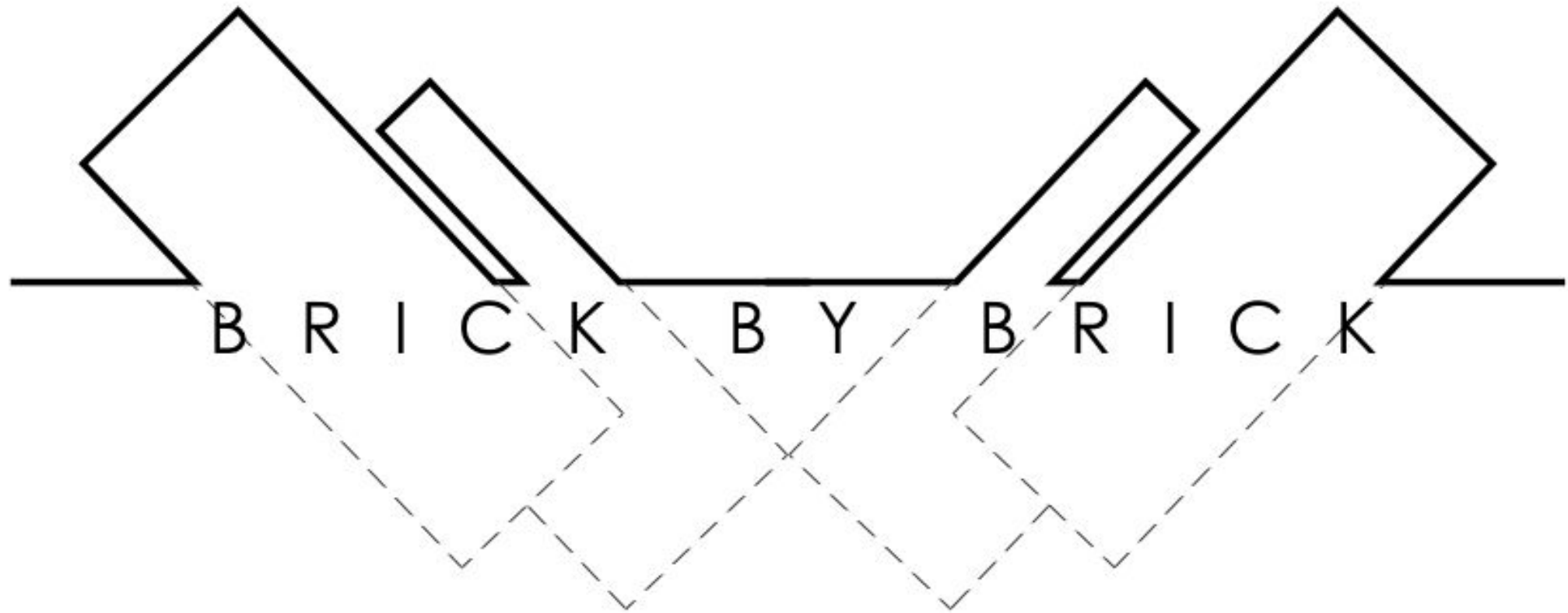
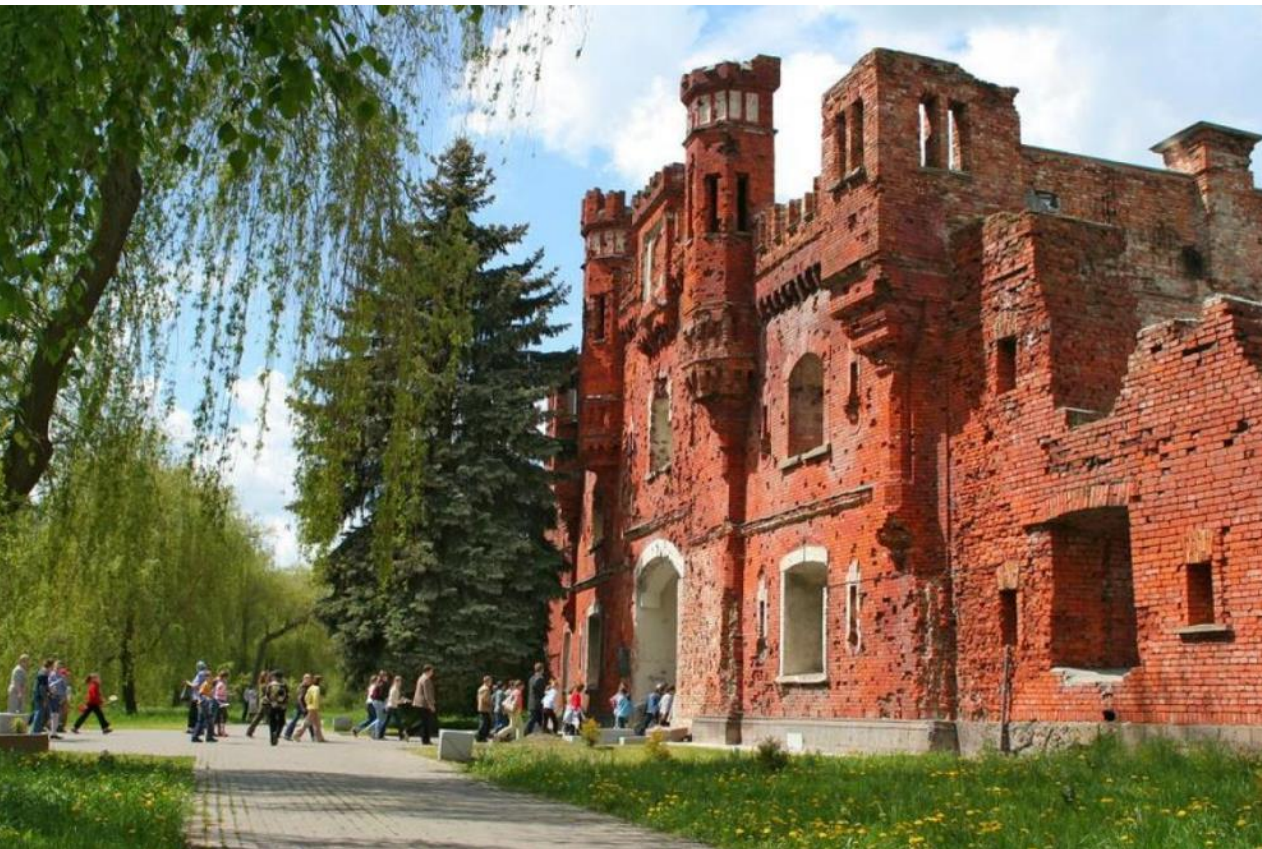


