POLAND – SILESIAN UNIVERSITY OF TECHNOLOGY IN GLIWICE
KAROLINA CHODURA // 1st. PRIZE ON THE NATIONAL STAGE

GREEN VALLEY

GREEN VALLEY

POLAND – That's from where I come

GREEN VALLEY

GREEN VALLEY

IDEA

✓ PUBLIC GREENERY
✗ PRIVATE GREENERY

✗ PUBLIC GREENERY
✓ PRIVATE GREENERY

✓ PUBLIC GREENERY
✓ PRIVATE GREENERY

NOISE FORM OF THE BUINLDING PROVIDES ACUSTIC COMFORT IN THE „GREEN VALLEY"ESTATE.

N A T U R A L LIGHT FAVOURABLE SOLAR EXPOSURE IS POSSIBLE THANKS TO THE FORM OF THE HOUSING STRUCTURE.

GREEN VALLEY

COMMUNICATION
D I A G R A M S

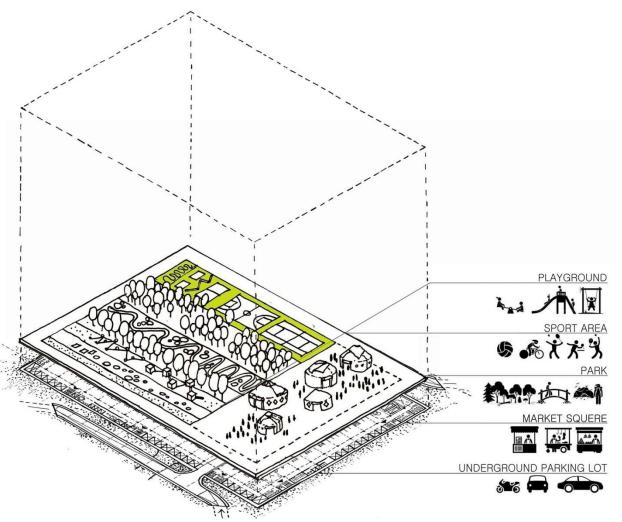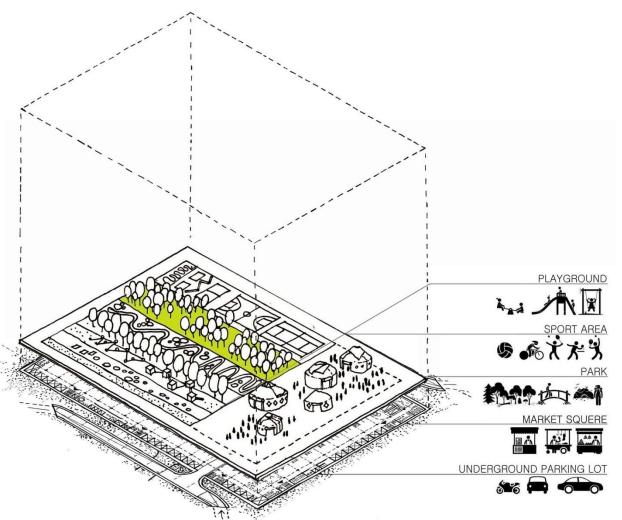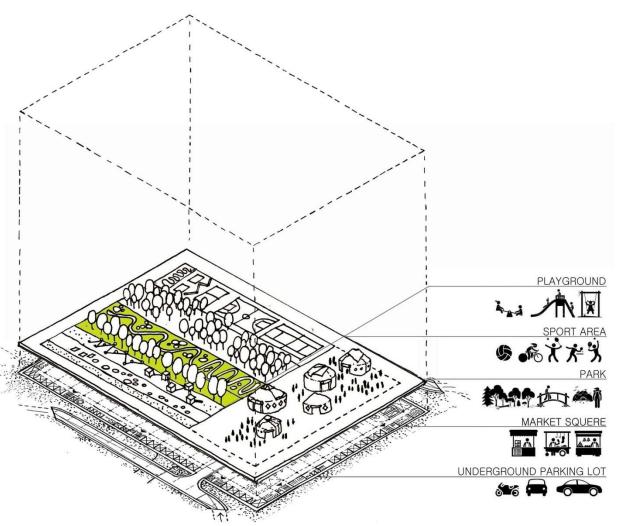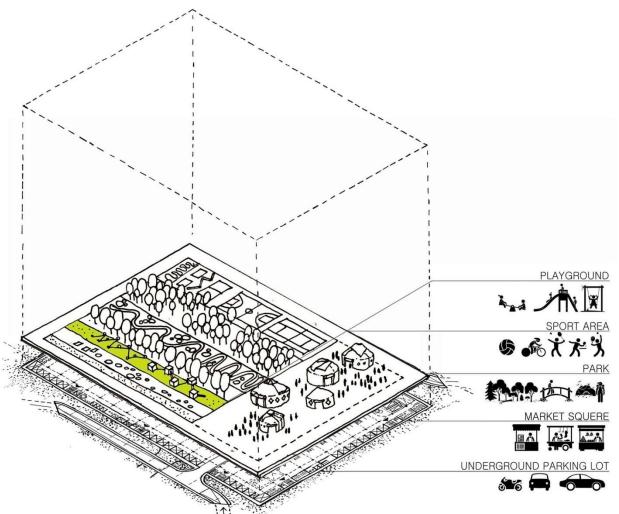PEDESTRIAN
T R A F F I C

