ECO-NIWAS SAMHITA (ENS) COMPLIANCE EVALUATION REPORT

Project Information

Project Name	Rewari G. H. I
State	Haryana
City	Hissar
Climate	COMPOSITE
Latitude	>= 23.5° N
Building Construction Type	New Building
Compliance Method Used	Point System

Housing Category Information

Housing Category	Plot Area(m^2)	Total No. of Residential Blocks	Total Basement Area(m^2)	Total Exterior Light Area(m^2)	Total Roof Area(m^2)
High Rise	6000	5	1128.24	258.84	1098.23

Housing Category- High Rise

Block Name for Compliance Check	No. of Blocks	No. of Floors
Tower A1	1	9
Tower A2	1	9
Tower B1	1	9
Tower B2	1	9
Tower B3	1	9

1. High Rise : Compliance Result

1.1. Building Envelope:

S.No.	Component	Mandatory Requirements	Calculated value	Points Achieved	Maximum Points
1	RETV(W/m².K)	NA	4.8	80	80
2	U-Value Roof(W/m².K)	NA	0.41	6	7
3	WFRop	Achieved	17.59	NA	NA
4	VLT %	Achieved	60.0	NA	NA

1.2. Building Services:

S.No.	Component	Mandatory Requirements	Calculated value	Points Achieved	Maximum Points
1	Exterior Lighting	NA	--	3	3
2	Basement Lighting	NA	--	3	3
3	Corridor Lighting	NA	--	3	3
4	Lift	NA	--	22	22
5	Pump	NA	--	9	14
6	Diesel Generator Sets	Achieved	--	NA	NA
7	Power Factor Correction	Achieved	--	NA	NA
8	Energy Monitoring System	Achieved	--	NA	NA
9	Electric Vehicle Supply Equipment	Achieved	--	NA	NA
10	Transformer	NA	--	6	6
11	Power Distribution Loss	Achieved	--	NA	NA
12	Car Parking Basement Ventilation	Achieved	--	NA	NA

1.3. Indoor Electrical End Use:

S.No.	Component	Mandatory Requirements	Calculated value	Points Achieved	Maximum Points
1	Indoor Lighting	NA	--	12	12
2	Ceiling Fan	NA	--	9	9
3	Cooling Equipment	NA	--	41	41

1.4. Renewable Energy System:

S.No.	Component	Mandatory Requirements	Calculated value	Points Achieved	Maximum Points
1	Solar Hot Water Requirements	NA	--	5	10
2	Solar Photovoltaic System	NA	--	5	10

Consolidated Compliance Status of the Project:

S.No.	Housing Categories	Total Points	Maximum Points	Minimum Points	Compliance Status
1	High Rise	204	220	100	Compliant

Contents

4. Block-3 Information

4.1 Dwelling Unit Details:

4.2 Building Envelope:

4.2.1 Mandatory Compliance:

4.2.2 Window Level Information:

4.2.3 Ventilator Level Information:

4.2.4 Door Level Information:

4.2.5 Wall Level Information:

4.2.6 Roof Level Information:

4.3 Building Services:

4.3.1 Common Area Lighting Details:

4.3.1.1 Corridor Lighting:

4.3.1.2 Basement Lighting:

4.3.1.3 Exterior Lighting:

4.3.2 Lifts:

4.3.3 Pumps:

4.3.4 Electrical System:

4.3.4.1 Diesel Generator Set:

4.3.4.2 Power Factor Correction:

4.3.4.3 Energy Monitoring:

4.3.4.4 EV Supply equipment:

4.3.4.5 Transformer:

4.3.4.3 Power Distribution Loss:

4.3.5 Car Parking Basement Ventilation:

4.3.6 Indoor Electrical Use:

4.3.6.1 IndoorLighting:

4.3.6.2 Ceiling Fan:

4.3.6.2 Cooling Equipment:

4.3.7 Renewable Energy System:

4.3.7.1 Solar Hot Water System:

4.3.7.2 Solar Photovoltaic System:

5. Block-4 Information

5.1 Dwelling Unit Details:

5.2 Building Envelope:

5.2.1 Mandatory Compliance:

5.2.2 Window Level Information:

5.2.3 Ventilator Level Information:

5.2.4 Door Level Information:

5.2.5 Wall Level Information:

5.2.6 Roof Level Information:

5.3 Building Services:

5.3.1 Common Area Lighting Details:

5.3.1.1 Corridor Lighting:

5.3.1.2 Basement Lighting:

5.3.1.3 Exterior Lighting:

5.3.2 Lifts:

5.3.3 Pumps:

5.3.4 Electrical System:

5.3.4.1 Diesel Generator Set:

5.3.4.2 Power Factor Correction:

5.3.4.3 Energy Monitoring:

5.3.4.4 EV Supply equipment:

5.3.4.5 Transformer:

5.3.4.3 Power Distribution Loss:

5.3.5 Car Parking Basement Ventilation:

5.3.6 Indoor Electrical Use:

5.3.6.1 IndoorLighting:

5.3.6.2 Ceiling Fan:

5.3.6.2 Cooling Equipment:

5.3.7 Renewable Energy System:

5.3.7.1 Solar Hot Water System:

5.3.7.2 Solar Photovoltaic System:

6. Block-5 Information

6.1 Dwelling Unit Details:

6.2 Building Envelope:

6.2.1 Mandatory Compliance:

6.2.2 Window Level Information:

6.2.3 Ventilator Level Information:

6.2.4 Door Level Information:

6.2.5 Wall Level Information:

6.2.6 Roof Level Information:

6.3 Building Services:

6.3.1 Common Area Lighting Details:

6.3.1.1 Corridor Lighting:

6.3.1.2 Basement Lighting:

6.3.1.3 Exterior Lighting:

6.3.2 Lifts:

6.3.3 Pumps:

6.3.4 Electrical System:

6.3.4.1 Diesel Generator Set:

6.3.4.2 Power Factor Correction:

6.3.4.3 Energy Monitoring:

6.3.4.4 EV Supply equipment:

6.3.4.5 Transformer:

6.3.4.3 Power Distribution Loss:

6.3.5 Car Parking Basement Ventilation:

6.3.6 Indoor Electrical Use:

6.3.6.1 IndoorLighting:

6.3.6.2 Ceiling Fan:

6.3.6.2 Cooling Equipment:

6.3.7 Renewable Energy System:

6.3.7.1 Solar Hot Water System:

6.3.7.2 Solar Photovoltaic System:

1. Site Level Informaion:

1.1. High Rise :

1.1.1. Basement Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.0	105.0

1.1.2. Exterior Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	Total Wattage	414.14	105.0

1.1.3. Pump:

S.N	VVVF Drive Technology	Pump Type	Automatic Control	Water Closet Flow(LPF)	Water Faucet Flow(LPM)
1	Yes	BEE 4 Star	Yes	4.0	4.0