# Community development in Brest, Belarus

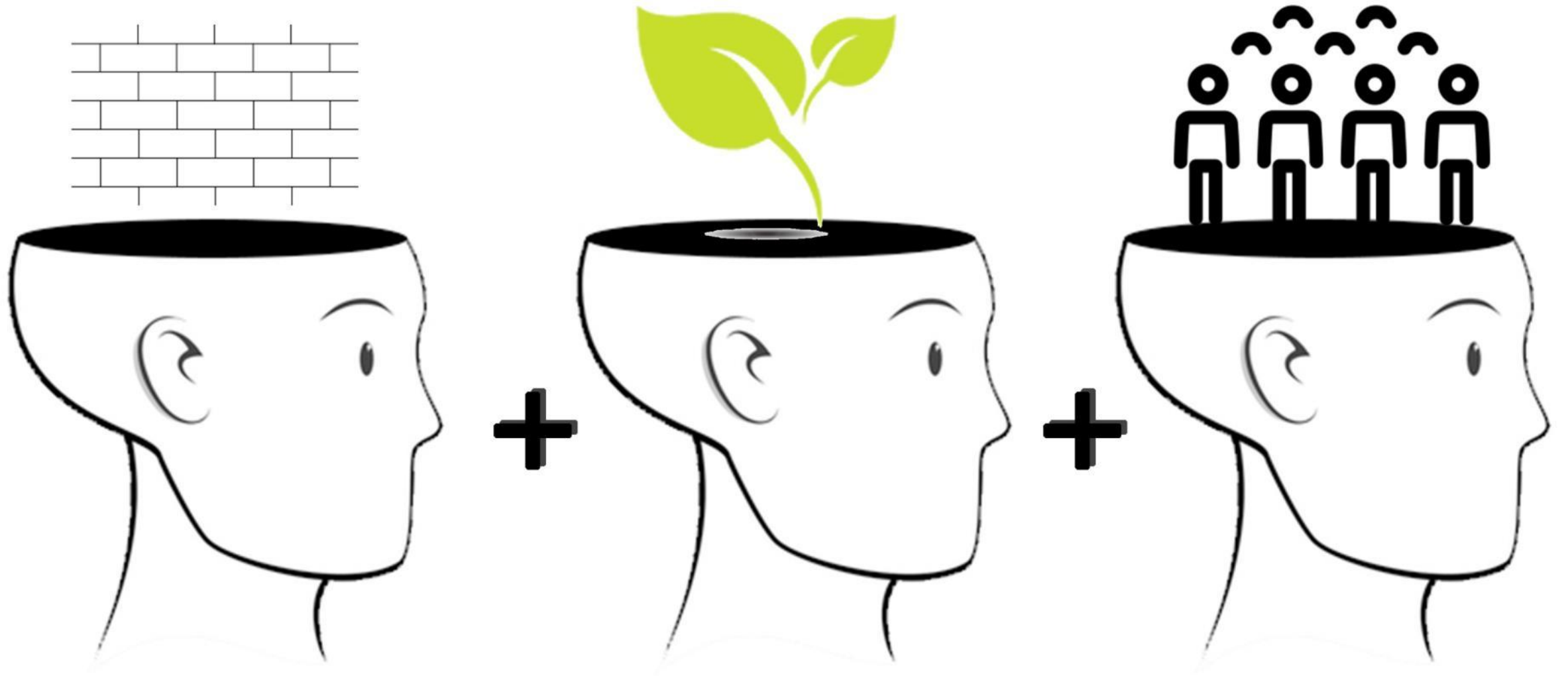
ISOVER MULTI-COMFORT HOUSE





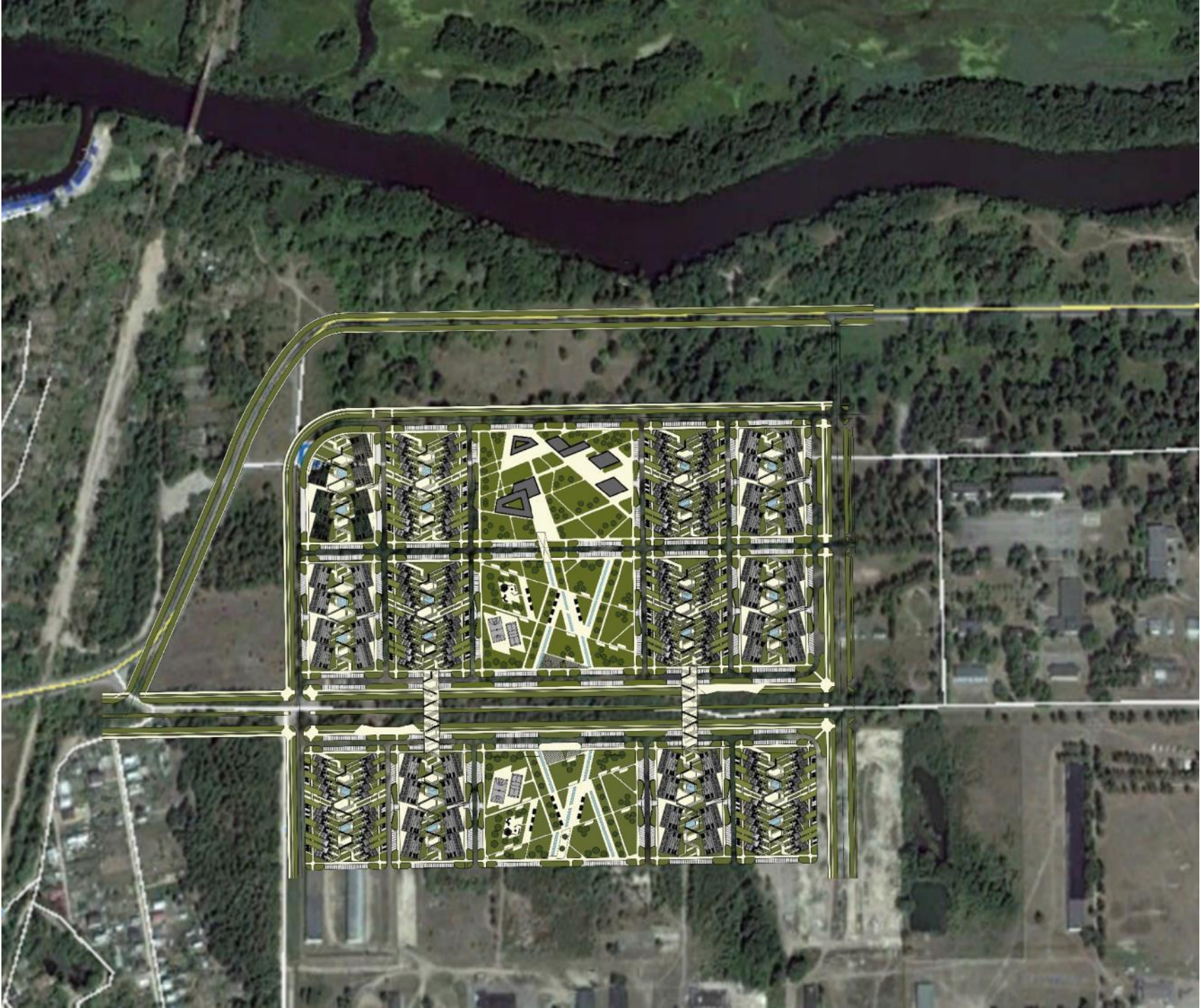


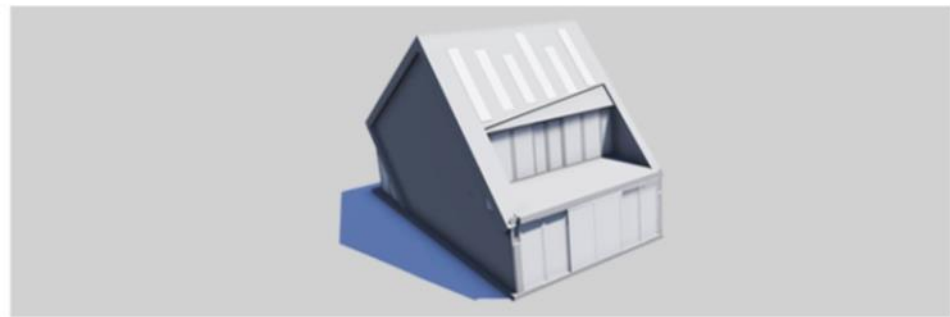
inspired from traditional architecture



# CONCEPT













1 homes



2 bicycle parking



3 bus station



4 playground



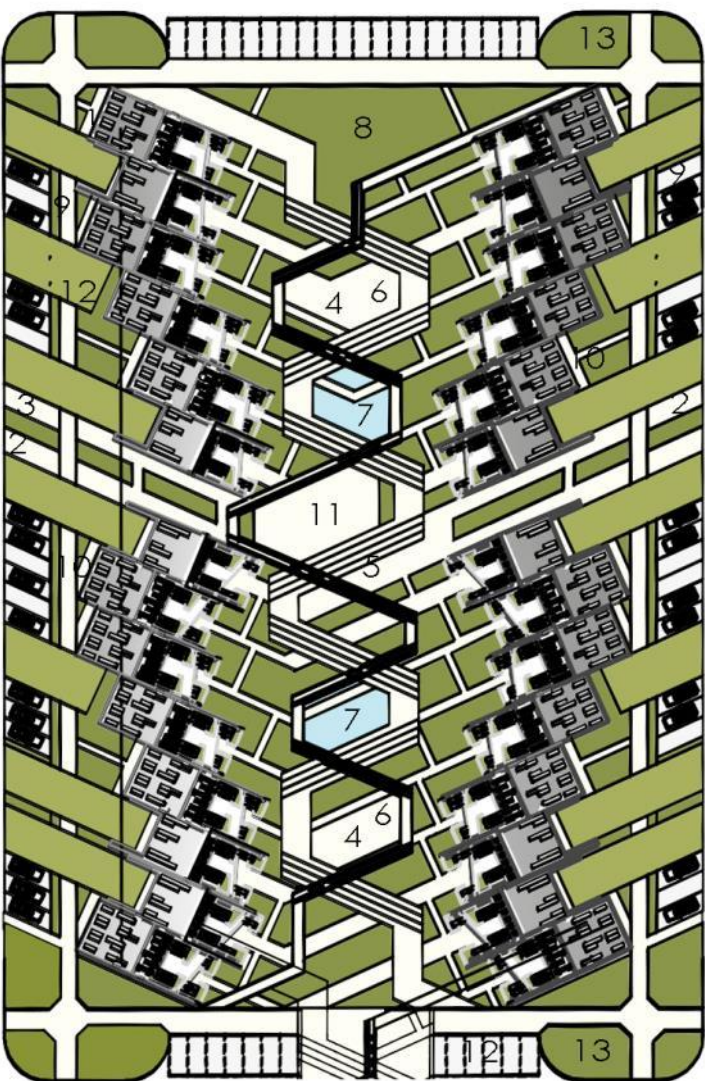
5 sport zone



6 outdoor gym



7 water area



8 coniferous trees  
barrier for winds



9 parking for residents



10 public zone



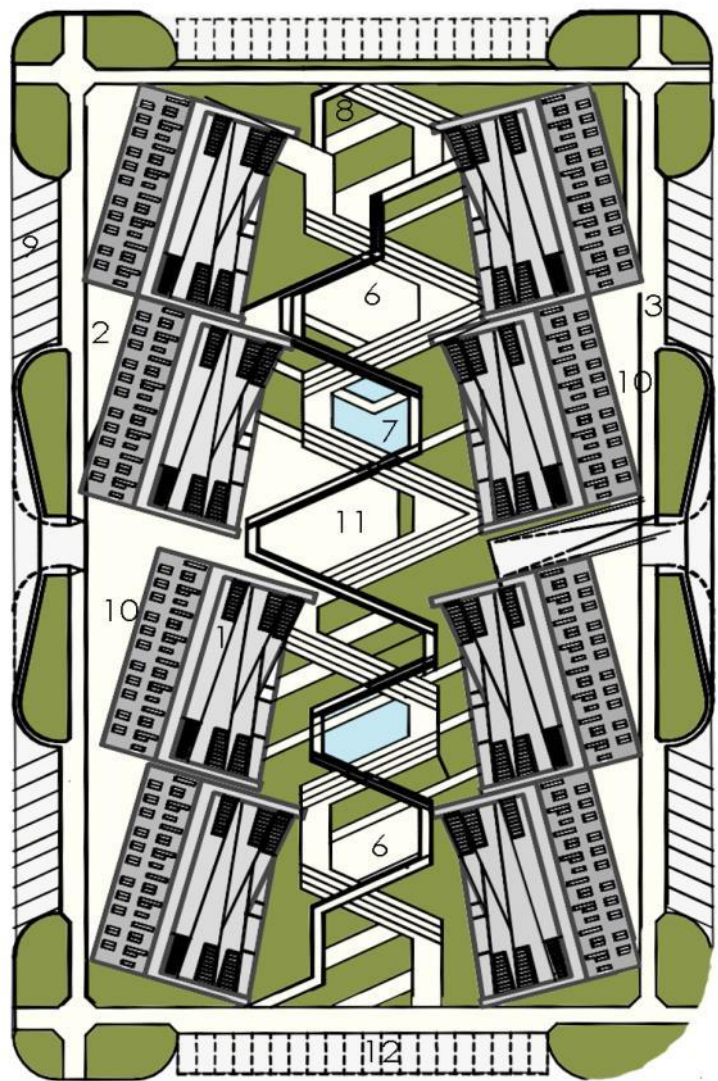
11 square neighborhood



12 parking for guest



13 point for trash





