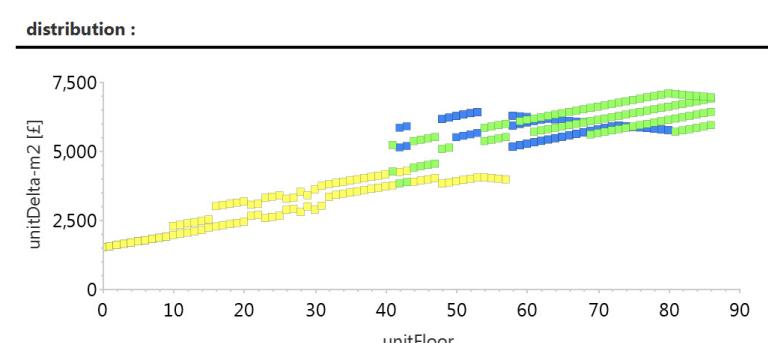
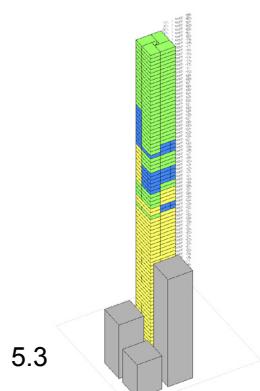
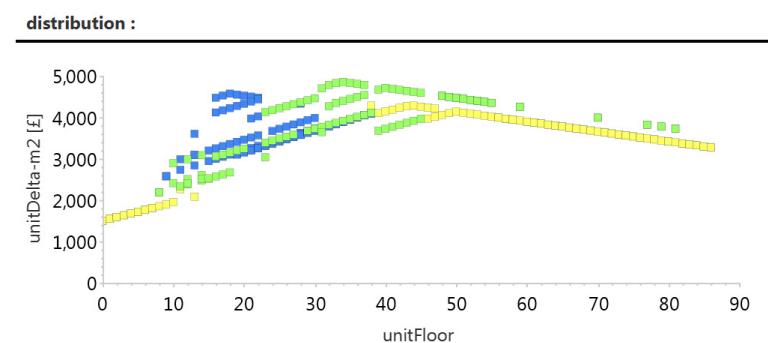
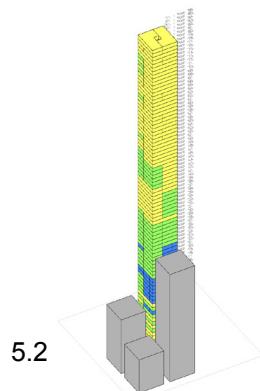
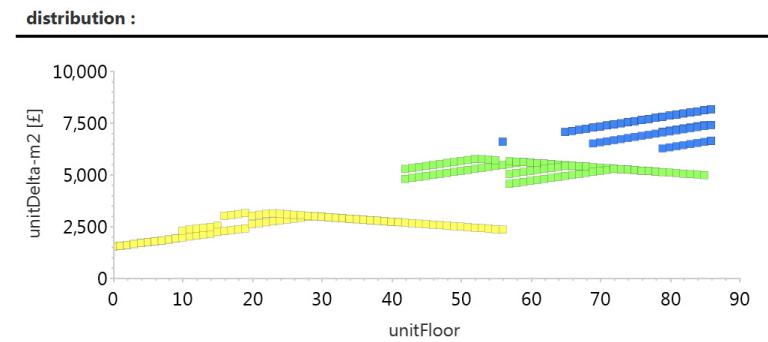
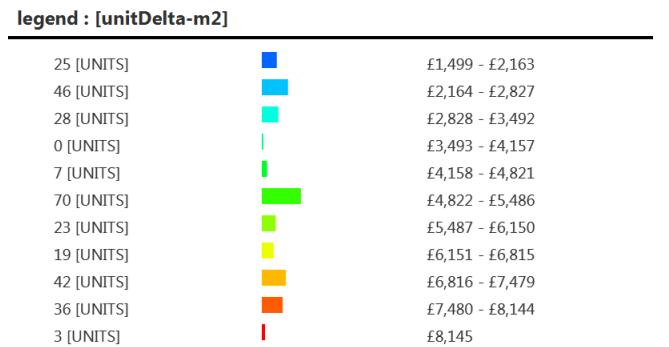
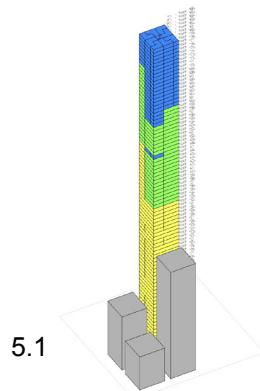
98 [UNITS]	£384,075 - £473,781
20 [UNITS]	£473,782 - £563,489
10 [UNITS]	£563,490 - £653,196
15 [UNITS]	£653,197 - £742,904
17 [UNITS]	£742,905 - £832,611
43 [UNITS]	£832,612 - £922,319
41 [UNITS]	£922,320 - £1,012,026
27 [UNITS]	£1,012,027 - £1,101,734
16 [UNITS]	£1,101,735 - £1,191,441
11 [UNITS]	£1,191,442 - £1,281,149
1 [UNITS]	£1,281,150

