

JA

Joubert Architecture
2007-

Marc Joubert

JA Joubert Architecture
Rotterdam, Netherlands

By the year 2025 Rotterdam aims to have halved its CO₂-emissions; an ambitious plan that will require a revolutionary approach to urban areas. One proactive response to this challenge is an exploratory study of the Hart van Zuid, an area including the Ahoy, Zuidplein and the Ikazia hospital. An interdisciplinary team has investigated how to tackle CO₂-issues in a structured way. This has resulted in the Rotterdam Energy Approach and Planning (REAP) methodology. REAP supports initial demand for energy, propagates the use of waste streams and advocates use of renewable energy sources to satisfy the remaining demand. REAP can be applied at all levels: individual buildings, clusters of buildings and even whole neighbourhoods. Applying REAP to the Hart van Zuid has shown that this area can become CO₂-neutral. Best of all: REAP can be applied everywhere. This booklet explains the background and the methodology behind REAP. Detailed plans for Hart van Zuid lavishly illustrate its use.

REAP

REAP Rotterdam Energy Approach and Planning

REAP

Rotterdam Energy Approach and Planning

Towards CO₂-neutral urban development



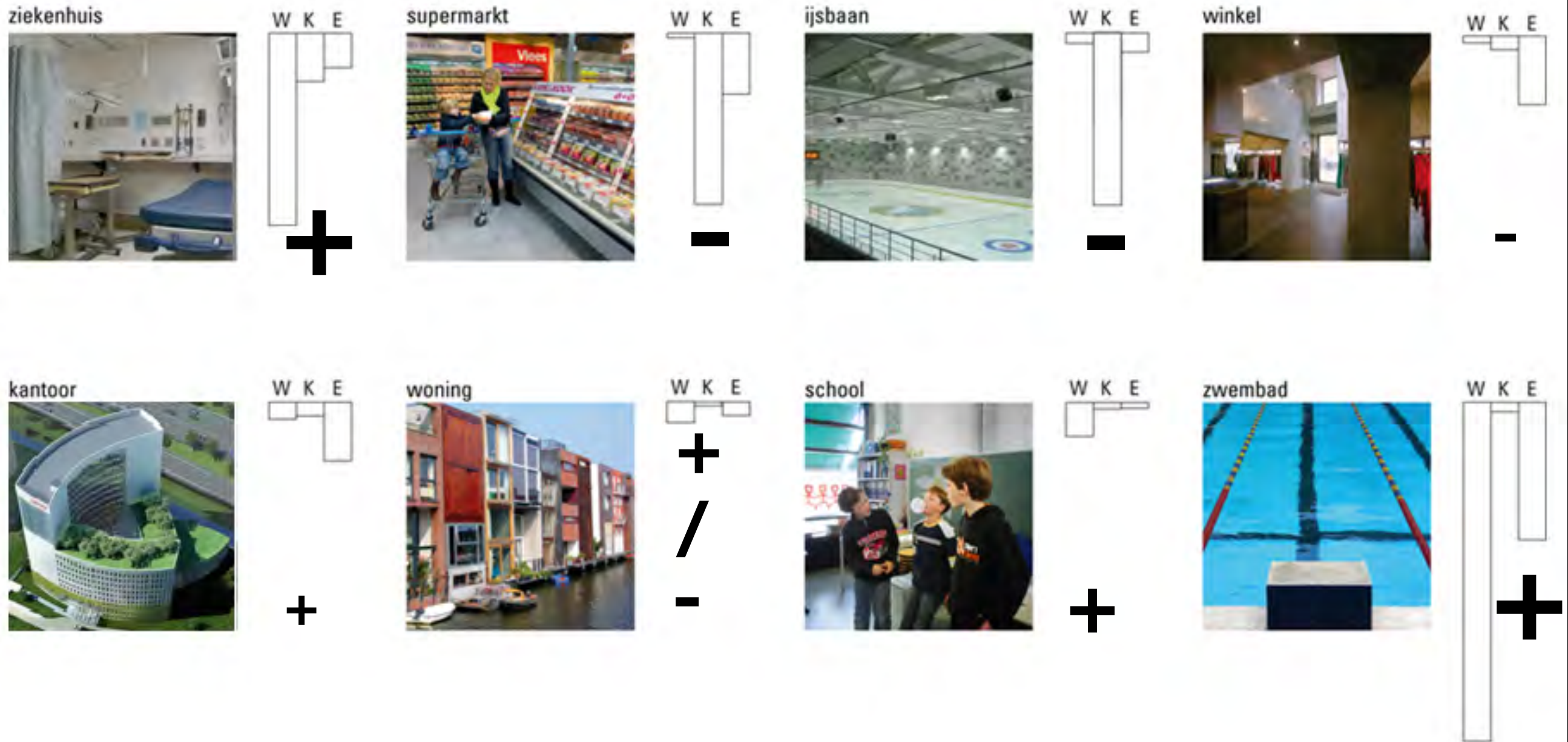
Mixed Sources

Productgroep uit goed beheerde bossen en andere gecontroleerde bronnen.

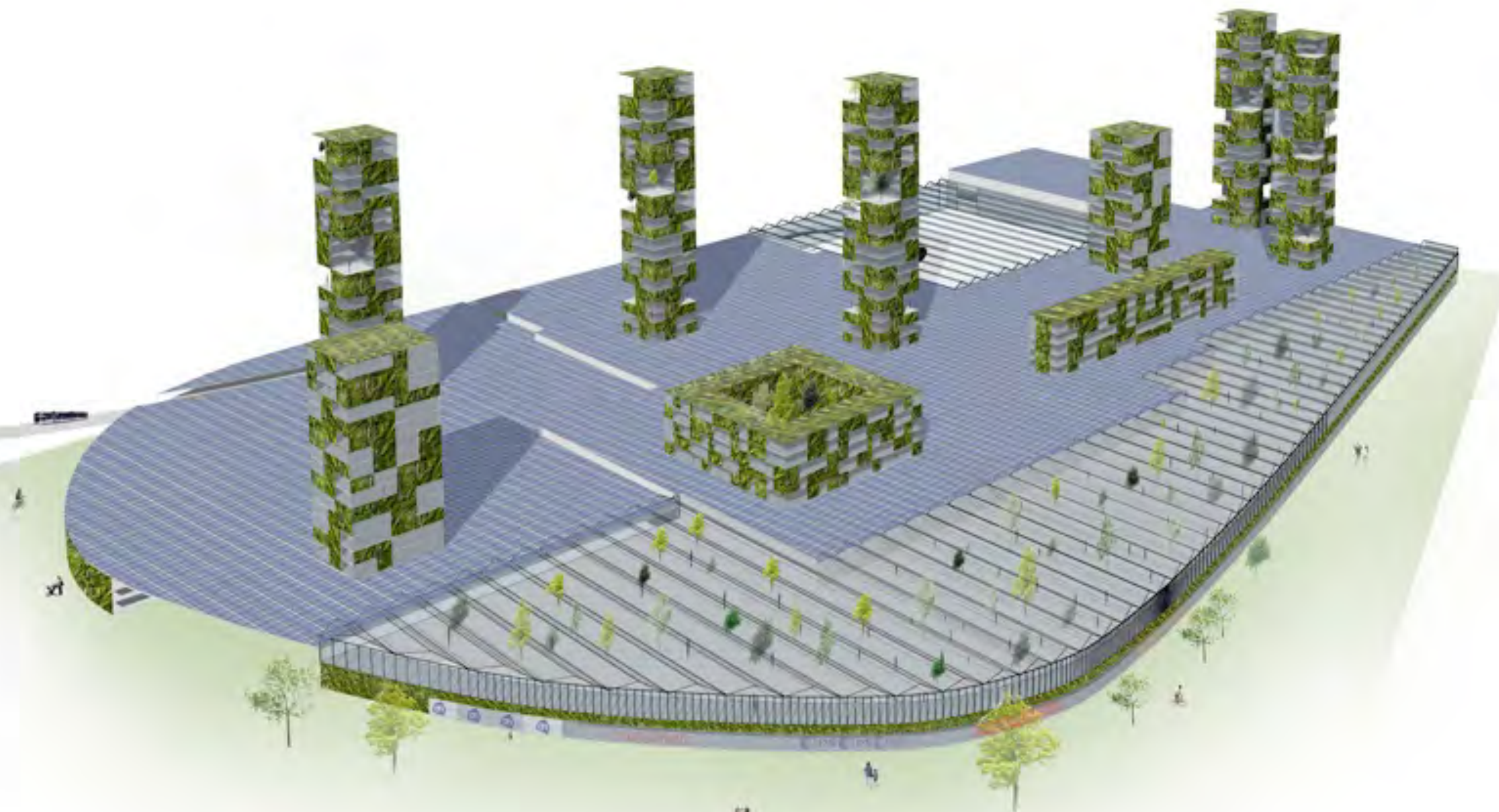
www.fsc.org Cert no. SGS-COC-1980
© 1996 Forest Stewardship Council