WHEELED
VEHICLES

TECHNICAL
SUPPORT

UNDERGROUND PARKING LOT

GREEN VALLEY

PLAYGROUND

SPORT AREA

PARK

MARKET SQUERE

UNDERGROUND PARKING LOT

GREEN VALLEY

PLAYGROUND

SPORT AREA

PARK

MARKET SQUERE

UNDERGROUND PARKING LOT

GREEN VALLEY

PLAYGROUND

SPORT AREA

PARK

MARKET SQUERE

UNDERGROUND PARKING LOT

GREEN VALLEY

PLAYGROUND

SPORT AREA

PARK

MARKET SQUERE

UNDERGROUND PARKING LOT

GREEN VALLEY

PLAYGROUND

SPORT AREA

PARK

MARKET SQUERE

UNDERGROUND PARKING LOT

GREEN VALLEY

PLAYGROUND

SPORT AREA

PARK

MARKET SQUERE

UNDERGROUND PARKING LOT

GREEN VALLEY

PLAYGROUND

SPORT AREA

PARK

MARKET SQUERE

UNDERGROUND PARKING LOT

GREEN VALLEY

GREEN VALLEY
HOUSING STRUCTURE

CONSTRUCTION
COMMUNICATION

PLAYGROUND

SPORT AREA

PARK

MARKET SQUERE

UNDERGROUND PARKING LOT

GREEN VALLEY

STATISTICS:

- 135
- 465
- 258
- 48
- 4050 m2
- 29335 m2
- 9525 m2
- 3673 m2
- 3645 m2
- 1633 m2
- 31432 m3

GREEN VALLEY

STATISTICS:

- 135
- 465
- 258
- 48
- 4050 m2
- 29335 m2
- 9525 m2
- 3673 m2
- 3645 m2
- 1633 m2
- 31432 m3

GREEN VALLEY

LONGITUDINAL SECTION

0 0.5 1 1.5 2   3   4   5 m

GREEN VALLEY

GREYWATER
SOURCES

GREYWATER

RECYCLED WATER
TO REUSE IN HOUSE
AND GARDEN

SEPTIC TANK

SAND FILTERS

PUMP-PIT
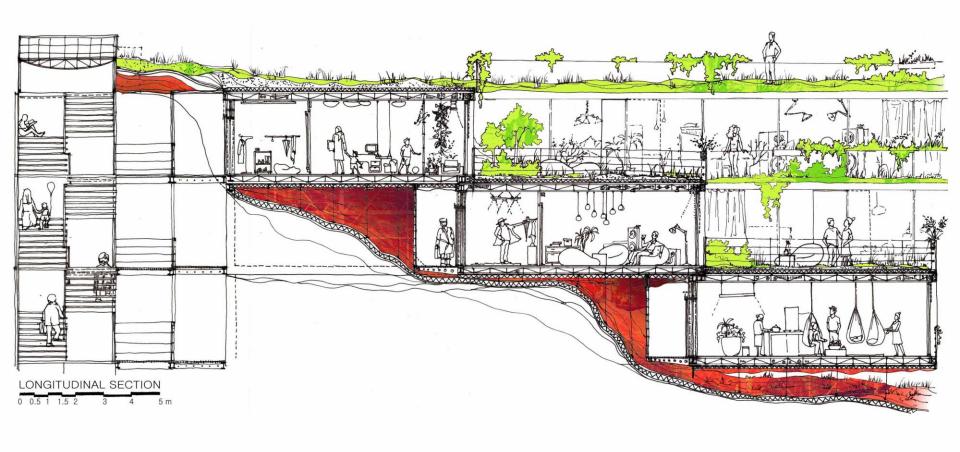
HYDROPONIC WASTEWATER
TREATMENT PLANT