distribution :



# RESIDENTIAL STACKING EVALUATOR

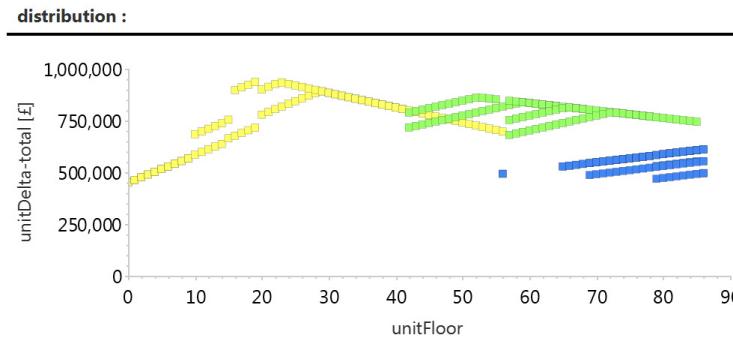
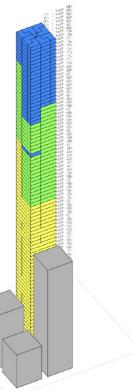
## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ unit profit m2 ]



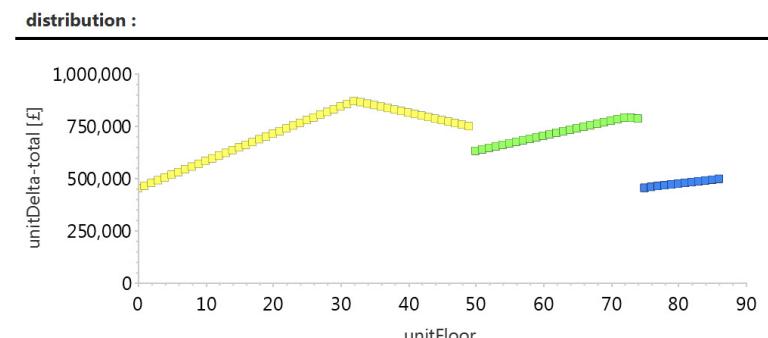
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ unit profit total ]

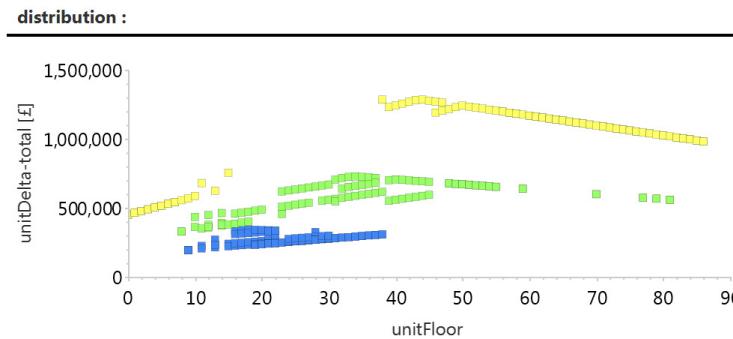
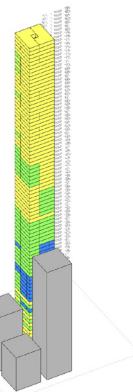
5.1