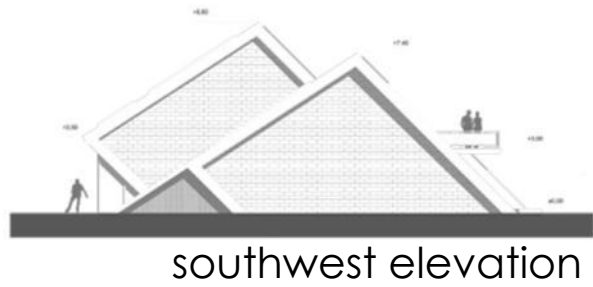
# LIFE CYCLE

18 HOUSES TYPE 1 (72 RESIDENTS)

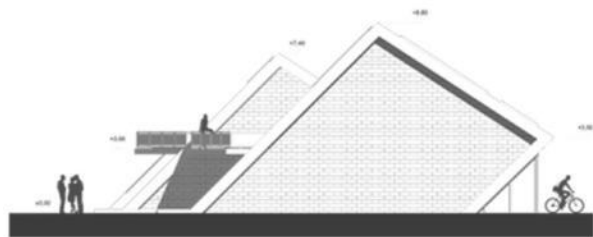


10 HOUSES TYPE 2 (20 RESIDENTS)





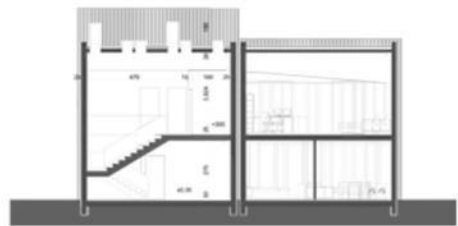
southwest elevation



northeast elevation



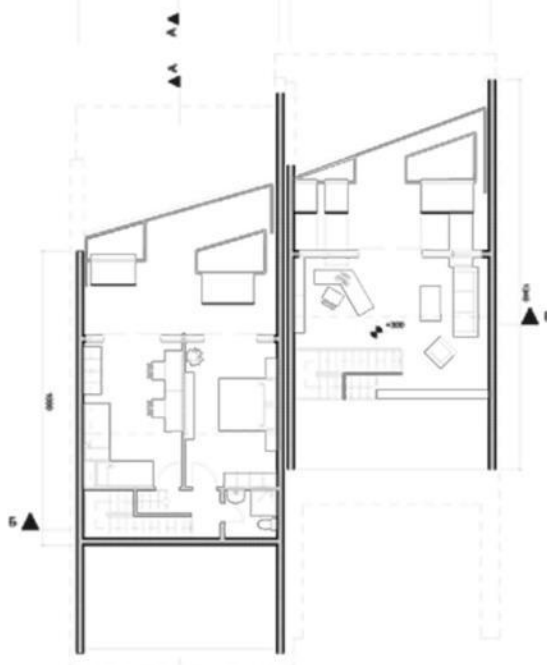
Section a-a



Section b-b



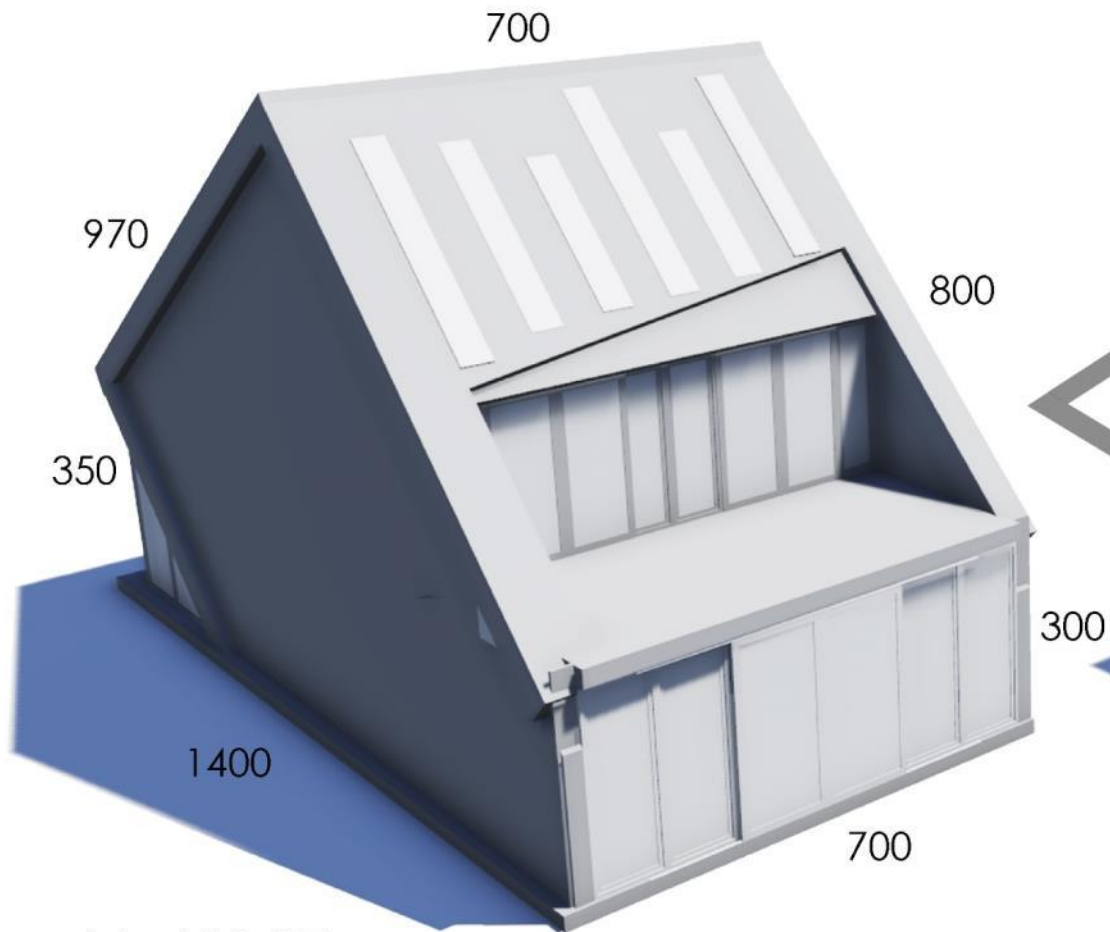
level 1



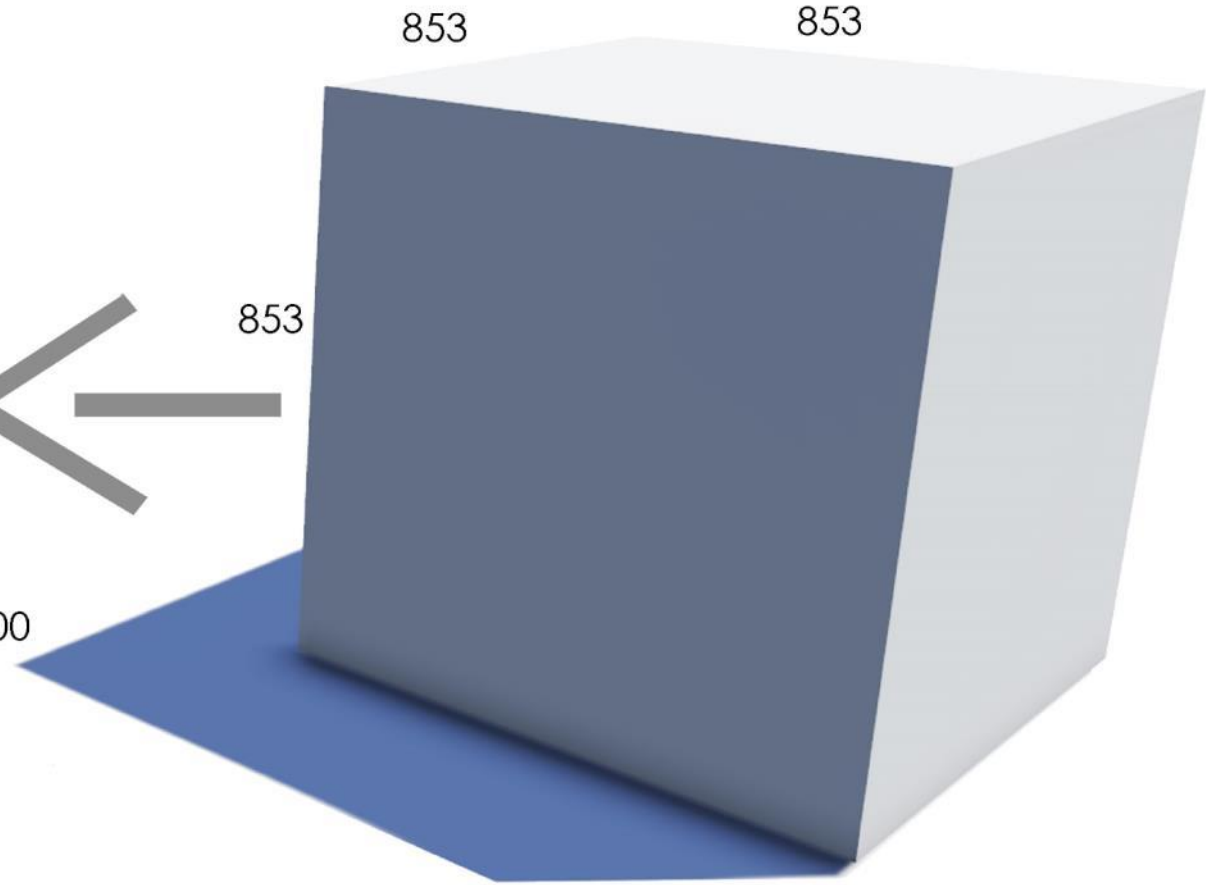
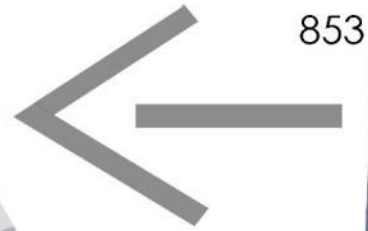
level 2



# MORPHOLOGY



$V=622.05$   
 $A=451,58$   
 $A/V=0,725$   
103%



$V=622.05$   
 $A=436,56$   
 $A/V=0,70$   
100%

< 15 kWh/m<sup>2</sup>.  
per year



#### G. HVAC

η Heat Recovery System:	95.00
η Subsoil Heat Exchanger:	33.00

#### H. Summer Ventilation Strategy

Summer Air Exchange Rate (...)	0.20
Summer Air Exchange Rate (...)	0
With Heat Recovery System:	No
Night Ventilation:	Tilted windows + '(25
Day Ventilation:	Tilted windows + '(33

#### I. Heat Demand Calculations

Transmission Heat Losses:	5206.47
Ventilation Heat Losses:	1154.84
Total Heat Losses:	6361.31
Internal Heat Gains:	1807.39
Available Solar Heat Gains:	2330.78
Total Heat Gains:	3955.88
Annual Heat Demand:	2405.43
<b>Specific Annual Heat Demand:</b>	<b>14.62</b> 🟡