GREEN VALLEY

☀ SUMMER
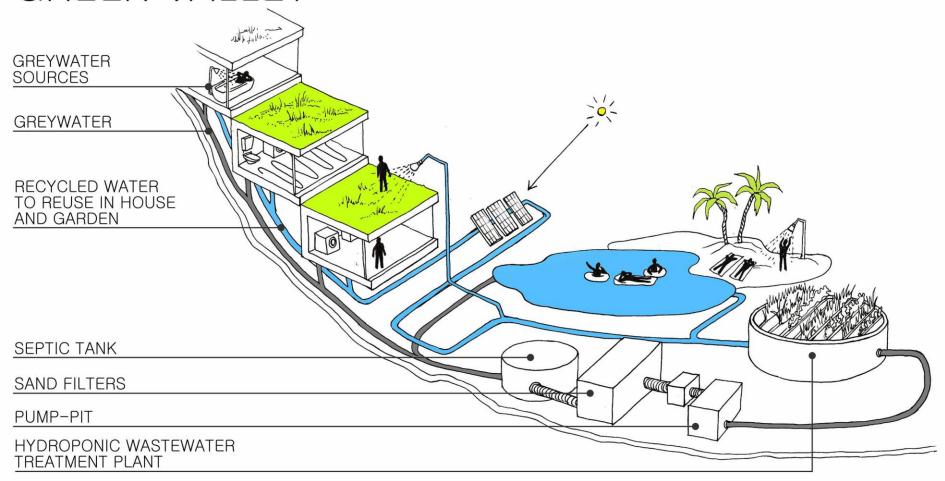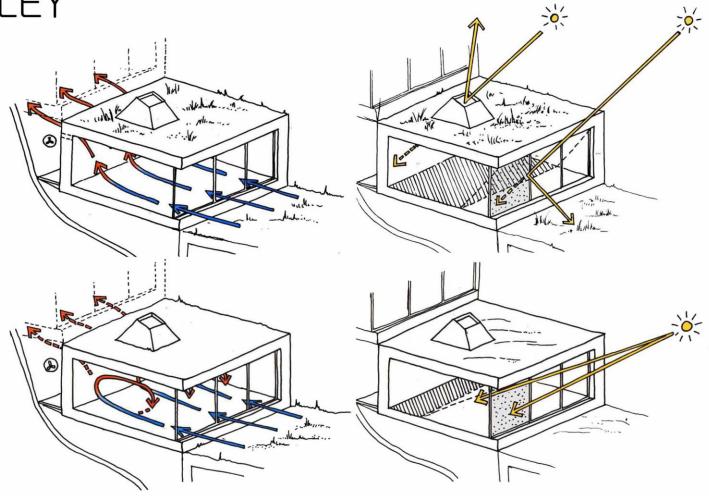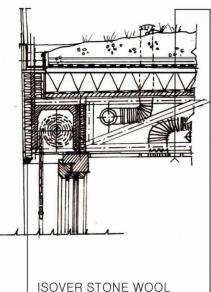
CROSS VENTILATION COOLS
THE APARTMENT DOWN

REFLECTION OF THE SUNLIGHT
AND ACCUMULATION OF THE
SOLAR ENERGY BY
PHOTOVOLTAIC PANELS
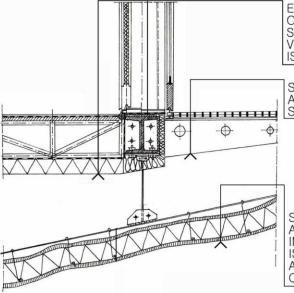
❄ WINTER

