

# 6 A New Housing Typology



## Design Parameters

	Parcel A	Parcel B	Parcel A & B
1 Net Floor Area (NFA) / m <sup>2</sup>	63,048	76,178	121,225
2 Gross Floor Area (GFA) / m <sup>2</sup>	56,324	68,187	110,511
3 Efficiency Ratio = NFA / GFA	80%	81%	80%
4 Site Area / m <sup>2</sup>	14,310	28,990	45,300
5 Gross Plot Ratio (GPR)	3.91 (max. 3.0)	3.25 (max. 3.0)	3.32
6 Site Coverage	29% (max. 50%)	20% (max. 40%)	22%
7 Total No. of Dwelling Units	106	194	190
8 Total No. of Car Parks Provided	341	128	771
a) Total No. of Future Car Park Lots Provided (Provided in the form of green area)	25	10	75

Block Number	No. of Storeys	No. of Units	Net Floor Area (NFA) / m <sup>2</sup>	Gross Floor Area (GFA) / m <sup>2</sup>	Efficiency Ratio	LR Ratio
A	18	232	23,322	27,897	84%	1.58
B	18	408	47,275	56,188	84%	1.65
C	18	104	11,008	13,407	82%	1.52
D	18	248	25,222	28,929	87%	1.45
E	18	258	27,322	32,311	84%	1.64
<b>TOTAL</b>		<b>1300</b>	<b>121,225</b>	<b>144,798</b>		

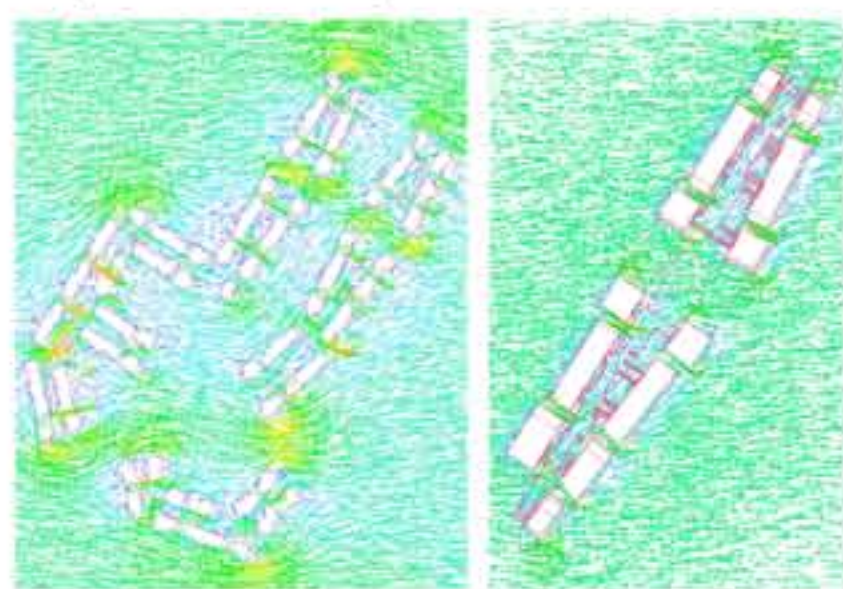
\* Includes M&E facilities (1,225 sqm), Shops (900 sqm) and Communal Spaces (1,790sqm).

Flat Type Distribution	Parcel A	Parcel B	Parcel A & B
	Number of Dwelling Units	Percentage Distribution of Flat Type	Number of Dwelling Units
3-room Flats	80	23.0%	160
4-room Flats	343	67.0%	686
5-room Flats	87	16.4%	174

Parking Provision	Parcel A	Parcel B	Parcel A & B
	Provision based on car park ratio	Provision based on car park ratio	Provision based on car park ratio
Number of car park lots required	278	484	762
Number of car park lots provided	343	128	771

Social Communal Facilities	Location (Parcel / Block)	Required Area (m <sup>2</sup> )	Provided Area (m <sup>2</sup> )
Education Centre	Parcel B / Block A	600	600
Reserve space for Future Social Communal Facilities	Parcel B / Block A	100	100
Childcare Centre	Parcel B / Block A	100	100
Residents' Committee Centre	Parcel B / Block A	100	100