#### B. Area Input

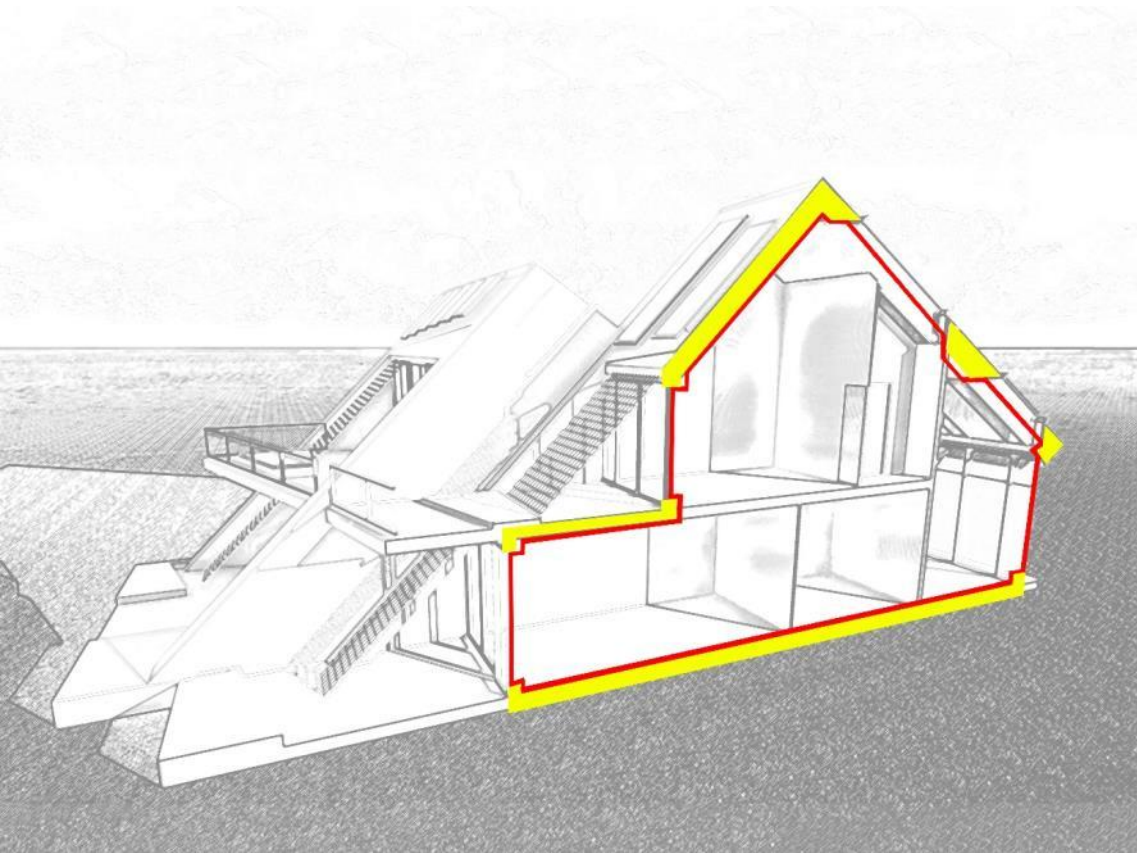
Sum Of Living Area	164.50
Sum of Heated Space Volume	658.00
A/V Ratio:	0.25
Sum of Thermal Envelope	545.65

#### C. Opaque Elements (Mean U-Values)

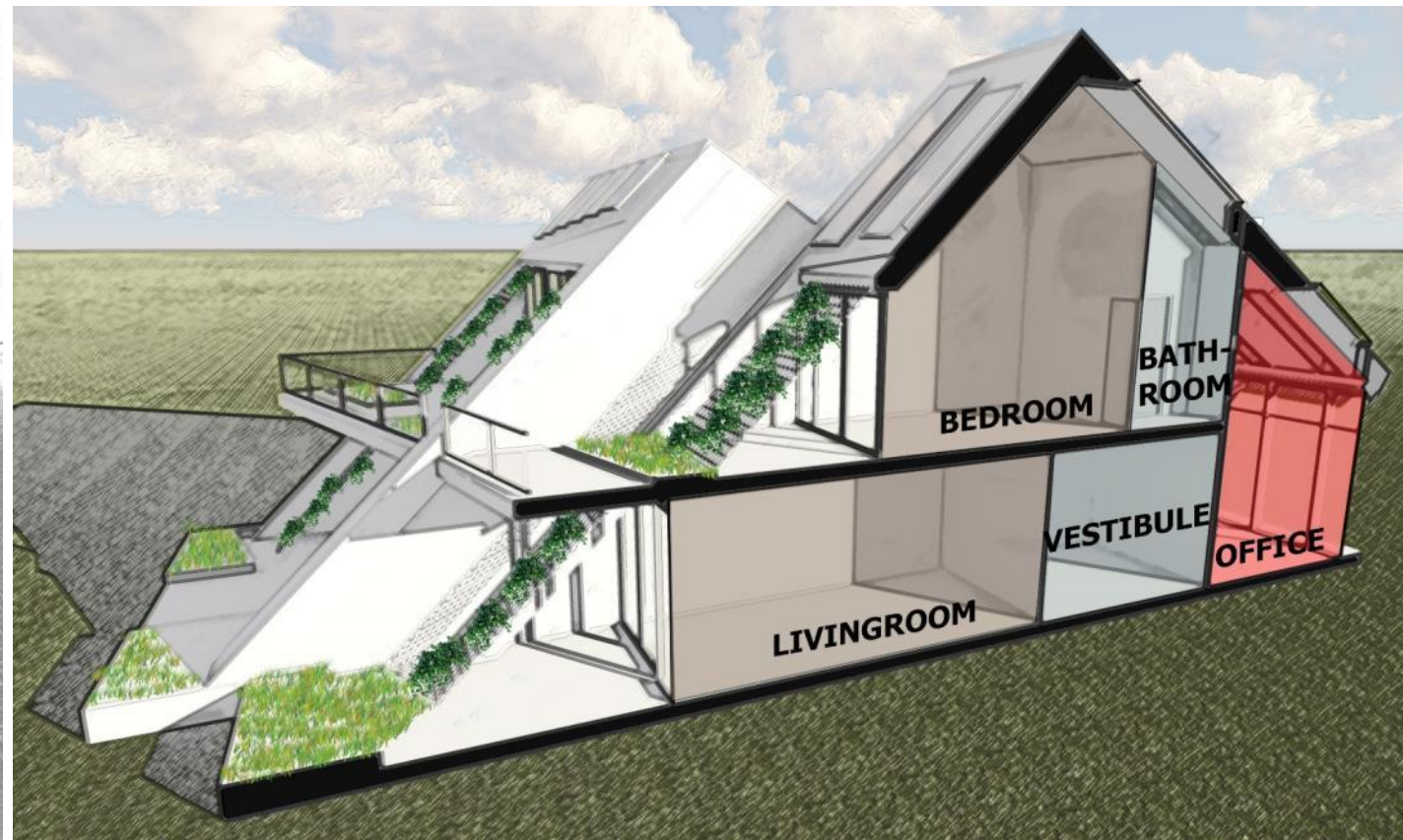
Pitched roof/mono pitched:	0.12
Wall against air:	0.11
Wall against neighbour:	Not taken into consid
Slab against ground:	0.10