1.1.4. Diesel Generator Set:

S.N	BEE Star Rating	Specific Fuel Consumption(g/kWh)	Capacity Range(kW)

1.1.5. Power Factor Correction:

S.N	Computation Method	Total Connected Load(kW)	Contract Demand(kVA)	Calculated Power Factor	Power Factor Reading
1	Direct	0.0	0.0	0.0	0.98

1.1.6. Energy Monitoring:

S.N	Energy Metering Type	Data Recording Interval	Digital Control System	Data Retaining Capability(yr)
1	Smart	15 Min	Yes	3

1.1.7. EV Supply Equipment:

S.N	Charger Category	Charger Type	Charger Connector Type	Rated Output Voltage(V)	Converter Efficiency(%)	Standby Power Consumption(W)
1	DC	Fast	Combined	200.0	95.0	0.0

1.1.8. Transformer:

S.N	Select Type	BEE Star Rating	Voltage Rating Class	KVA Rating	Max Losses at 50%(W)	Max Losses at 100%(W)
1	Dry	BEE 5 Star	Upto 11KV	100	50.0	100.0

1.1.9. Power Distribution Loss:

S.N	Total Connected Load(kW)	Current Rating of Cable(A)	Total Cable Length(m)	Max Impedence(Ohm/m)
1	120.0	15.0	200.0	0.026

1.1.10. Solar Photovoltaic System:

S.N	PV System Location	Input Method	Area Reserved for Solar PV(m^2)	Installed Capacity(kWp)	Efficiency of PV Panel(%)
1	On Roof	Roof Area Equivalent	300.0	0.0	21.0

2. High Rise -Block -1 Information

2.1. Dwelling Unit Details:

S.N	Type of Dwelling Unit	No. of Units	Carpet Area (m^2)	Corridor Area (m^2)	Basement Area (m^2)	Exterior Area (m^2)	Total Area (m^2)
1	2 BHK	6	54.06	15.0	430.28	43.55	324.36
						Total Carpet Area (m^2)	*324.36*

2.2. Building Envelope:

2.2.1. Mandatory Compliance:

SN	Requirements	Minimum Requirements	User Value	Compliance Status
1	Openable Window-To-Floor Area Ratio (WFRop)	12.5	17.59	Compliant
2	Visible Light Transmittance (VLT %)	27.0	60.0	Compliant

2.2.2. Window Level Information:

2.2.2.1. Window Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m^2)	Number	Type	% Open	% Fixed
W	Rectangle	1.0	1.55	1.55	6	Casement	90.0	10.0
W1	Rectangle	1.05	1.45	1.52	4	Casement	90.0	10.0

2.2.2.2. Window Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value ($W/m^2.K$)	SHGC	VLT
W	90.0	0.9	1.395	Material	3.4	0.35	60.0
W1	90.0	0.945	1.305	Material	3.4	0.35	60.0

2.2.2.3. Window Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value ($W/m^2.K$)
W	10.0	Properties	---	0.0	1.5
W1	10.0	Properties	---	0.0	1.5

2.2.2.4. Window Shading Details:

2.2.2.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W1	Wall1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

2.2.2.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	Wall1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1	Wall1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

2.2.2.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	Wall1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1	Wall1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

2.2.2.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	Wall1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1	Wall1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

2.2.2.4.5. North-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.2.4.6. North-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.2.4.7. South-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.2.4.8. South-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.3. Ventilator Level Information:

2.2.3.1. Ventilator Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m²)	Number	Type	% Open	% Fixed
V	Rectangle	0.6	0.9	0.54	8	Casement	90.0	10.0
V1	Rectangle	0.55	0.9	0.5	1	Casement	90.0	10.0

2.2.3.2. Ventilator Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value (W/m².K)	SHGC	VLT
V	90.0	0.54	0.81	Material	3.4	0.35	60.0
V1	90.0	0.495	0.81	Material	3.4	0.35	60.0

2.2.3.3. Ventilator Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value (W/m².K)
V	10.0	Properties	---	0.0	1.5
V1	10.0	Properties	---	0.0	1.5

2.2.3.4. Ventilator Shading Details:

2.2.3.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.3.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.3.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.3.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.3.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.3.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.3.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.3.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.4. Door Level Information:

2.2.4.1. Door Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m²)	Number	Type	% Open	% Fixed
DW1	Rectangle	1.8	2.4	4.32	10	Casement	90.0	10.0

2.2.4.2. Door Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value (W/m².K)	SHGC	VLT
DW1	90.0	1.62	2.16	Material	3.4	0.35	60.0

2.2.4.3. Door Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value (W/m².K)
DW1	10.0	Properties	---	0.0	1.5

2.2.4.4. Door Shading Details:

2.2.4.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.4.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.4.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.4.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.4.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.4.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.4.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.4.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

2.2.5. Wall Level Information:

2.2.5.1. Wall Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	Wall1	Material	Cement plaster (1762 kg/m3) [15.0]	0.77
			Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0]	
			Cement plaster (1762 kg/m3) [15.0]	
2	Wall1	Material	Cement plaster (1762 kg/m3) [15.0]	0.77
			Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0]	
			Cement plaster (1762 kg/m3) [15.0]	
3	Wall1	Material	Cement plaster (1762 kg/m3) [15.0]	0.77
			Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0]	
			Cement plaster (1762 kg/m3) [15.0]	
4	Wall1	Material	Cement plaster (1762 kg/m3) [15.0]	0.77
			Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0]	
			Cement plaster (1762 kg/m3) [15.0]	

2.2.5.2. Wall Area Details:

S.N	Construction Name	Orientation	Height(m)	Width(m)	Area(m²)
1	Wall1	N	27.0	32.37	873.99
2	Wall1	E	27.0	22.71	613.17
3	Wall1	S	27.0	32.37	873.99
4	Wall1	W	27.0	22.71	613.17
				Total Wall Area (m²)	*2974.3199999999997*

2.2.6. Roof Level Information:

2.2.6.1. Roof Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	Roof	Material	Concrete (laid to slope) [50.0 mm]	0.41
			Polyurethane foam(PUF) [50.0 mm]	
			Cement screed [20.0 mm]	

2.2.6.2. Roof Area Details:

S.N	Construction Name	Height(m)	Width(m)	Area(m²)
1	Roof	32.37	22.71	735.12
			Total Roof Area (m²)	*735.12*