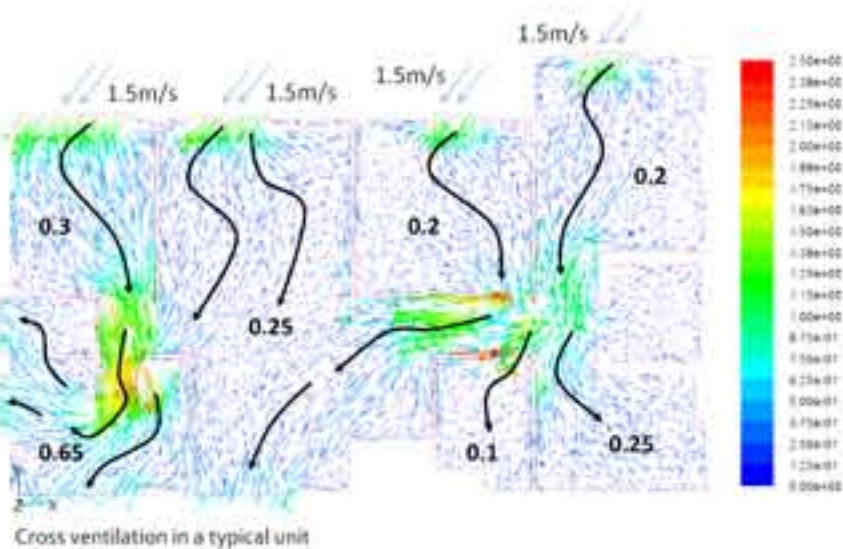
## Computational Fluid Dynamics Simulation



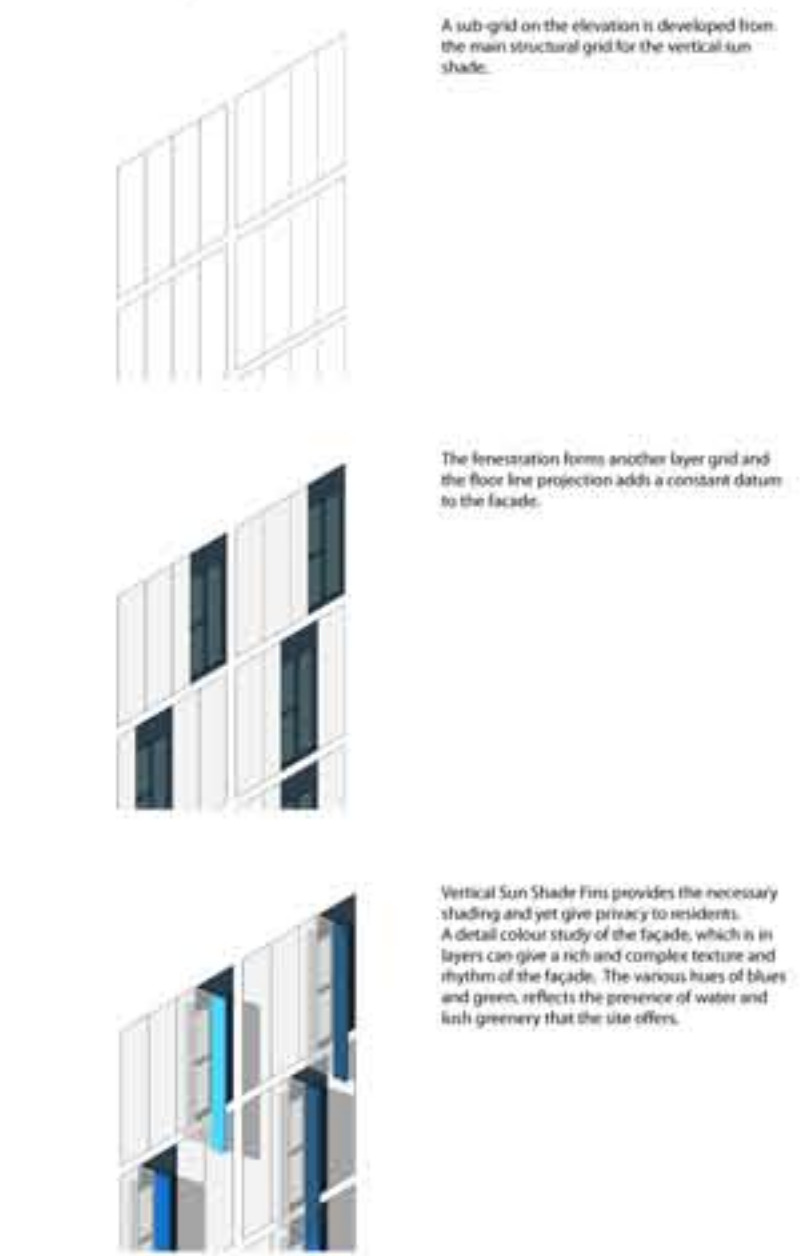
The site layout while being generated from good urban design principles, also promotes good cross ventilation through the site as proven by the CFD studies.

The Sandwich Block design allows effective cross and stack ventilation within the block as proven by the CFD studies. Strategically placed voids of different sizes creates different pressure sufficient to induce air movement.

The unit is also subjected to CFD studies and are found to be effectively cross ventilated.



## Facade System



## Good Structural & Spatial Fit

The unit plan is based on a modular system that is carefully designed to give good structural and spatial fit. The entire site is based on a modular grid of 6.3m and multiples of 6. This grid fits the car parking use in the lower levels, the need for communal and social communal facilities on the ground storey as well as the apartment units on the upper floor.