#### J. Overheating Calculations

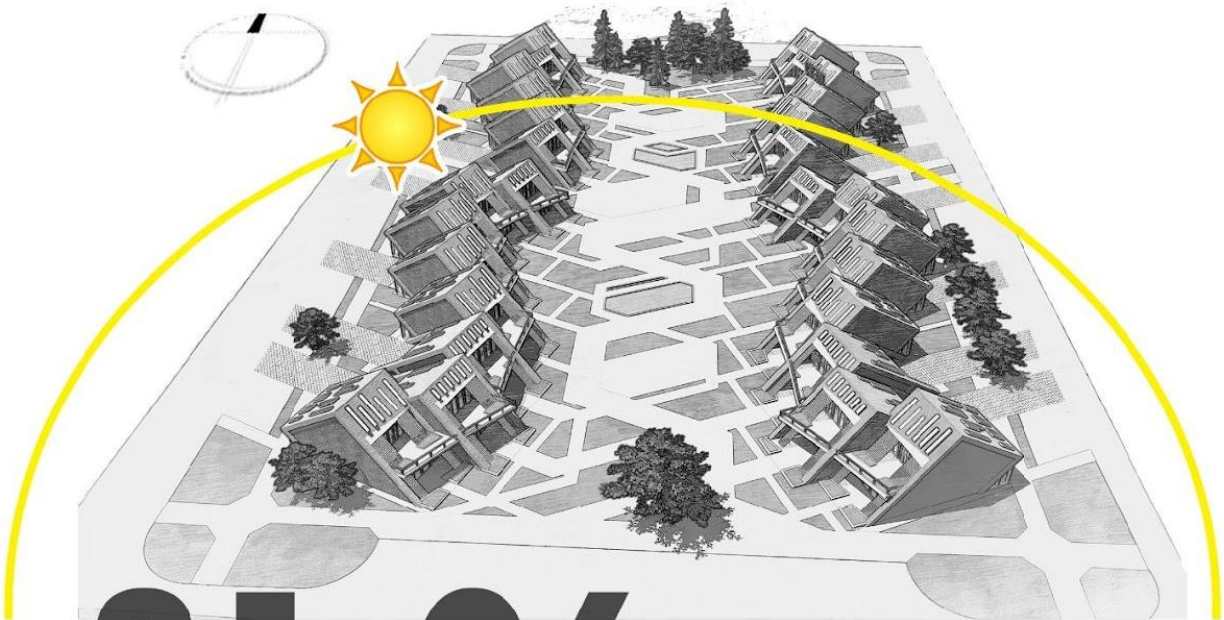
Exterior Thermal Transmittan...	48.89
Ground Thermal Transmittance:	6.55
Ventilation Transmission Ambi...	43.43
Ventilation Transmission Gro...	0.00
Solar Aperture:	14.11
Frequency of Overheating:	0.00