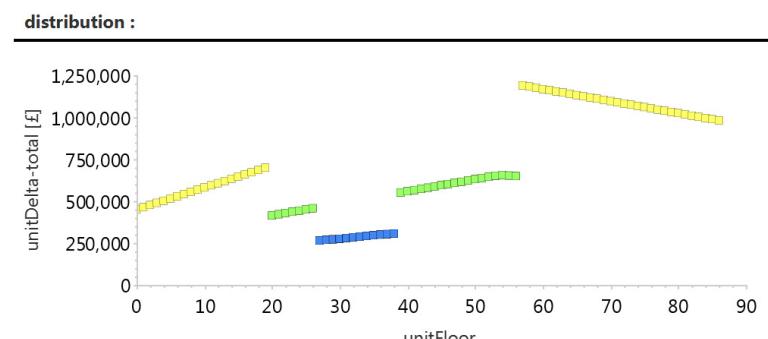
3.1



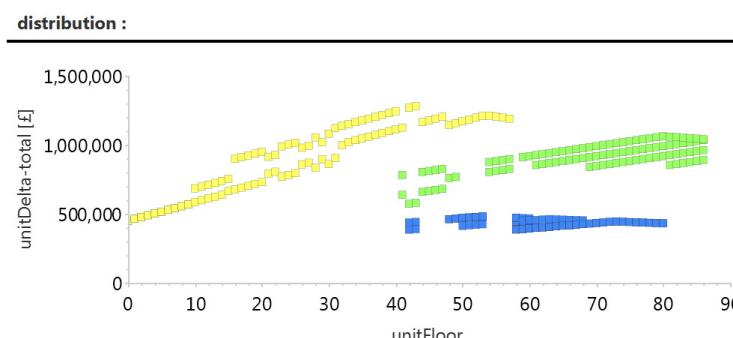
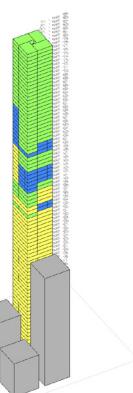
5.2



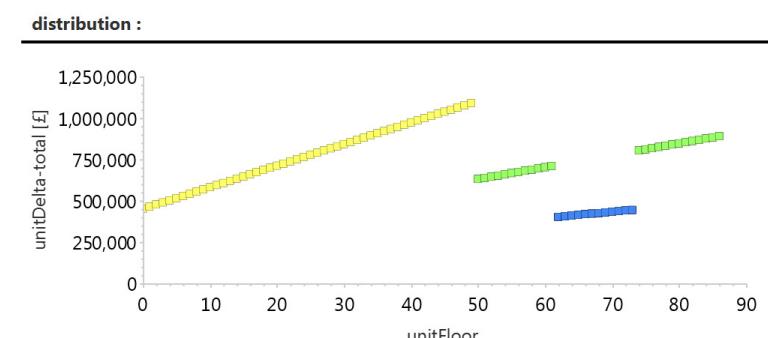
3.2



5.3



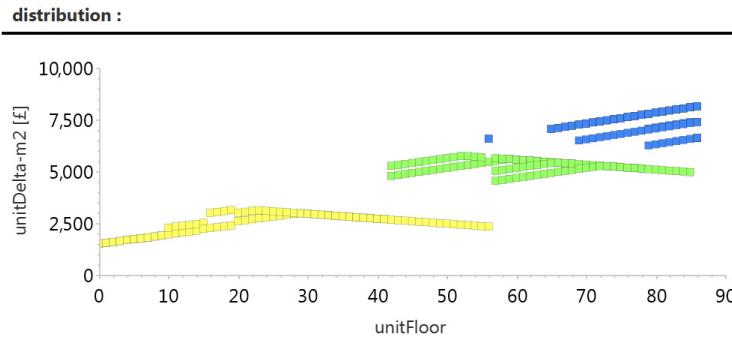
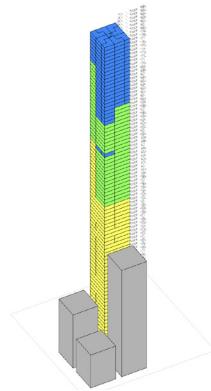
3.3