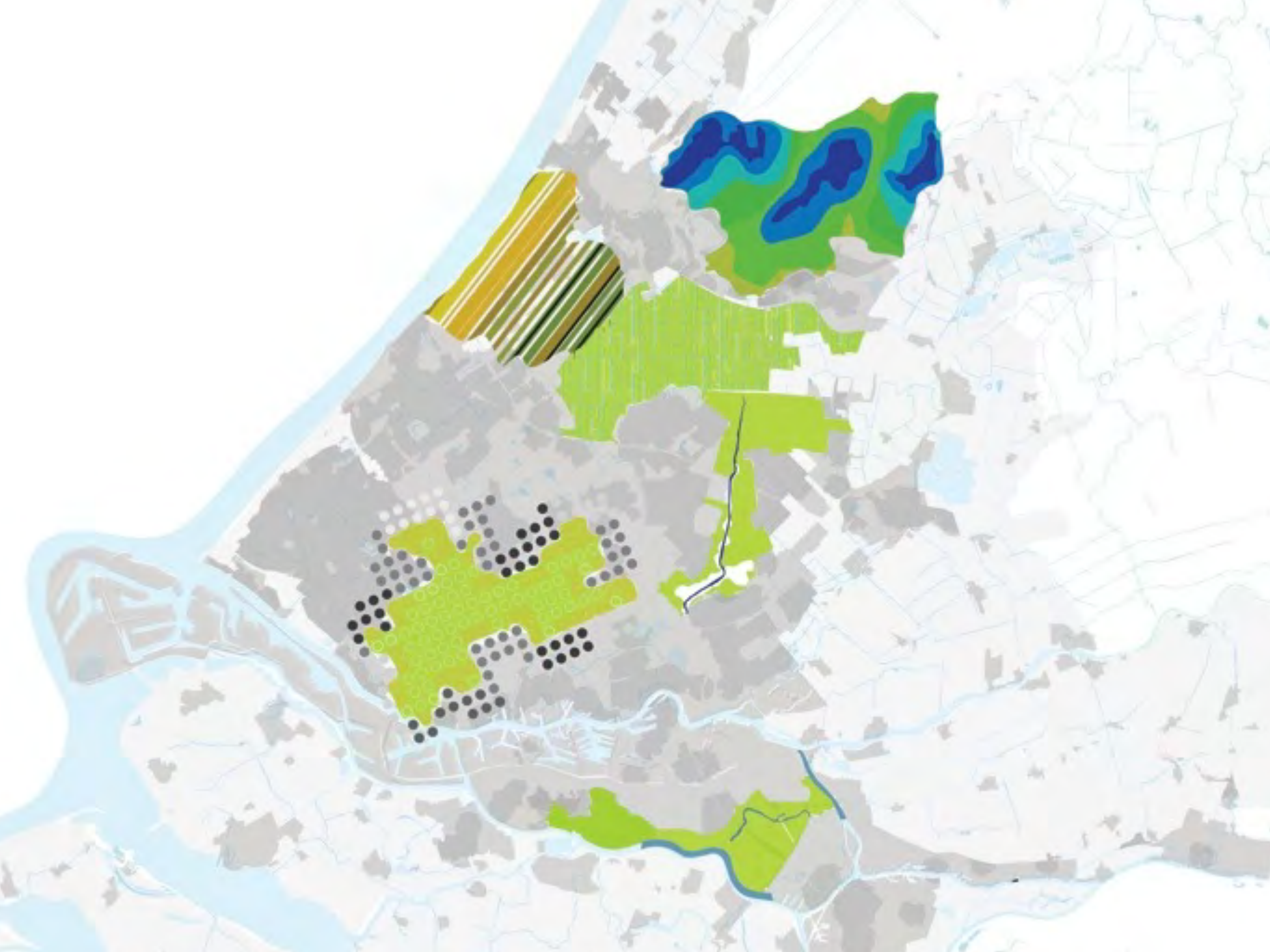
Energy use and Residual Energy per Program.