2.3. Building Services:

2.3.1. Mandatory Compliance:

S.N	Requirements	Minimum Requirements	User Value	Compliance Status
1	Diesel Generator Set Specific Fuel Consumption (g/kWh)	--	--	Achieved
2	Power Factor Correction (All 3 phase connections)	0.97	--	Achieved
3	Energy Monitoring	--	--	Achieved
4	Electric Vehicle Supply Equipment	--	--	Achieved
5	Car Parking Basement Ventilation	>=600	430.28	Achieved

2.3.2. Common Area Lighting:

2.3.2.1. Corridor Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	3.0	105.0

2.3.2.2. Basement Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.0	105.0

2.3.2.3. Exterior Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Automatic Control	Luminous Efficacy(lm/W)
1	Total Wattage	100.0	Yes	110.0

2.3.3. Lifts Details:

S.N	VVVF Drive Technology	Motor Class	Regenaration Drive System	Group Control	Luminous Efficacy(lm/W)	Automatic Light & Fan Control
1	Yes	IE4	Yes	Yes	105.0	Yes

2.3.4. Pumps Details:

S.N	VVVF Drive Technology	Pump Type	Automatic Control	Water Closet Flow(LPF)	Water Faucet Flow(LPM)
1	Yes	BEE 4 Star	Yes	4.0	4.0

2.3.5. Electric System:

2.3.5.1. Diesel Generator:

S.N	BEE Star Rating	Fuel Consumption(g/kWh)	Capacity Range(kW)
1	BEE 5 Star	40.0	120.0

2.3.5.2. Power Factor Correction:

S.N	Computation Method	Total Connected Load(kW)	Contract Demand(kVA)	Calculated Power Factor	Power Factor Reading
1	Direct	0.0	0.0	0.0	0.98

2.3.5.3. Energy Monitoring:

S.N	Energy Metering Type	Data Recording Intervel	Digital Control System	Data Retaining Capability
1	Digital	15 Min	Yes	3

2.3.5.4. EV Supply Equipment:

S.N	Charger Category	Charger Type	Charger Connector Type	Rated Output Voltage(V)	Converter Efficiency(%)	Standby Power Consumption(W)
1	DC	Fast	Combined	200.0	95.0	0.0

2.3.5.5. Transformer:

S.N	Select Type	BEE Star Rating	Voltage Rating Class	KVA Rating	Max Losses at 50%(W)	Max Losses at 100%(W)
1	Dry	BEE 5 Star	Upto 11KV	100	50.0	100.0

2.3.5.6. Power Distribution Loss:

S.N	Total Connected Load(kW)	Current Rating of Cable(A)	Total Cable Length(m)	Max Impedence(Ohm/m)
1	120.0	15.0	200.0	0.026

2.3.6. Car Parking Basement Ventilation:

S.N	Car Parking Location	CO Sensor Installed	Ventilation Strategy	Car Parking Area(m^2)	Fan Motor Power(W)	Fan Motor IE Class	Fan Motor Efficiency(%)
1	Stilt	Yes	Mechanical	430.28	400.0	IE4	95.0

2.4. Indoor Electrical Use:

2.4.1. Indoor Lighting:

S.N	Select Area	Luminous Efficacy(lm/W)
1	BedRoom+Kitchen+Hall	105.0

2.4.2. Comfort System:

2.4.2.1. Ceiling Fan:

S.N	BEE Star Rating	Ceiling Fan Blade Sweep(mm)	Service Value(m^2/min.W)	No. of Fans Installed
1	BEE 5 Star	<1200 mm	4	18

2.4.2.2. Cooling Equipment:

S.N	Equipment Type	BEE Star Rating	System Capacity(Tonnage)	Chiller/VRF Type	Chiller/VRF Capacity(kWr)	Chiller/VRF COP	Chiller IPLV	Low Energy Comfort System
1	Low Energy CS	--	120.0	--	0.0	0.0	0.0	Evap Cooling

2.5. Renewable Energy System:

2.5.1. Solar Hot Water System:

S.N	Hot Water System Installed For	Hot Water Requirement/Floor(ltr/day)	Capacity of Solar Water Installed(ltr/Day)
1	Top 4 Floor	20	100.0

2.5.2. Solar PhotoVoltaic System:

S.N	Input Method	Roof Area Reserved for Solar PV(m^2)	Installed Capacity(kWp)	Efficiency of PV Panel(%)
1	Roof Area Equivalent	150.0	0.0	21.0

3. High Rise -Block -2 Information

3.1. Dwelling Unit Details:

S.N	Type of Dwelling Unit	No. of Units	Carpet Area (m^2)	Corridor Area (m^2)	Basement Area (m^2)	Exterior Area (m^2)	Total Area (m^2)
1	2 BHK	6	54.06	15.0	430.28	43.55	324.36
						Total Carpet Area (m^2)	*324.36*

3.2. Building Envelope:

3.2.1. Mandatory Compliance:

SN	Requirements	Minimum Requirements	User Value	Compliance Status
1	Openable Window-To-Floor Area Ratio (WFRop)	12.5	17.59	Compliant
2	Visible Light Transmittance (VLT %)	27.0	60.0	Compliant

3.2.2. Window Level Information:

3.2.2.1. Window Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m^2)	Number	Type	% Open	% Fixed
W	Rectangle	1.0	1.55	1.55	6	Casement	90.0	10.0
W1	Rectangle	1.05	1.45	1.52	4	Casement	90.0	10.0

3.2.2.2. Window Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value ($W/m^2.K$)	SHGC	VLT
W	90.0	0.9	1.395	Material	3.4	0.35	60.0
W1	90.0	0.945	1.305	Material	3.4	0.35	60.0

3.2.2.3. Window Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value ($W/m^2.K$)
W	10.0	Properties	---	0.0	1.5
W1	10.0	Properties	---	0.0	1.5

3.2.2.4. Window Shading Details:

3.2.2.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W1	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.2.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.2.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.2.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.2.4.5. North-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.2.4.6. North-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.2.4.7. South-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.2.4.8. South-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.3. Ventilator Level Information:

3.2.3.1. Ventilator Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m²)	Number	Type	% Open	% Fixed
V	Rectangle	0.6	0.9	0.54	8	Casement	90.0	10.0
V1	Rectangle	0.55	0.9	0.5	1	Casement	90.0	10.0

3.2.3.2. Ventilator Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value (W/m².K)	SHGC	VLT
V	90.0	0.54	0.81	Material	3.4	0.35	60.0
V1	90.0	0.495	0.81	Material	3.4	0.35	60.0

3.2.3.3. Ventilator Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value (W/m².K)
V	10.0	Properties	---	0.0	1.5
V1	10.0	Properties	---	0.0	1.5

3.2.3.4. Ventilator Shading Details:

3.2.3.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.3.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	V	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.3.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	V	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.3.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	V	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.3.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.3.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.3.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.3.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.4. Door Level Information:

3.2.4.1. Door Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m^2)	Number	Type	% Open	% Fixed
DW1	Rectangle	1.8	2.4	4.32	10	Casement	90.0	10.0

3.2.4.2. Door Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value ($W/m^2.K$)	SHGC	VLT
DW1	90.0	1.62	2.16	Material	3.4	0.35	60.0

3.2.4.3. Door Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value ($W/m^2.K$)
DW1	10.0	Properties	---	0.0	1.5

3.2.4.4. Door Shading Details:

3.2.4.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.4.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DW1	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.4.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DW1	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.4.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DW1	Wall2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

3.2.4.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.4.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.4.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.4.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

3.2.5. Wall Level Information:

3.2.5.1. Wall Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	Wall2	Material	Cement plaster (1762 kg/m3) [15.0]	0.77
			Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0]	
			Cement plaster (1762 kg/m3) [15.0]	
2	Wall2	Material	Cement plaster (1762 kg/m3) [15.0]	0.77
			Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0]	
			Cement plaster (1762 kg/m3) [15.0]	
3	Wall2	Material	Cement plaster (1762 kg/m3) [15.0]	0.77
			Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0]	
			Cement plaster (1762 kg/m3) [15.0]	
4	Wall2	Material	Cement plaster (1762 kg/m3) [15.0]	0.77
			Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0]	
			Cement plaster (1762 kg/m3) [15.0]	

3.2.5.2. Wall Area Details:

S.N	Construction Name	Orientation	Height(m)	Width(m)	Area(m²)
1	Wall2	N	27.0	32.37	873.99
2	Wall2	E	27.0	22.71	613.17
3	Wall2	S	27.0	32.37	873.99
4	Wall2	W	27.0	22.71	613.17
				Total Wall Area (m²)	*2974.3199999999997*

3.2.6. Roof Level Information:

3.2.6.1. Roof Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	Roof2	Material	Concrete (laid to slope) [50.0 mm]	0.41
			Polyurethane foam(PUF) [50.0 mm]	
			Cement screed [20.0 mm]	

3.2.6.2. Roof Area Details:

S.N	Construction Name	Height(m)	Width(m)	Area(m²)
1	Roof2	32.37	22.71	735.12
			Total Roof Area (m²)	*735.12*

3.3. Building Services:

3.3.1. Mandatory Compliance:

S.N	Requirements	Minimum Requirements	User Value	Compliance Status
1	Diesel Generator Set Specific Fuel Consumption (g/kWh)	--	--	Achieved
2	Power Factor Correction (All 3 phase connections)	0.97	--	Achieved
3	Energy Monitoring	--	--	Achieved
4	Electric Vehicle Supply Equipment	--	--	Achieved
5	Car Parking Basement Ventilation	>=600	430.28	Achieved

3.3.2. Common Area Lighting:

3.3.2.1. Corridor Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	3.0	105.0

3.3.2.2. Basement Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.0	105.0

3.3.2.3. Exterior Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Automatic Control	Luminous Efficacy(lm/W)
1	Total Wattage	100.0	Yes	110.0

3.3.3. Lifts Details:

S.N	VVVF Drive Technology	Motor Class	Regenaration Drive System	Group Control	Luminous Efficacy(lm/W)	Automatic Light & Fan Control
1	Yes	IE4	Yes	Yes	105.0	Yes

3.3.4. Pumps Details:

S.N	VVVF Drive Technology	Pump Type	Automatic Control	Water Closet Flow(LPF)	Water Faucet Flow(LPM)
1	Yes	BEE 4 Star	Yes	4.0	4.0

3.3.5. Electric System:

3.3.5.1. Diesel Generator:

S.N	BEE Star Rating	Fuel Consumption(g/kWh)	Capacity Range(kW)
1	BEE 5 Star	40.0	120.0

3.3.5.2. Power Factor Correction:

S.N	Computation Method	Total Connected Load(kW)	Contract Demand(kVA)	Calculated Power Factor	Power Factor Reading
1	Direct	0.0	0.0	0.0	0.98

3.3.5.3. Energy Monitoring:

S.N	Energy Metering Type	Data Recording Intervel	Digital Control System	Data Retaining Capability
1	Smart	15 Min	Yes	3

3.3.5.4. EV Supply Equipment:

S.N	Charger Category	Charger Type	Charger Connector Type	Rated Output Voltage(V)	Converter Efficiency(%)	Standby Power Consumption(W)
1	DC	Fast	Combined	200.0	95.0	0.0

3.3.5.5. Transformer:

S.N	Select Type	BEE Star Rating	Voltage Rating Class	KVA Rating	Max Losses at 50%(W)	Max Losses at 100%(W)
1	Dry	BEE 5 Star	Upto 11KV	100	50.0	100.0

3.3.5.6. Power Distribution Loss:

S.N	Total Connected Load(kW)	Current Rating of Cable(A)	Total Cable Length(m)	Max Impedence(Ohm/m)
1	120.0	15.0	200.0	0.026

3.3.6. Car Parking Basement Ventilation:

S.N	Car Parking Location	CO Sensor Installed	Ventilation Strategy	Car Parking Area(m^2)	Fan Motor Power(W)	Fan Motor IE Class	Fan Motor Efficiency(%)
1	Basement	Yes	Mechanical	430.28	400.0	IE4	95.0

3.4. Indoor Electrical Use:

3.4.1. Indoor Lighting:

S.N	Select Area	Luminous Efficacy(lm/W)
1	BedRoom+Kitchen+Hall	105.0

3.4.2. Comfort System:

3.4.2.1. Ceiling Fan:

S.N	BEE Star Rating	Ceiling Fan Blade Sweep(mm)	Service Value(m^2/min.W)	No. of Fans Installed
1	BEE 5 Star	<1200 mm	4	18

3.4.2.2. Cooling Equipment:

S.N	Equipment Type	BEE Star Rating	System Capacity(Tonnage)	Chiller/VRF Type	Chiller/VRF Capacity(kWr)	Chiller/VRF COP	Chiller IPLV	Low Energy Comfort System
1	Low Energy CS	--	120.0	--	0.0	0.0	0.0	Evap Cooling

3.5. Renewable Energy System:

3.5.1. Solar Hot Water System:

S.N	Hot Water System Installed For	Hot Water Requirement/Floor(ltr/day)	Capacity of Solar Water Installed(ltr/Day)
1	Top 4 Floor	20	100.0

3.5.2. Solar PhotoVoltaic System:

S.N	Input Method	Roof Area Reserved for Solar PV(m^2)	Installed Capacity(kWp)	Efficiency of PV Panel(%)
1	Roof Area Equivalent	350.0	0.0	21.0