VENTILATION IS FOCUSED ON
SYSTEM WITH HEAT RECOVERY

ABSORBTION OF THE SUNLIGHT
AND ACCUMULATION
OF THE SOLAR ENERGY BY
PHOTOVOLTAIC PANELS
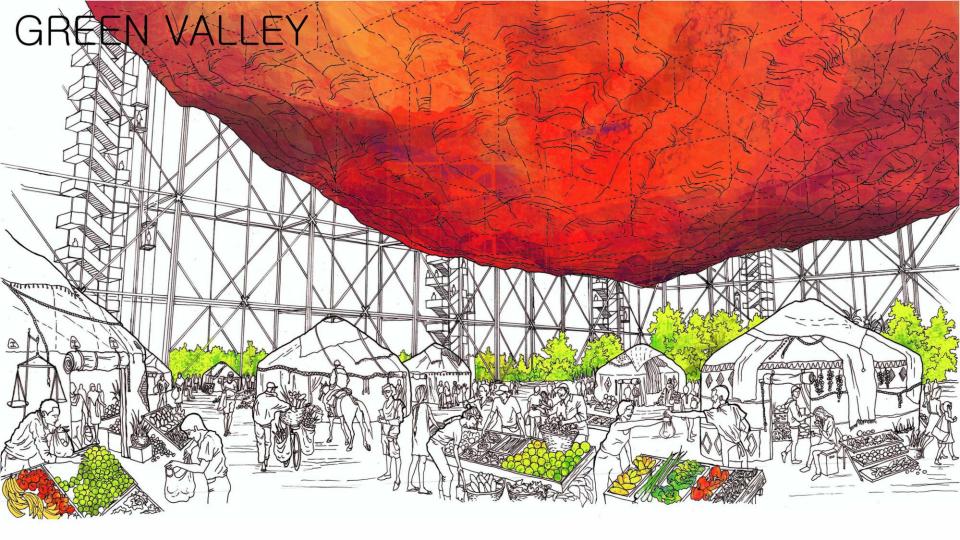
GREEN VALLEY

DETAILS

EPOXY RESIN FLOOR
OSB BOARD
STEEL CONSTRUCTION ELEMENT
VAPOR BARRIER ISOVER VARIO DUPLEX
ISOVER MINERAL WOOL PANELS

STEEL GRATING WALKWAY
AMORTIZING BASE
STEEL CANTILEVER

SOIL WITH PLANTINGS
FILTER FABRIC
MOISTURE RETENTION LAYER
AERATION LAYER
DREINAGE LAYER
MOISTURE BARRIER
LOAD-BEARING LAYER
ISOVER MINERAL GLASS WOOL
ISOVER STONE WOOL
VAPOR BARRIER ISOVER STOPAIR
OSB BOARD
STEEL CONSTRUCTION ELEMENT
SAINT GOBAIN ECOPHON PANELS

STEEL ROD
ALLUMINIUM CONNECTION
INTERNAL COLOURED MEMBRANE
ISOVER MINERAL WOOL
ADHESION SPRAYED EXTERNAL
COLOURED MEMBRANE

ISOVER STONE WOOL

MULTI-COMFORT CRITERIA	REQUIRED	RECEIVED
HEATING ENERGY DEMAND	<30 kWh/m2a	18 kWh/m2a
COOLING ENERGY DEMAND	<15 kWh/m2a	12 kWh/m2a
AIR TIGHTNESS	0,6 V/h	0,3 V/h
DAYLIGHTNING (%)	60%	70%
SUMMER COMFORT (%)	10%- 5%	7%

ACOUSTICS CRITERIA		REQUIRED	RECEIVED
BETWEEN DWELLINGS	AIRBORNE	>58dB	62dB
	IMPACT	<45dB	44dB
BETWEEN ROOMS	AIRBORNE	>45dB	47dB
	IMPACT	<50dB	46dB
FROM EXTERIOR NOISE		<25dB	20dB

GREEN VALLEY

GREEN VALLEY

THANK YOU FOR YOUR ATTENTION