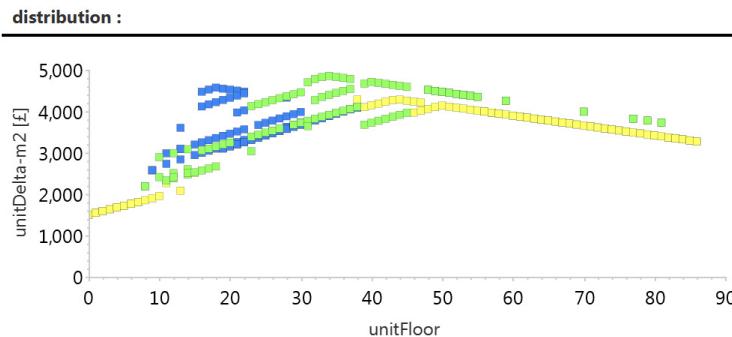
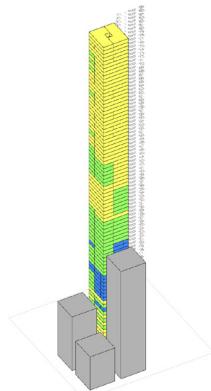
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 5 - APPLYING ADDITIONAL PREMIUMS [ unit profit m2 ]

5.1

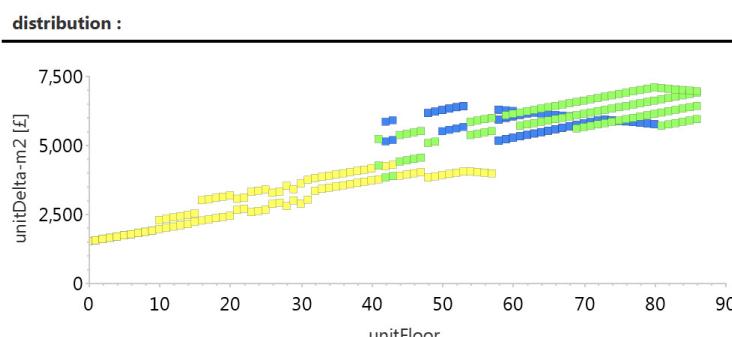
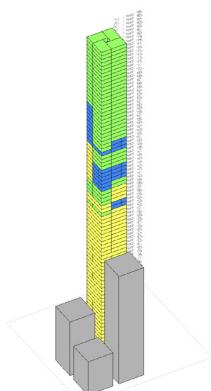


3.1



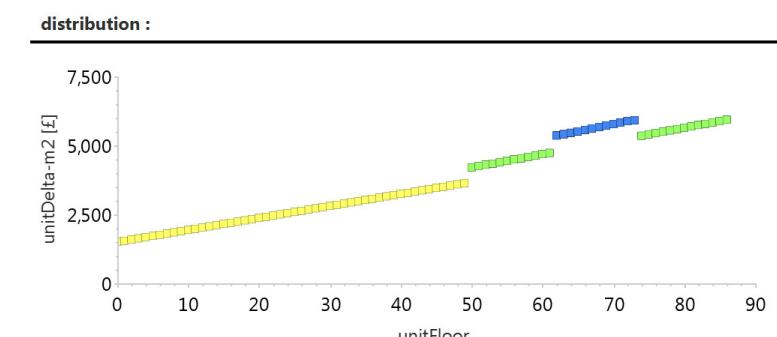
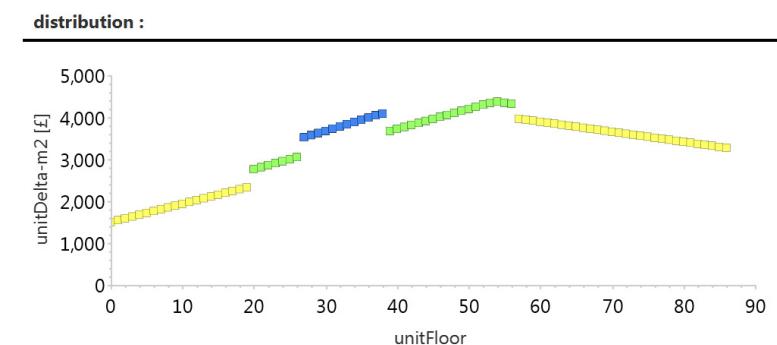
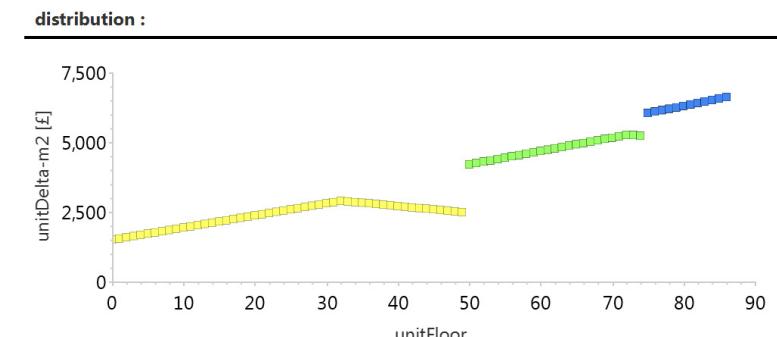
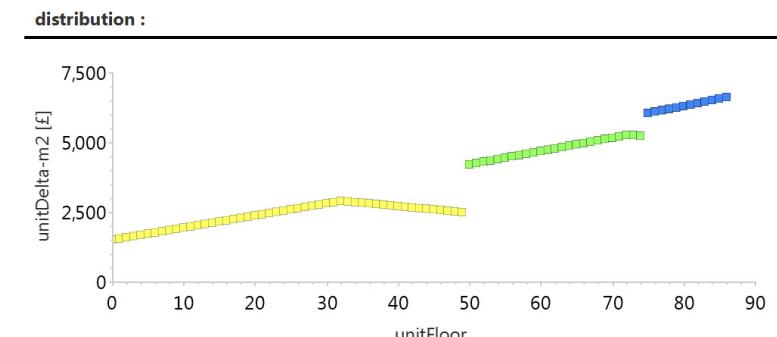
3.2