4. High Rise -Block -3 Information

4.1. Dwelling Unit Details:

S.N	Type of Dwelling Unit	No. of Units	Carpet Area (m^2)	Corridor Area (m^2)	Basement Area (m^2)	Exterior Area (m^2)	Total Area (m^2)
1	2 BHK	3	65.22	15.0	430.28	43.55	195.66
						Total Carpet Area (m^2)	*195.66*

4.2. Building Envelope:

4.2.1. Mandatory Compliance:

SN	Requirements	Minimum Requirements	User Value	Compliance Status
1	Openable Window-To-Floor Area Ratio (WFRop)	12.5	29.16	Compliant
2	Visible Light Transmittance (VLT %)	27.0	60.0	Compliant

4.2.2. Window Level Information:

4.2.2.1. Window Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m^2)	Number	Type	% Open	% Fixed
W	Rectangle	1.0	1.55	1.55	6	Casement	90.0	10.0
W1	Rectangle	1.05	1.45	1.52	4	Casement	90.0	10.0

4.2.2.2. Window Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value ($W/m^2.K$)	SHGC	VLT
W	90.0	0.9	1.395	Material	3.4	0.35	60.0
W1	90.0	0.945	1.305	Material	3.4	0.35	60.0

4.2.2.3. Window Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value ($W/m^2.K$)
W	10.0	Properties	---	0.0	1.5
W1	10.0	Properties	---	0.0	1.5

4.2.2.4. Window Shading Details:

4.2.2.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

4.2.2.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

4.2.2.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

4.2.2.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.2.4.5. North-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.2.4.6. North-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.2.4.7. South-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.2.4.8. South-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.3. Ventilator Level Information:

4.2.3.1. Ventilator Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m²)	Number	Type	% Open	% Fixed
V	Rectangle	0.6	0.9	0.54	8	Casement	90.0	10.0
V1	Rectangle	0.55	0.9	0.5	1	Casement	90.0	10.0

4.2.3.2. Ventilator Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value (W/m².K)	SHGC	VLT
V	90.0	0.54	0.81	Material	3.4	0.35	60.0
V1	90.0	0.495	0.45	Material	3.4	0.35	60.0

4.2.3.3. Ventilator Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value (W/m².K)
V	10.0	Properties	---	0.0	1.5
V1	10.0	Properties	---	0.0	1.5

4.2.3.4. Ventilator Shading Details:

4.2.3.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	V	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

4.2.3.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	V	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	V1	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

4.2.3.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	V	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

4.2.3.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	V	WallB1	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

4.2.3.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.3.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.3.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.3.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.4. Door Level Information:

4.2.4.1. Door Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m^2)	Number	Type	% Open	% Fixed
DWB1	Rectangle	1.8	2.4	4.32	10	Casement	90.0	10.0

4.2.4.2. Door Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value ($W/m^2.K$)	SHGC	VLT
DWB1	90.0	1.62	2.16	Material	3.4	0.35	60.0

4.2.4.3. Door Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value ($W/m^2.K$)
DWB1	10.0	Properties	---	0.0	1.5

4.2.4.4. Door Shading Details:

4.2.4.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.4.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.4.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.4.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.4.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.4.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.4.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.4.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

4.2.5. Wall Level Information:

4.2.5.1. Wall Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	WallB1	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
2	WallB1	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
3	WallB1	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
4	WallB1	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77

4.2.5.2. Wall Area Details:

S.N	Construction Name	Orientation	Height(m)	Width(m)	Area(m²)
1	WallB1	N	27.0	32.37	873.99
2	WallB1	E	27.0	22.71	613.17
3	WallB1	S	27.0	32.37	873.99
4	WallB1	W	27.0	22.71	613.17
				Total Wall Area (m²)	*2974.3199999999997*

4.2.6. Roof Level Information:

4.2.6.1. Roof Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	RoofB1	Material	Concrete (laid to slope) [50.0 mm]	0.632
			Expanded polystyrene (16 kg/m3) [50.0 mm]	
			Cement screed [20.0 mm]	

4.2.6.2. Roof Area Details:

S.N	Construction Name	Height(m)	Width(m)	Area(m²)
1	RoofB1	18.5	10.57	195.55
			Total Roof Area (m²)	*195.55*

4.3. Building Services:

4.3.1. Mandatory Compliance:

S.N	Requirements	Minimum Requirements	User Value	Compliance Status
1	Diesel Generator Set Specific Fuel Consumption (g/kWh)	--	--	Achieved
2	Power Factor Correction (All 3 phase connections)	0.97	--	Achieved
3	Energy Monitoring	--	--	Achieved
4	Electric Vehicle Supply Equipment	--	--	Achieved
5	Car Parking Basement Ventilation	>=600	430.28	Achieved

4.3.2. Common Area Lighting:

4.3.2.1. Corridor Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.5	110.0

4.3.2.2. Basement Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.0	110.0

4.3.2.3. Exterior Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Automatic Control	Luminous Efficacy(lm/W)
1	Total Wattage	100.0	Yes	110.0

4.3.3. Lifts Details:

S.N	VVVF Drive Technology	Motor Class	Regenaration Drive System	Group Control	Luminous Efficacy(lm/W)	Automatic Light & Fan Control
1	Yes	IE4	Yes	Yes	105.0	Yes

4.3.4. Pumps Details:

S.N	VVVF Drive Technology	Pump Type	Automatic Control	Water Closet Flow(LPF)	Water Faucet Flow(LPM)
1	Yes	BEE 5 Star	Yes	4.0	4.0

4.3.5. Electric System:

4.3.5.1. Diesel Generator:

S.N	BEE Star Rating	Fuel Consumption(g/kWh)	Capacity Range(kW)
1	BEE 5 Star	40.0	120.0

4.3.5.2. Power Factor Correction:

S.N	Computation Method	Total Connected Load(kW)	Contract Demand(kVA)	Calculated Power Factor	Power Factor Reading
1	Direct	0.0	0.0	0.0	0.98

4.3.5.3. Energy Monitoring:

S.N	Energy Metering Type	Data Recording Intervel	Digital Control System	Data Retaining Capability
1	Smart	15 Min	Yes	3

4.3.5.4. EV Supply Equipment:

S.N	Charger Category	Charger Type	Charger Connector Type	Rated Output Voltage(V)	Converter Efficiency(%)	Standby Power Consumption(W)
1	DC	Fast	Combined	200.0	95.0	0.0

4.3.5.5. Transformer:

S.N	Select Type	BEE Star Rating	Voltage Rating Class	KVA Rating	Max Losses at 50%(W)	Max Losses at 100%(W)
1	Dry	BEE 5 Star	Upto 11KV	100	50.0	100.0

4.3.5.6. Power Distribution Loss:

S.N	Total Connected Load(kW)	Current Rating of Cable(A)	Total Cable Length(m)	Max Impedence(Ohm/m)
1	120.0	15.0	200.0	0.026