Make Most Efficient Combination.

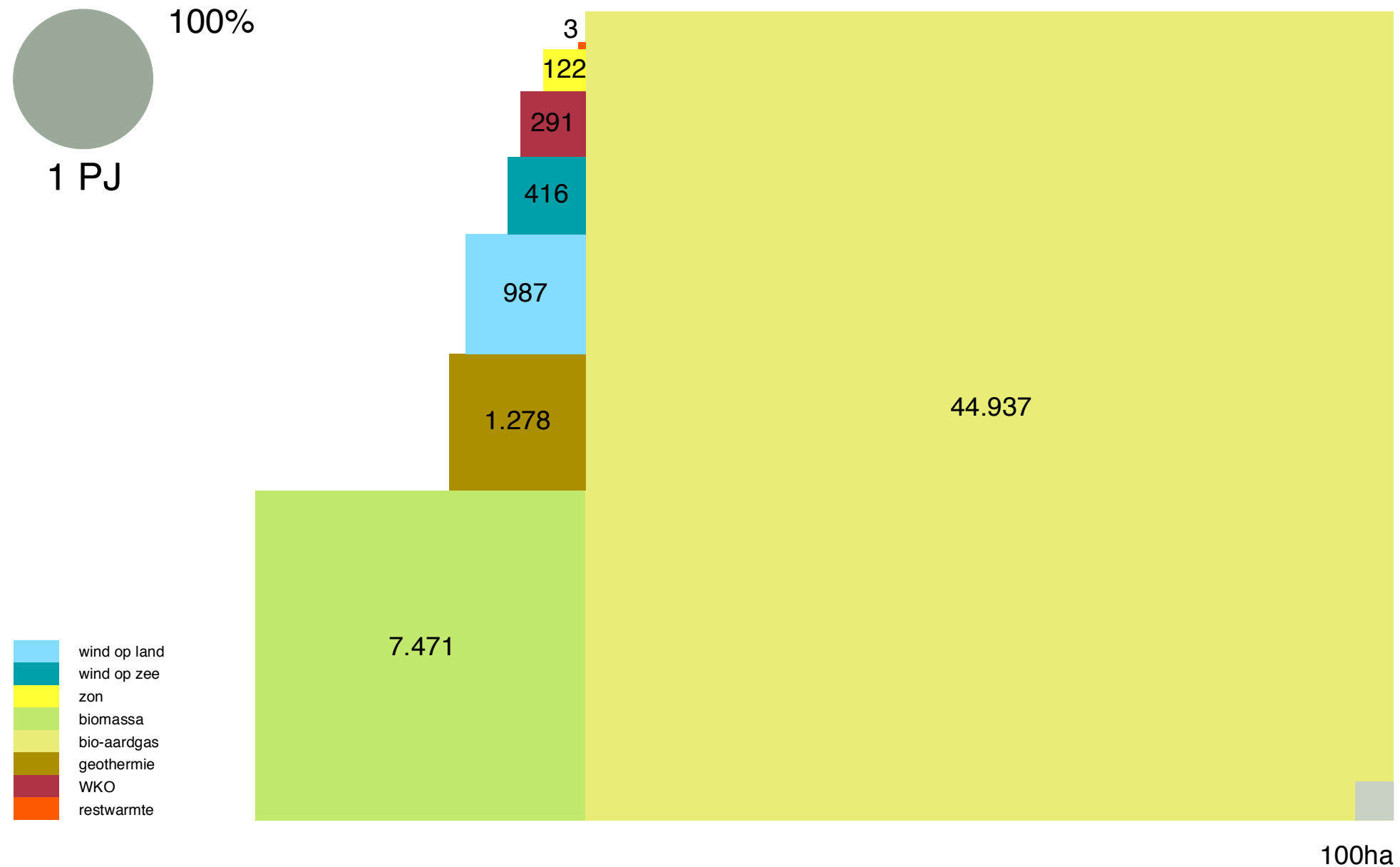


Warm, Cold and Electricity Use for different Programs (Seasonal)





Hoeveel hectare neemt hernieuwbare energie in?