5.2



3.3

5.3



# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 6 - MULTIPLE FOOTPRINTS [ summary ]

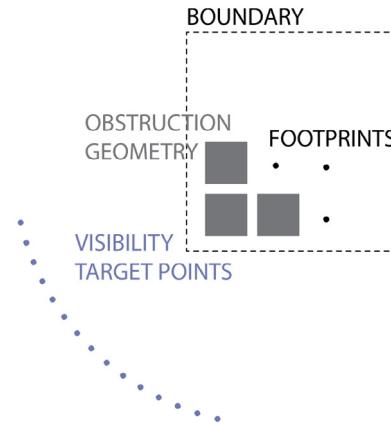
### UNIT MIX

	COUNT	VAL	CAP
1BED	100	5100	800000
2BED	100	4800	1800000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

### GEOMETRY



### INPUT PARAMETERS



- max area : none
- **max height : 170m**
- **unit value cap :**  
**VARIED for all unit types**
- floor cost base: £3000 / m<sup>2</sup>
- floor cost multiplier : 8% every 10 floors
- unit value floor multiplier : 1.5% per floor
- **unit value visibility multiplier :**  
**MAX 30% of base unit value**
- floor to ceiling height : 4m

### DESCRIPTION

Evaluation 6 examines the interplay between multiple footprints, evaluating stack results based on the relationships between multiple potential stack locations, including visibility intersection.

All input metrics for evaluation 6 are identical to evaluation 5.3, with the exception of an added height constraint of 170m, in order to maintain a result that requires more than one footprint, and two additional footprint locations.

In fact, the output from evaluation 6 when left to optimize without a height constraint is identical to the output from evaluation 5.3

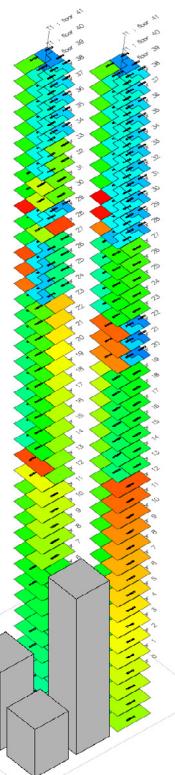
# RESIDENTIAL STACKING EVALUATOR

## EVALUATION 6 - MULTIPLE FOOTPRINTS [ summary ]

UNIT MIX

	COUNT	VAL	CAP
1BED	100	5100	800000
2BED	100	4800	1800000
3BED	100	4500	2500000
PHSINGLE	0	0	0
PHDOUBLI	0	0	0
D3BED	0	0	0
D4BED	0	0	0