4.3.6. Car Parking Basement Ventilation:

S.N	Car Parking Location	CO Sensor Installed	Ventilation Strategy	Car Parking Area(m^2)	Fan Motor Power(W)	Fan Motor IE Class	Fan Motor Efficiency(%)
1	Basement	Yes	Mechanical	430.28	400.0	IE4	95.0

4.4. Indoor Electrical Use:

4.4.1. Indoor Lighting:

S.N	Select Area	Luminous Efficacy(lm/W)
1	BedRoom+Kitchen+Hall	105.0

4.4.2. Comfort System:

4.4.2.1. Ceiling Fan:

S.N	BEE Star Rating	Ceiling Fan Blade Sweep(mm)	Service Value(m^2/min.W)	No. of Fans Installed
1	BEE 5 Star	<1200 mm	4	9

4.4.2.2. Cooling Equipment:

S.N	Equipment Type	BEE Star Rating	System Capacity(Tonnage)	Chiller/VRF Type	Chiller/VRF Capacity(kWr)	Chiller/VRF COP	Chiller IPLV	Low Energy Comfort System
1	Low Energy CS	--	120.0	--	0.0	0.0	0.0	Evap Cooling

4.5. Renewable Energy System:

4.5.1. Solar Hot Water System:

S.N	Hot Water System Installed For	Hot Water Requirement/Floor(ltr/day)	Capacity of Solar Water Installed(ltr/Day)
1	Top 4 Floor	20	100.0

4.5.2. Solar PhotoVoltaic System:

S.N	Input Method	Roof Area Reserved for Solar PV(m^2)	Installed Capacity(kWp)	Efficiency of PV Panel(%)
1	Roof Area Equivalent	250.0	0.0	21.0

5. High Rise -Block -4 Information

5.1. Dwelling Unit Details:

S.N	Type of Dwelling Unit	No. of Units	Carpet Area (m^2)	Corridor Area (m^2)	Basement Area (m^2)	Exterior Area (m^2)	Total Area (m^2)
1	2 BHK	3	65.22	15.0	430.28	43.55	195.66
						Total Carpet Area (m^2)	*195.66*

5.2. Building Envelope:

5.2.1. Mandatory Compliance:

SN	Requirements	Minimum Requirements	User Value	Compliance Status
1	Openable Window-To-Floor Area Ratio (WFRop)	12.5	29.16	Compliant
2	Visible Light Transmittance (VLT %)	27.0	60.0	Compliant

5.2.2. Window Level Information:

5.2.2.1. Window Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m^2)	Number	Type	% Open	% Fixed
WB2	Rectangle	1.0	1.55	1.55	6	Casement	90.0	10.0
W1B2	Rectangle	1.05	1.45	1.52	4	Casement	90.0	10.0

5.2.2.2. Window Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value ($W/m^2.K$)	SHGC	VLT
WB2	90.0	0.9	1.395	Material	3.4	0.35	60.0
W1B2	90.0	0.945	1.368	Material	3.4	0.35	60.0

5.2.2.3. Window Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value ($W/m^2.K$)
WB2	10.0	Properties	---	0.0	1.5
W1B2	10.0	Properties	---	0.0	1.5

5.2.2.4. Window Shading Details:

5.2.2.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	WB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1B2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.2.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	WB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1B2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.2.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	WB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1B2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.2.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W1B2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.2.4.5. North-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.2.4.6. North-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.2.4.7. South-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.2.4.8. South-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.3. Ventilator Level Information:

5.2.3.1. Ventilator Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m²)	Number	Type	% Open	% Fixed
VB2	Rectangle	0.6	0.9	0.54	8	Casement	90.0	10.0
V1B2	Rectangle	0.55	0.9	0.5	1	Casement	90.0	10.0

5.2.3.2. Ventilator Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value (W/m².K)	SHGC	VLT
VB2	90.0	0.54	0.81	Material	3.4	0.35	60.0
V1B2	90.0	0.495	0.45	Material	3.4	0.35	60.0

5.2.3.3. Ventilator Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value (W/m².K)
VB2	10.0	Properties	---	0.0	1.5
V1B2	10.0	Properties	---	0.0	1.5

5.2.3.4. Ventilator Shading Details:

5.2.3.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	VB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.3.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	VB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.3.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	VB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	V1B2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.3.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.3.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.3.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.3.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.3.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.4. Door Level Information:

5.2.4.1. Door Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m^2)	Number	Type	% Open	% Fixed
DB2	Rectangle	1.8	2.4	4.32	10	Casement	90.0	10.0

5.2.4.2. Door Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value ($W/m^2.K$)	SHGC	VLT
DB2	90.0	1.62	2.16	Material	3.4	0.35	60.0

5.2.4.3. Door Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value ($W/m^2.K$)
DB2	10.0	Properties	---	0.0	1.5

5.2.4.4. Door Shading Details:

5.2.4.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.4.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.4.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.4.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DB2	WallB2	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

5.2.4.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.4.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.4.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.4.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

5.2.5. Wall Level Information:

5.2.5.1. Wall Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	WallB2	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
2	WallB2	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
3	WallB2	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
4	WallB2	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77

5.2.5.2. Wall Area Details:

S.N	Construction Name	Orientation	Height(m)	Width(m)	Area(m²)
1	WallB2	N	27.0	32.37	873.99
2	WallB2	E	27.0	22.71	613.17
3	WallB2	S	27.0	32.37	873.99
4	WallB2	W	27.0	22.71	613.17
				Total Wall Area (m²)	*2974.3199999999997*

5.2.6. Roof Level Information:

5.2.6.1. Roof Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	RoofB2	Material	Concrete (laid to slope) [50.0 mm]	0.632
			Expanded polystyrene (16 kg/m3) [50.0 mm]	
			Cement screed [20.0 mm]	

5.2.6.2. Roof Area Details:

S.N	Construction Name	Height(m)	Width(m)	Area(m²)
1	RoofB2	18.5	10.57	195.55
			Total Roof Area (m²)	*195.55*

5.3. Building Services:

5.3.1. Mandatory Compliance:

S.N	Requirements	Minimum Requirements	User Value	Compliance Status
1	Diesel Generator Set Specific Fuel Consumption (g/kWh)	--	--	Achieved
2	Power Factor Correction (All 3 phase connections)	0.97	--	Achieved
3	Energy Monitoring	--	--	Achieved
4	Electric Vehicle Supply Equipment	--	--	Achieved
5	Car Parking Basement Ventilation	>=600	430.28	Achieved

5.3.2. Common Area Lighting:

5.3.2.1. Corridor Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.5	105.0

5.3.2.2. Basement Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.0	105.0

5.3.2.3. Exterior Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Automatic Control	Luminous Efficacy(lm/W)
1	Total Wattage	100.0	Yes	105.0