AIRTIGHTNESS



FUNCTIONAL ZONING

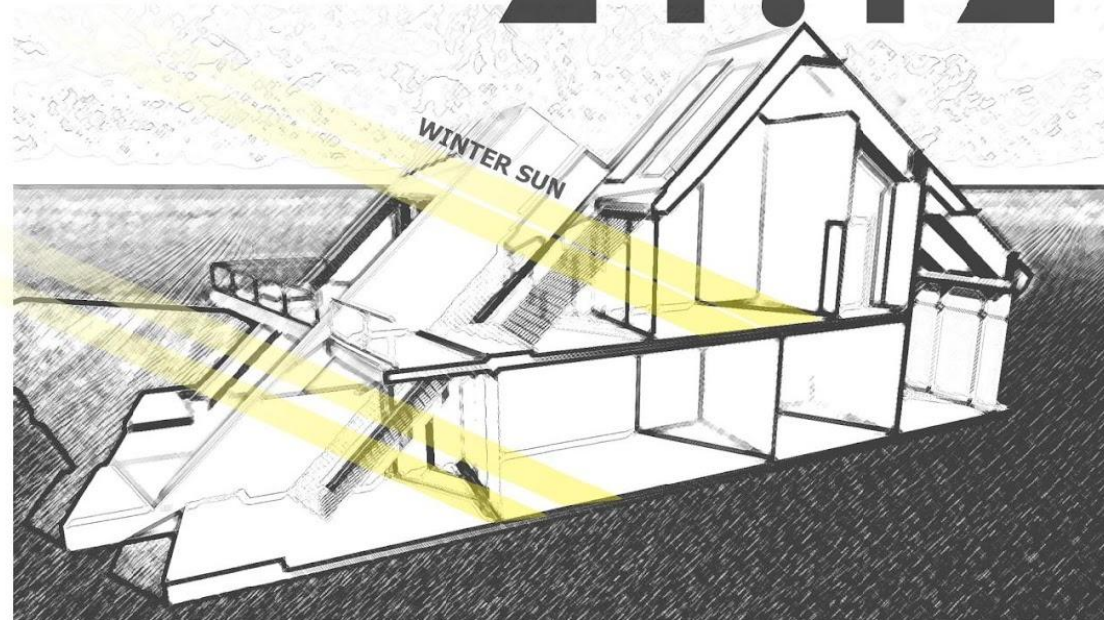


**21.06**

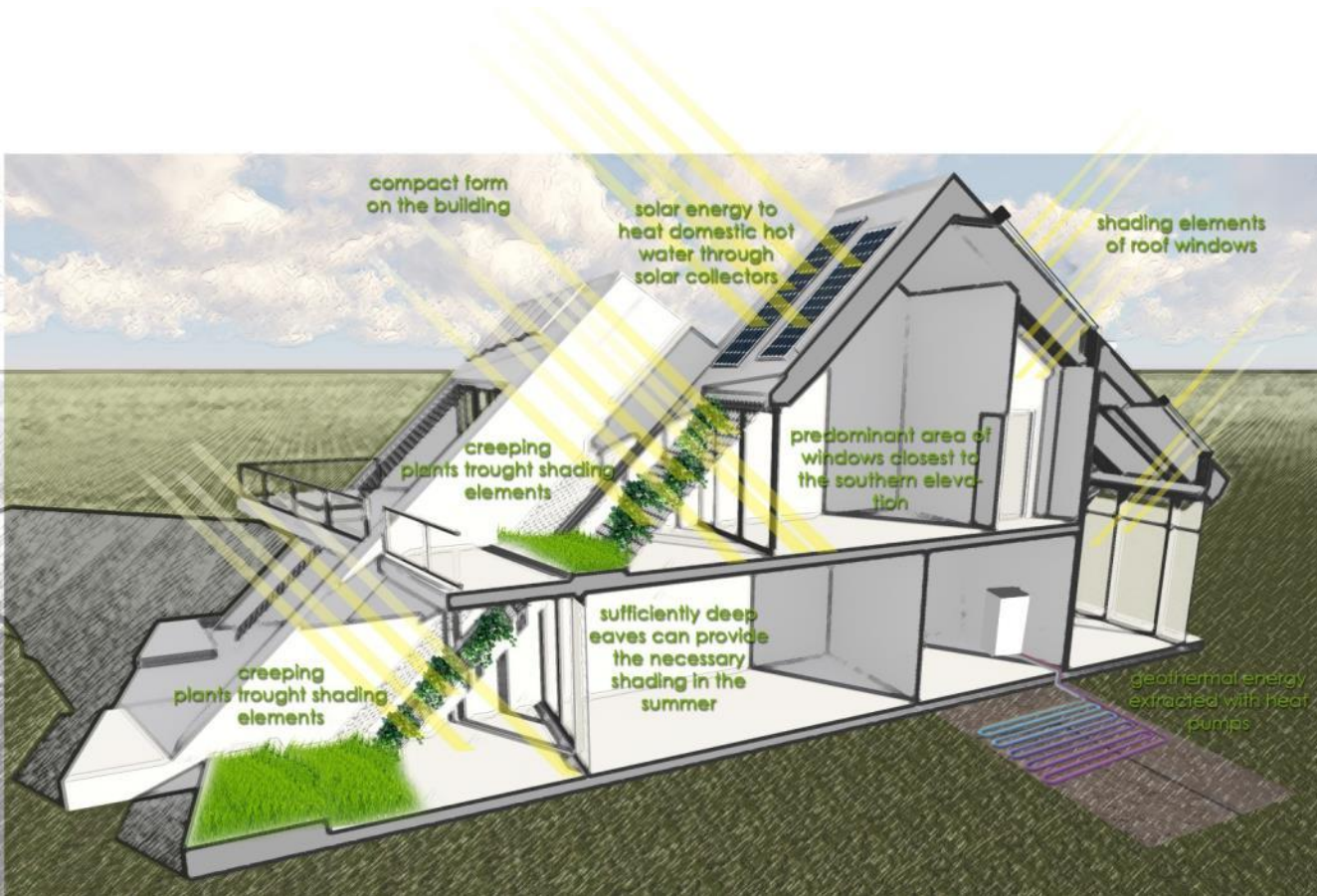


SUNLIGHT

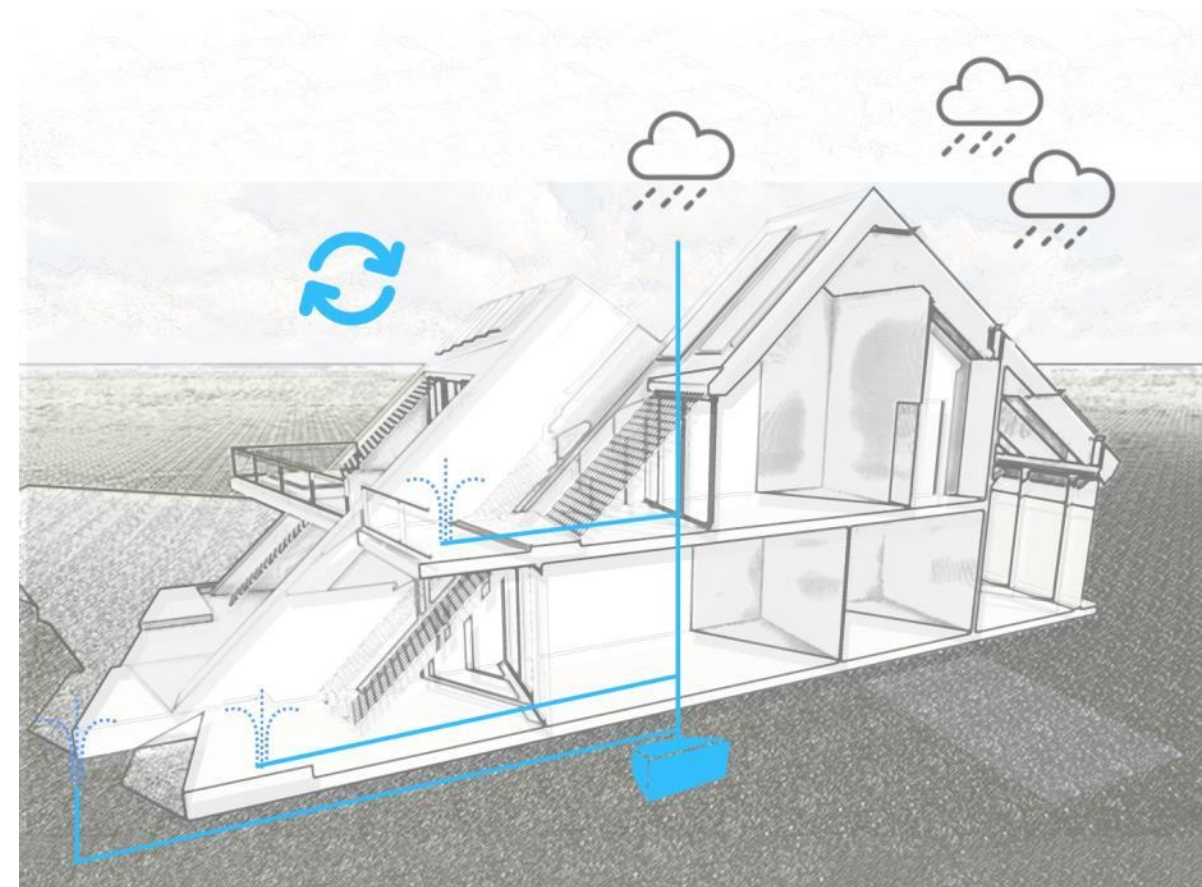
**21.12**



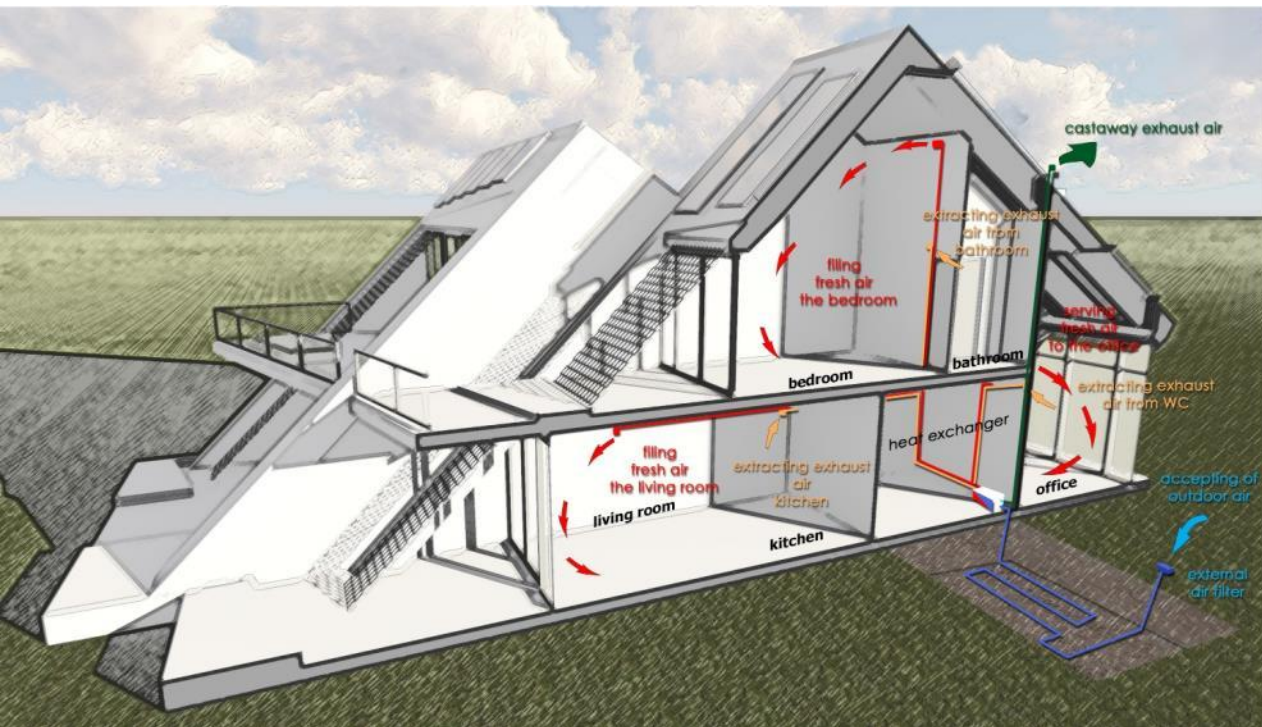




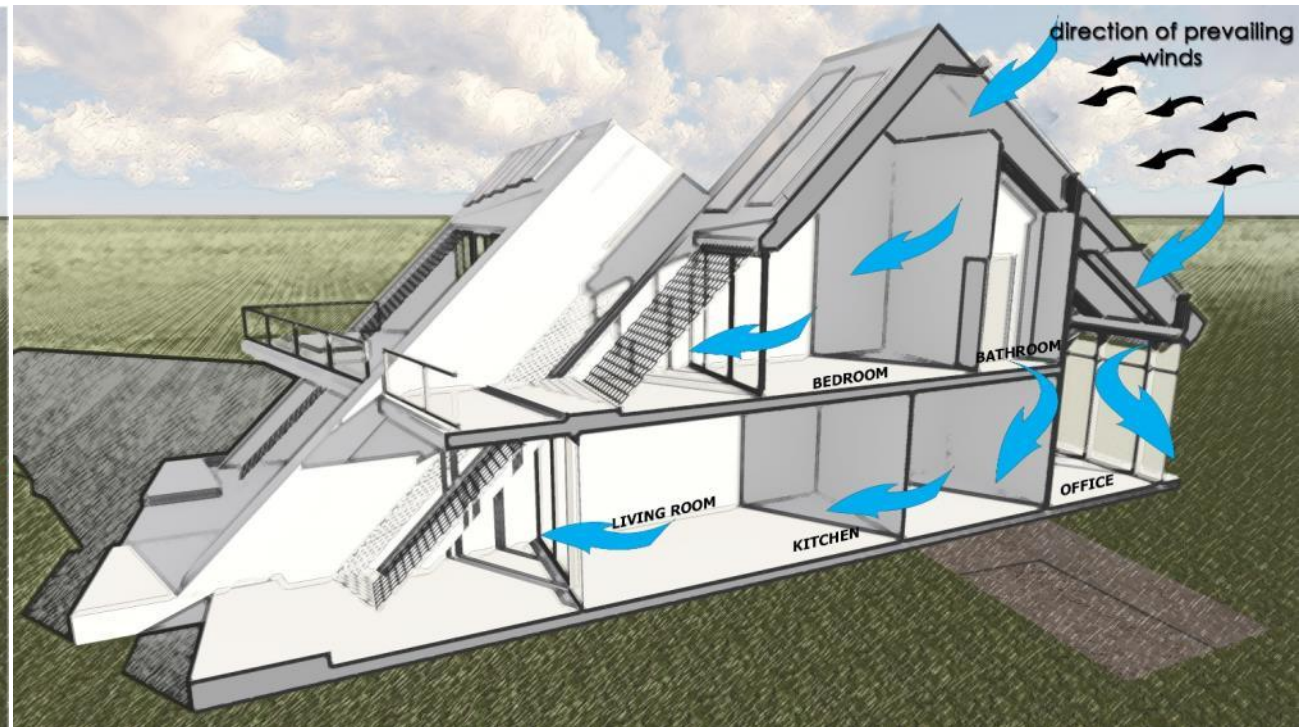
ACTIVE ACTIONS FOR SHADING AND HARVESTING OF RENEWABLE ENERGY



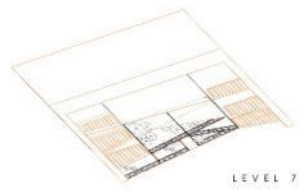
SYSTEM FOR COLLECTION AND USE OF RAINWATER