SCHEME 4.1



FLOORS : 82  
UNITS : 299  
PROFIT : £159,276,704

6.1 - generation 5

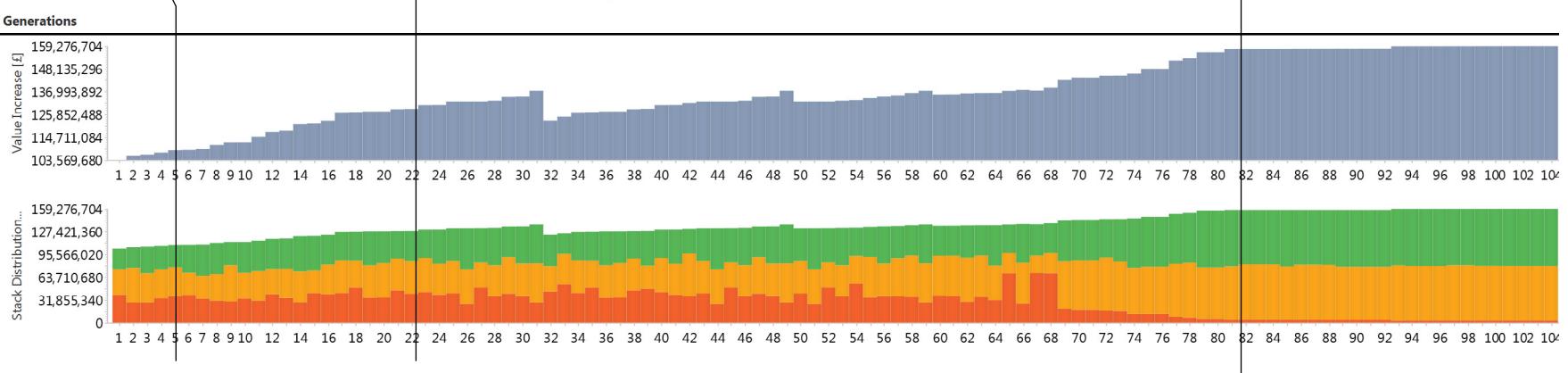
6.1 - generation 23

6.1 - generation 82

Performance

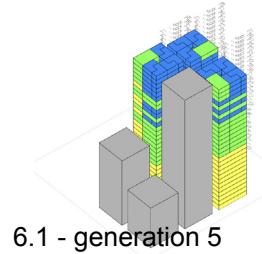
stack :

AREA	52200m <sup>2</sup>
UNITS	299
PHDOUBLE - 0 [0]	-
D3BED - 0 [0]	-
3BED - 99 [100]	£163,293,776 [£1,649,432/unit - £5,498/m <sup>2</sup> ]
1BED - 100 [100]	£67,247,328 [£672,473/unit - £8,966/m <sup>2</sup> ]
D4BED - 0 [0]	-
2BED - 100 [100]	£110,175,600 [£1,101,756/unit - £7,345/m <sup>2</sup> ]
PHSINGLE - 0 [0]	-
VALUE	£340,716,704 [£1,139,520/unit - £6,527/m <sup>2</sup> ]
COST	£181,440,000 [£606,822/unit - £3,475/m <sup>2</sup> ]
PROFIT	£159,276,704 [£532,698/unit - £3,051/m <sup>2</sup> ]



# RESIDENTIAL STACKING EVALUATOR

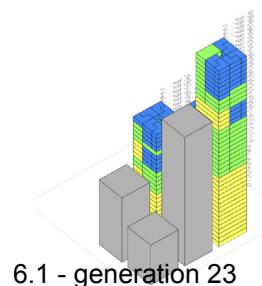
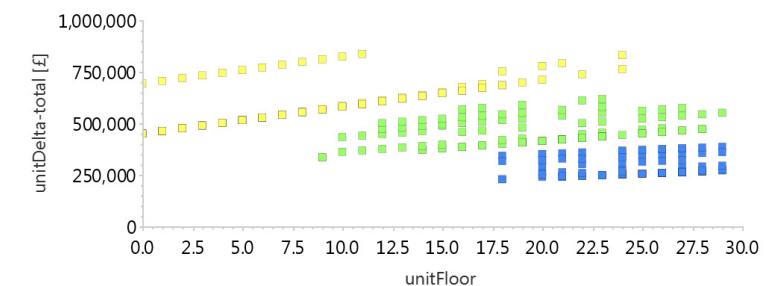
## EVALUATION 6 - MULTIPLE FOOTPRINTS [ unit profit total ]



legend : [unitDelta-total]