5.3.3. Lifts Details:

S.N	VVVF Drive Technology	Motor Class	Regenaration Drive System	Group Control	Luminous Efficacy(lm/W)	Automatic Light & Fan Control
1	Yes	IE4	Yes	Yes	105.0	Yes

5.3.4. Pumps Details:

S.N	VVVF Drive Technology	Pump Type	Automatic Control	Water Closet Flow(LPF)	Water Faucet Flow(LPM)
1	Yes	BEE 5 Star	Yes	4.0	4.0

5.3.5. Electric System:

5.3.5.1. Diesel Generator:

S.N	BEE Star Rating	Fuel Consumption(g/kWh)	Capacity Range(kW)
1	BEE 5 Star	40.0	120.0

5.3.5.2. Power Factor Correction:

S.N	Computation Method	Total Connected Load(kW)	Contract Demand(kVA)	Calculated Power Factor	Power Factor Reading
1	Direct	0.0	0.0	0.0	0.98

5.3.5.3. Energy Monitoring:

S.N	Energy Metering Type	Data Recording Intervel	Digital Control System	Data Retaining Capability
1	Smart	15 Min	Yes	3

5.3.5.4. EV Supply Equipment:

S.N	Charger Category	Charger Type	Charger Connector Type	Rated Output Voltage(V)	Converter Efficiency(%)	Standby Power Consumption(W)
1	DC	Fast	Combined	200.0	95.0	0.0

5.3.5.5. Transformer:

S.N	Select Type	BEE Star Rating	Voltage Rating Class	KVA Rating	Max Losses at 50%(W)	Max Losses at 100%(W)
1	Dry	BEE 5 Star	Upto 11KV	100	50.0	100.0

5.3.5.6. Power Distribution Loss:

S.N	Total Connected Load(kW)	Current Rating of Cable(A)	Total Cable Length(m)	Max Impedence(Ohm/m)
1	120.0	15.0	200.0	0.026

5.3.6. Car Parking Basement Ventilation:

S.N	Car Parking Location	CO Sensor Installed	Ventilation Strategy	Car Parking Area(m^2)	Fan Motor Power(W)	Fan Motor IE Class	Fan Motor Efficiency(%)
1	Basement	Yes	Mechanical	430.28	400.0	IE4	95.0

5.4. Indoor Electrical Use:

5.4.1. Indoor Lighting:

S.N	Select Area	Luminous Efficacy(lm/W)
1	BedRoom+Kitchen+Hall	105.0

5.4.2. Comfort System:

5.4.2.1. Ceiling Fan:

S.N	BEE Star Rating	Ceiling Fan Blade Sweep(mm)	Service Value(m^2/min.W)	No. of Fans Installed
1	BEE 5 Star	<1200 mm	4	9

5.4.2.2. Cooling Equipment:

S.N	Equipment Type	BEE Star Rating	System Capacity(Tonnage)	Chiller/VRF Type	Chiller/VRF Capacity(kWr)	Chiller/VRF COP	Chiller IPLV	Low Energy Comfort System
1	Low Energy CS	--	120.0	--	0.0	0.0	0.0	Evap Cooling

5.5. Renewable Energy System:

5.5.1. Solar Hot Water System:

S.N	Hot Water System Installed For	Hot Water Requirement/Floor(ltr/day)	Capacity of Solar Water Installed(ltr/Day)
1	Top 4 Floor	20	100.0

5.5.2. Solar PhotoVoltaic System:

S.N	Input Method	Roof Area Reserved for Solar PV(m^2)	Installed Capacity(kWp)	Efficiency of PV Panel(%)
1	Roof Area Equivalent	250.0	0.0	21.0

6. High Rise -Block -5 Information

6.1. Dwelling Unit Details:

S.N	Type of Dwelling Unit	No. of Units	Carpet Area (m^2)	Corridor Area (m^2)	Basement Area (m^2)	Exterior Area (m^2)	Total Area (m^2)
1	2 BHK	3	65.22	15.0	430.28	43.55	195.66
						Total Carpet Area (m^2)	*162.18*

6.2. Building Envelope:

6.2.1. Mandatory Compliance:

SN	Requirements	Minimum Requirements	User Value	Compliance Status
1	Openable Window-To-Floor Area Ratio (WFRop)	12.5	35.18	Compliant
2	Visible Light Transmittance (VLT %)	27.0	60.0	Compliant

6.2.2. Window Level Information:

6.2.2.1. Window Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m^2)	Number	Type	% Open	% Fixed
WB3	Rectangle	1.0	1.55	1.55	6	Casement	90.0	10.0
W1B3	Rectangle	1.05	1.45	1.52	4	Casement	90.0	10.0

6.2.2.2. Window Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value ($W/m^2.K$)	SHGC	VLT
WB3	90.0	0.9	1.395	Material	3.4	0.35	60.0
W1B3	90.0	0.945	1.305	Material	3.4	0.35	60.0

6.2.2.3. Window Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value ($W/m^2.K$)
WB3	10.0	Properties	---	0.0	1.5
W1B3	10.0	Properties	---	0.0	1.5

6.2.2.4. Window Shading Details:

6.2.2.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	WB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1B3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.2.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	WB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1B3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.2.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	WB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	W1B3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.2.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	W1B3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.2.4.5. North-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.2.4.6. North-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.2.4.7. South-East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.2.4.8. South-West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.3. Ventilator Level Information:

6.2.3.1. Ventilator Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m²)	Number	Type	% Open	% Fixed
VB3	Rectangle	0.6	0.9	0.54	8	Casement	90.0	10.0
V1B3	Rectangle	0.55	0.9	0.5	1	Casement	90.0	10.0

6.2.3.2. Ventilator Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value (W/m².K)	SHGC	VLT
VB3	90.0	0.54	0.81	Material	3.4	0.35	60.0
V1B3	90.0	0.495	0.81	Material	3.4	0.35	60.0

6.2.3.3. Ventilator Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value (W/m².K)
VB3	10.0	Properties	---	0.0	1.5
V1B3	10.0	Properties	---	0.0	1.5

6.2.3.4. Ventilator Shading Details:

6.2.3.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	VB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.3.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	VB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.3.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	VB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35
1	V1B3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.3.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	VB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.3.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.3.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.3.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.3.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.4. Door Level Information:

6.2.4.1. Door Construction Details:

Name	Shape	Height(m)	Width(m)	Area(m²)	Number	Type	% Open	% Fixed
DB3	Rectangle	1.8	2.4	4.32	10	Casement	90.0	10.0

6.2.4.2. Door Glazing Details:

Name	Glaze %	Glazing Height(m)	Glazing Width(m)	Definition Type	U-value (W/m².K)	SHGC	VLT
DB3	90.0	1.62	2.16	Material	3.4	0.35	60.0