CONTROLLED VENTILATION



NATURAL VENTILATION



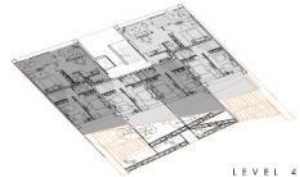
LEVEL 7



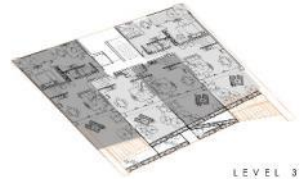
LEVEL 6



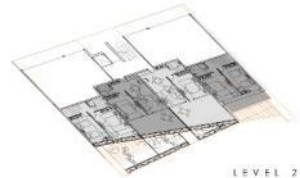
LEVEL 5



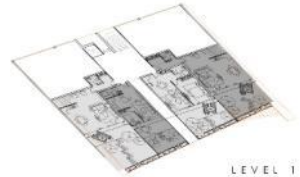
LEVEL 4



LEVEL 3

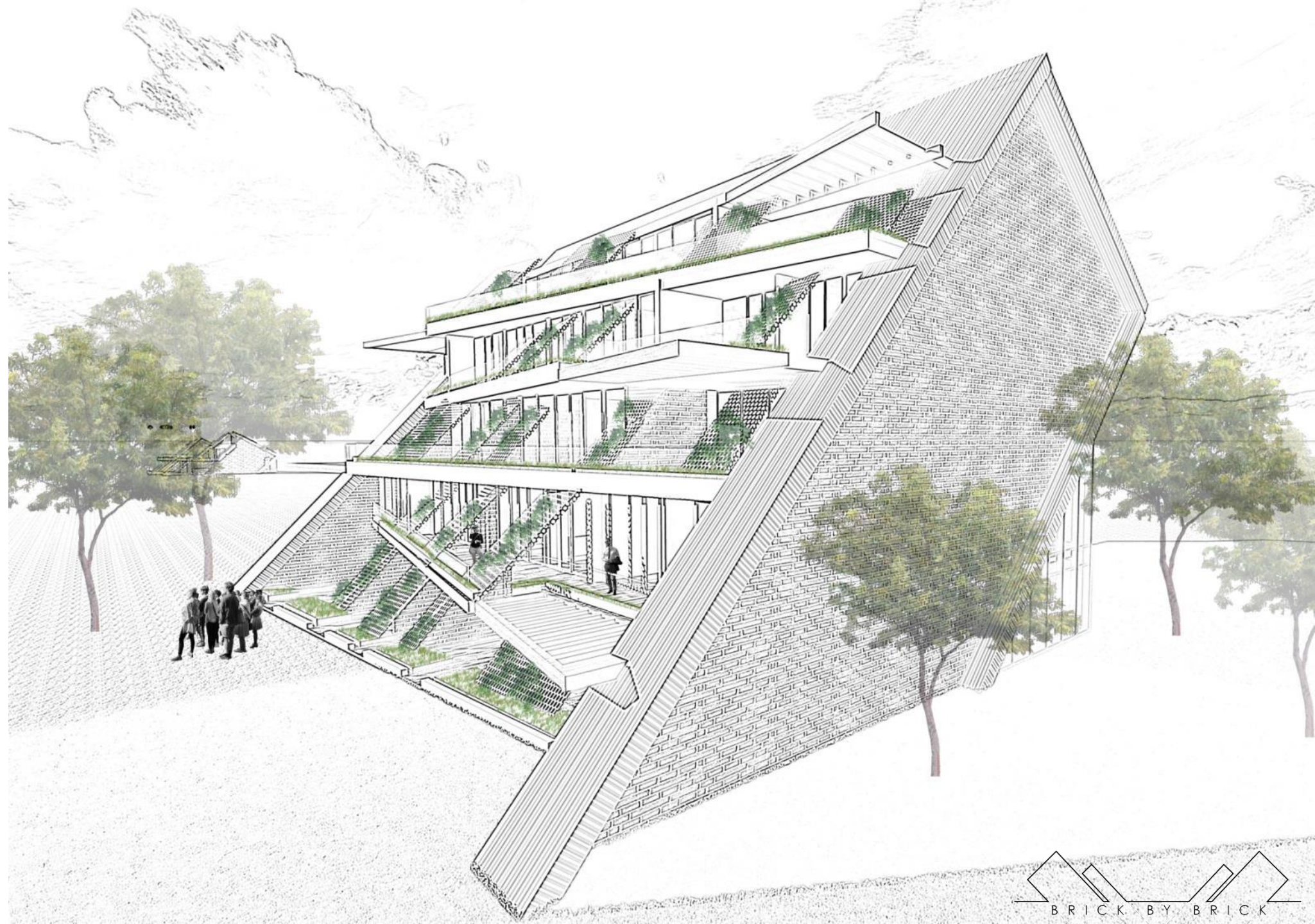


LEVEL 2

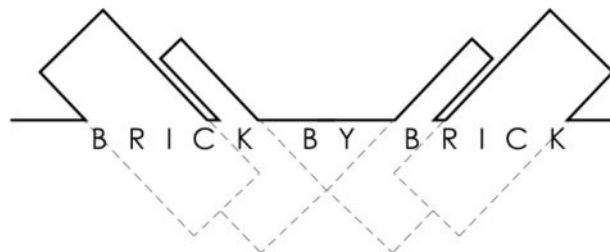


LEVEL 1

AXONOMETRY OF MULTIFAMILY BUILDING







THANK YOU FOR YOUR ATTENTION