65 [UNITS]	£228,374 - £289,191
20 [UNITS]	£289,192 - £350,008
37 [UNITS]	£350,009 - £410,826
51 [UNITS]	£410,827 - £471,643
44 [UNITS]	£471,644 - £532,461
34 [UNITS]	£532,462 - £593,278
20 [UNITS]	£593,279 - £654,096
12 [UNITS]	£654,097 - £714,913
8 [UNITS]	£714,914 - £775,731
7 [UNITS]	£775,732 - £836,548
1 [UNITS]	£836,549

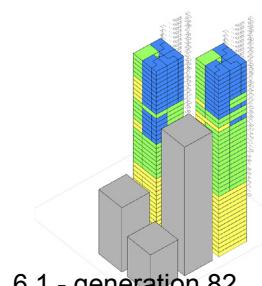
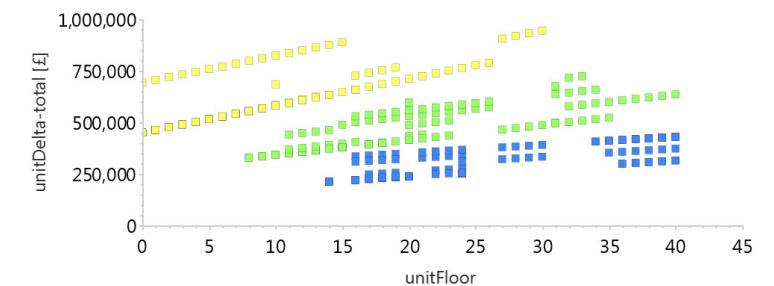
distribution :



legend : [unitDelta-total]

39 [UNITS]	£212,625 - £285,861
41 [UNITS]	£285,862 - £359,099
59 [UNITS]	£359,100 - £432,336
44 [UNITS]	£432,337 - £505,574
45 [UNITS]	£505,575 - £578,811
30 [UNITS]	£578,812 - £652,049
15 [UNITS]	£652,050 - £725,286
15 [UNITS]	£725,287 - £798,524
5 [UNITS]	£798,525 - £871,761
5 [UNITS]	£871,762 - £944,999
1 [UNITS]	£945,000

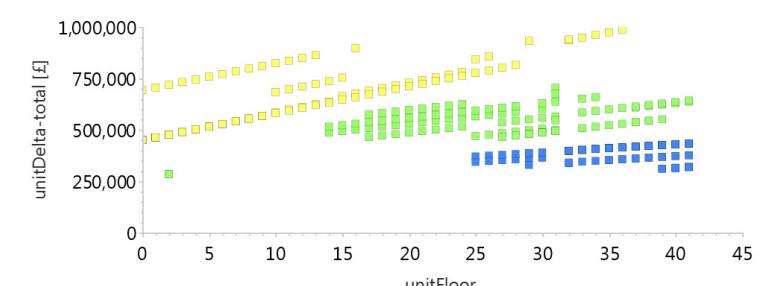
distribution :



legend : [unitDelta-total]

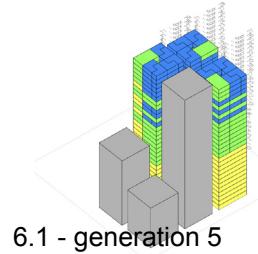
22 [UNITS]	£284,400 - £354,689
62 [UNITS]	£354,690 - £424,979
55 [UNITS]	£424,980 - £495,269
54 [UNITS]	£495,270 - £565,559
44 [UNITS]	£565,560 - £635,849
21 [UNITS]	£635,850 - £706,139
20 [UNITS]	£706,140 - £776,429
10 [UNITS]	£776,430 - £846,719
4 [UNITS]	£846,720 - £917,009
6 [UNITS]	£917,010 - £987,299
1 [UNITS]	£987,300

distribution :