6.2.4.3. Door Opaque Area Details:

Name	Opaque Area %	Definition Type	Material Type	Thickness(m)	U-value (W/m².K)
DB3	10.0	Properties	---	0.0	1.5

6.2.4.4. Door Shading Details:

6.2.4.4.1. South Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.4.4.2. North Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.4.4.3. East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.4.4.4. West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		
1	DB3	WallB3	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.35

6.2.4.4.5. North East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.4.4.6. North West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.4.4.7. South East Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.4.4.8. South West Shading details:

S.N	Name	Parent Wall	Overhang		Side Fin-Left		Side Fin-Right		ESF Total	Effective SHGC
			Depth (m)	Distance (m)	Depth (m)	Distance (m)	Depth (m)	Distance (m)		

6.2.5. Wall Level Information:

6.2.5.1. Wall Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	WallB3	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
2	WallB3	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
3	WallB3	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77
4	WallB3	Material	Cement plaster (1762 kg/m3) [15.0] Aerated autoclaved concrete (AAC) Block (642 kg/m3) [200.0] Cement plaster (1762 kg/m3) [15.0]	0.77

6.2.5.2. Wall Area Details:

S.N	Construction Name	Orientation	Height(m)	Width(m)	Area(m²)
1	WallB3	N	27.0	32.37	873.99
2	WallB3	E	27.0	22.71	613.17
3	WallB3	S	27.0	32.37	873.99
4	WallB3	W	27.0	22.71	613.17
				Total Wall Area (m²)	*2974.3199999999997*

6.2.6. Roof Level Information:

6.2.6.1. Roof Construction Details:

S.N	Name	Construction Type	Layer Details	U-value(W/m².K)
1	RoofB3	Material	Concrete (laid to slope) [50.0 mm]	0.632
			Expanded polystyrene (16 kg/m3) [50.0 mm]	
			Cement screed [20.0 mm]	

6.2.6.2. Roof Area Details:

S.N	Construction Name	Height(m)	Width(m)	Area(m²)
1	RoofB3	18.5	10.57	195.55
			Total Roof Area (m²)	*195.55*

6.3. Building Services:

6.3.1. Mandatory Compliance:

S.N	Requirements	Minimum Requirements	User Value	Compliance Status
1	Diesel Generator Set Specific Fuel Consumption (g/kWh)	--	--	Achieved
2	Power Factor Correction (All 3 phase connections)	0.97	--	Achieved
3	Energy Monitoring	--	--	Achieved
4	Electric Vehicle Supply Equipment	--	--	Achieved
5	Car Parking Basement Ventilation	>=600	430.28	Achieved

6.3.2. Common Area Lighting:

6.3.2.1. Corridor Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.5	105.0

6.3.2.2. Basement Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Luminous Efficacy(lm/W)
1	LPD	1.0	105.0

6.3.2.3. Exterior Lighting:

S.N	Input Method	Lighting Power/Density(W or W/m²)	Automatic Control	Luminous Efficacy(lm/W)
1	Total Wattage	100.0	Yes	105.0

6.3.3. Lifts Details:

S.N	VVVF Drive Technology	Motor Class	Regenaration Drive System	Group Control	Luminous Efficacy(lm/W)	Automatic Light & Fan Control
1	Yes	IE4	Yes	Yes	105.0	Yes

6.3.4. Pumps Details:

S.N	VVVF Drive Technology	Pump Type	Automatic Control	Water Closet Flow(LPF)	Water Faucet Flow(LPM)
1	Yes	BEE 5 Star	Yes	4.0	4.0

6.3.5. Electric System:

6.3.5.1. Diesel Generator:

S.N	BEE Star Rating	Fuel Consumption(g/kWh)	Capacity Range(kW)
1	BEE 5 Star	40.0	120.0

6.3.5.2. Power Factor Correction:

S.N	Computation Method	Total Connected Load(kW)	Contract Demand(kVA)	Calculated Power Factor	Power Factor Reading
1	Direct	0.0	0.0	0.0	0.98

6.3.5.3. Energy Monitoring:

S.N	Energy Metering Type	Data Recording Intervel	Digital Control System	Data Retaining Capability
1	Smart	15 Min	Yes	3

6.3.5.4. EV Supply Equipment:

S.N	Charger Category	Charger Type	Charger Connector Type	Rated Output Voltage(V)	Converter Efficiency(%)	Standby Power Consumption(W)
1	DC	Fast	Combined	200.0	95.0	0.0

6.3.5.5. Transformer:

S.N	Select Type	BEE Star Rating	Voltage Rating Class	KVA Rating	Max Losses at 50%(W)	Max Losses at 100%(W)
1	Dry	BEE 5 Star	Upto 11KV	100	50.0	100.0

6.3.5.6. Power Distribution Loss:

S.N	Total Connected Load(kW)	Current Rating of Cable(A)	Total Cable Length(m)	Max Impedence(Ohm/m)
1	120.0	15.0	200.0	0.026

6.3.6. Car Parking Basement Ventilation:

S.N	Car Parking Location	CO Sensor Installed	Ventilation Strategy	Car Parking Area(m^2)	Fan Motor Power(W)	Fan Motor IE Class	Fan Motor Efficiency(%)
1	Basement	Yes	Mechanical	430.28	400.0	IE4	95.0

6.4. Indoor Electrical Use:

6.4.1. Indoor Lighting:

S.N	Select Area	Luminous Efficacy(lm/W)
1	BedRoom+Kitchen+Hall	105.0

6.4.2. Comfort System:

6.4.2.1. Ceiling Fan:

S.N	BEE Star Rating	Ceiling Fan Blade Sweep(mm)	Service Value(m^2/min.W)	No. of Fans Installed
1	BEE 5 Star	<1200 mm	4	9

6.4.2.2. Cooling Equipment:

S.N	Equipment Type	BEE Star Rating	System Capacity(Tonnage)	Chiller/VRF Type	Chiller/VRF Capacity(kWr)	Chiller/VRF COP	Chiller IPLV	Low Energy Comfort System
1	Low Energy CS	--	120.0	--	0.0	0.0	0.0	Evap Cooling

6.5. Renewable Energy System:

6.5.1. Solar Hot Water System:

S.N	Hot Water System Installed For	Hot Water Requirement/Floor(ltr/day)	Capacity of Solar Water Installed(ltr/Day)
1	Top 4 Floor	20	100.0

6.5.2. Solar PhotoVoltaic System:

S.N	Input Method	Roof Area Reserved for Solar PV(m^2)	Installed Capacity(kWp)	Efficiency of PV Panel(%)
1	Roof Area Equivalent	250.0	0.0	21.0