# RESIDENTIAL STACKING EVALUATOR

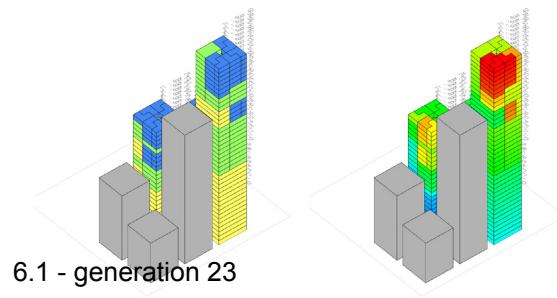
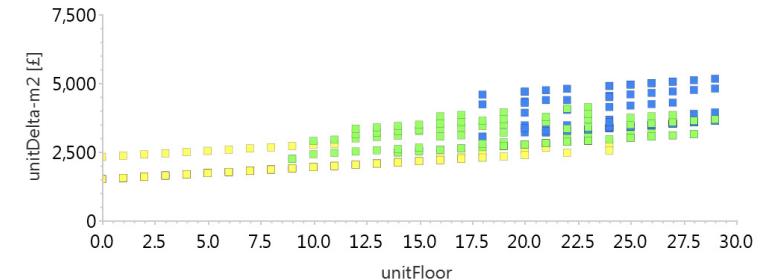
## EVALUATION 6 - MULTIPLE FOOTPRINTS [ unit profit m<sup>2</sup> ]



legend : [unitDelta-m<sup>2</sup>]

45 [UNITS]	£1,499 - £1,864
28 [UNITS]	£1,865 - £2,229
31 [UNITS]	£2,230 - £2,594
40 [UNITS]	£2,595 - £2,959
36 [UNITS]	£2,960 - £3,325
73 [UNITS]	£3,326 - £3,690
13 [UNITS]	£3,691 - £4,055
11 [UNITS]	£4,056 - £4,421
11 [UNITS]	£4,422 - £4,786
10 [UNITS]	£4,787 - £5,151
1 [UNITS]	£5,152

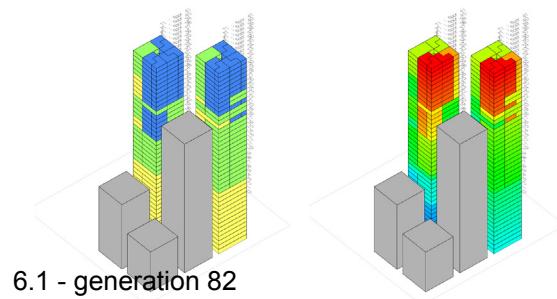
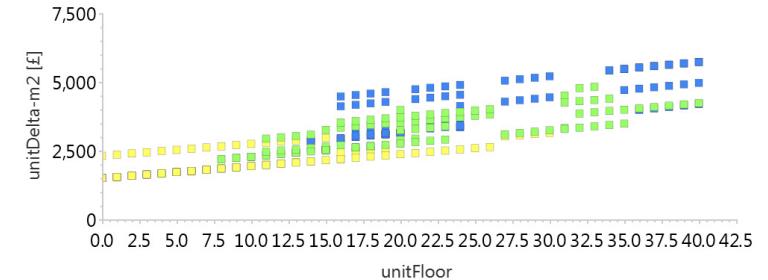
distribution :



legend : [unitDelta-m<sup>2</sup>]

48 [UNITS]	£1,499 - £1,921
29 [UNITS]	£1,922 - £2,344
50 [UNITS]	£2,345 - £2,767
47 [UNITS]	£2,768 - £3,190
32 [UNITS]	£3,191 - £3,613
22 [UNITS]	£3,614 - £4,036
28 [UNITS]	£4,037 - £4,460
16 [UNITS]	£4,461 - £4,883
7 [UNITS]	£4,884 - £5,306
17 [UNITS]	£5,307 - £5,729
3 [UNITS]	£5,730

distribution :



legend : [unitDelta-m<sup>2</sup>]

37 [UNITS]	£1,499 - £1,927
23 [UNITS]	£1,928 - £2,355
28 [UNITS]	£2,356 - £2,783
20 [UNITS]	£2,784 - £3,211
42 [UNITS]	£3,212 - £3,640
30 [UNITS]	£3,641 - £4,068
29 [UNITS]	£4,069 - £4,496
21 [UNITS]	£4,497 - £4,925
17 [UNITS]	£4,926 - £5,353
46 [UNITS]	£5,354 - £5,781
6 [UNITS]	£5,782

distribution :