Berekingen op basis van o.a:

- Protocol Monitoring Hernieuwbare Energie - Agentschap NL 2010
- Kleine Energieatlas 2008
- MIRT Verkenning - Energietransitie, Ruimte en interactie 2010



Endless Paper

Architecture Exhibition

JA Joubert Architects Rotterdam
Katedra za arhitekturo i urbanizacijo

Departman za arhitekturo i urbanizacijo
Fakultet tehničkih nauka u Novom Sadu





SHOWCASE PROJECT



ELASSTIC is the acronym for Enhanced Large scale Architecture with Safety and Security Technologies and special Information Capabilities. The project is co-funded by the 7th Framework Programme of the European Commission. Read more about the project on this website!

The ever increasing size, height and complexity of large scale urban built infrastructures lead to higher risks with respect to natural and manmade threats. In case of a real incident, this leads to more casualties and damage. Evidently, there is a need for a comprehensive approach for improvement of the security and resilience of large scale complex structures in order to safeguard the infrastructure and its occupants during its entire life-cycle, including regular operational processes as well as exceptional crisis situations.

The overall objective of the **ELASSTIC** project is to improve the safety, security and resilience of large scale multifunctional building complexes to natural and man-made disasters by providing a methodology and tools which enable to include security and resilience from the early design and planning phase of such projects.

Facts & Figures

- Full name: Enhanced Large scale Architecture with Safety and Security Technologies and special Information Capabilities
- Acronym: ELASSTIC
- Duration: 36 months
- Start date: 1 May 2013
- Total budget: 5.29 M€
- EC Funding: 3.47 M€

Project Partners

[Read more](#) about the project partners

Definitions

[Read more](#) about project definitions

Project Flyer 1



Project Flyer 2



News

[Flyer 2 released »](#)

[Deliverable 2.1 released »](#)

[Launch of project website »](#)

[Official start of the ELASSTIC project »](#)

Events

June 16, 2015

[BIM today »](#)

August 17, 2015

[IASS 2015 »](#)

Tweets



MC Versteegden

3 april

@MCVersteegden

Poster ready! #Elastic # EP7
pic.twitter.com/NF4D9CbdU8



Nieuwe tweet opstellen...

News letter



Why Tesla's battery for your home should terrify utilities

Elon Musk's electricity empire could mean a new type of power grid

By [Josh Dzieza](#) on February 13, 2015 02:25 pm



(Bill Pugliano/Getty Images)

Earlier this week, during a disappointing Tesla earnings call, [Elon Musk mentioned](#) in passing that he'd be producing a stationary battery for powering the home in the next few months. It sounded like a throwaway side project from someone who's never seen a side project he doesn't like. But it's a very smart move, and one that's more central to Musk's ambitions than it might seem.

GIZMODO

We're Six Years Closer to a Clean Energy Future Than We Thought



Alissa Walker

Filed to: AFTERNOON READING 4/09/15 7:30pm

18,670



11



Apple investing \$850 million in California solar farm

SAN FRANCISCO | BY CHRISTINA FARR



Apple CEO Tim Cook speaks at the WSJD Live conference in Laguna Beach, California October 27, 2014.
REUTERS/LUCY NICHOLSON

(Reuters) - [Apple Inc](#) Chief Executive Tim Cook said on Tuesday the technology company is investing \$850 million to help build a solar farm in California with solar panel maker First Solar.

The project in Monterey County, California will provide enough energy for 60,000 homes as

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TRENDING ON REUTERS

Nokia buys Alcatel to take on Ericsson in telecom equipment | [VIDEO](#)

1

Ex-NFL star Hernandez gets life in prison for 2013 killing | [VIDEO](#)

2

Protester against ECB 'dictatorship' showers Draghi with confetti | [VIDEO](#)

3

Exclusive: Six percent of U.S. adults plan to buy Apple Watch - Reuters/Ipsos poll

4

Mideast's arch-survivor stands in way of Saudi success in Yemen | [VIDEO](#)

5

Energy

Urban Planning:

Reduce transport

Promote cycling

Remote heating

Reuse waste energy

Orientation - light & sunlight

Natural ventilation

Architecture:

Local materials

Better isolation

Sun in winter / shade in summer

Local energy production (Electric & heat) PVT

Local energy storage : battery and geothermal storage

Active
Passive

Kagithane
Istanbul, Turkey

rooftrim
+47350
level 10
+45300

level 9
+41100

level 8
+36900

level 7
+32700

level 6
+28500

level 5
+24300

level 4
+20100

level 3
+15900

level 2
+7500

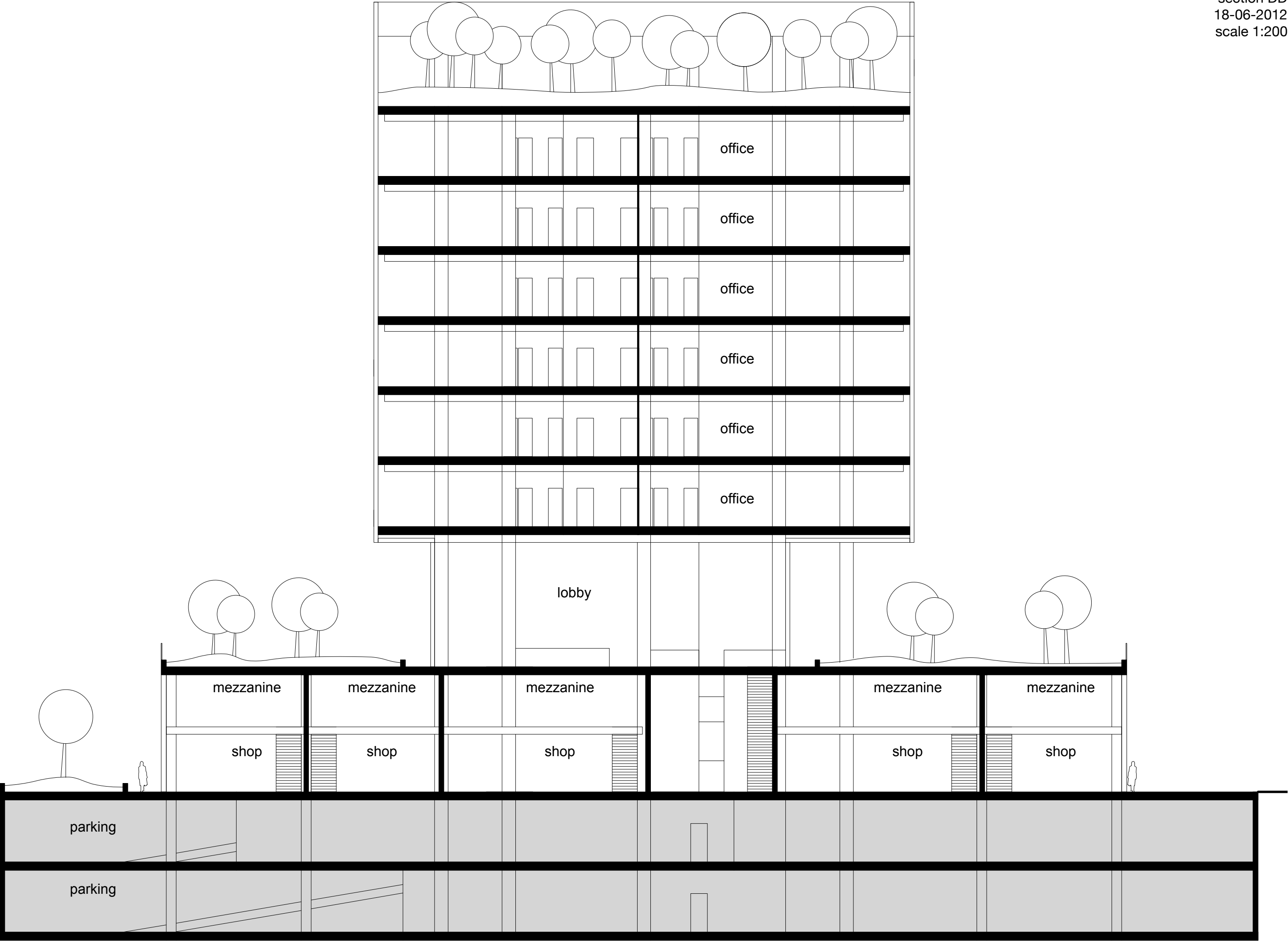
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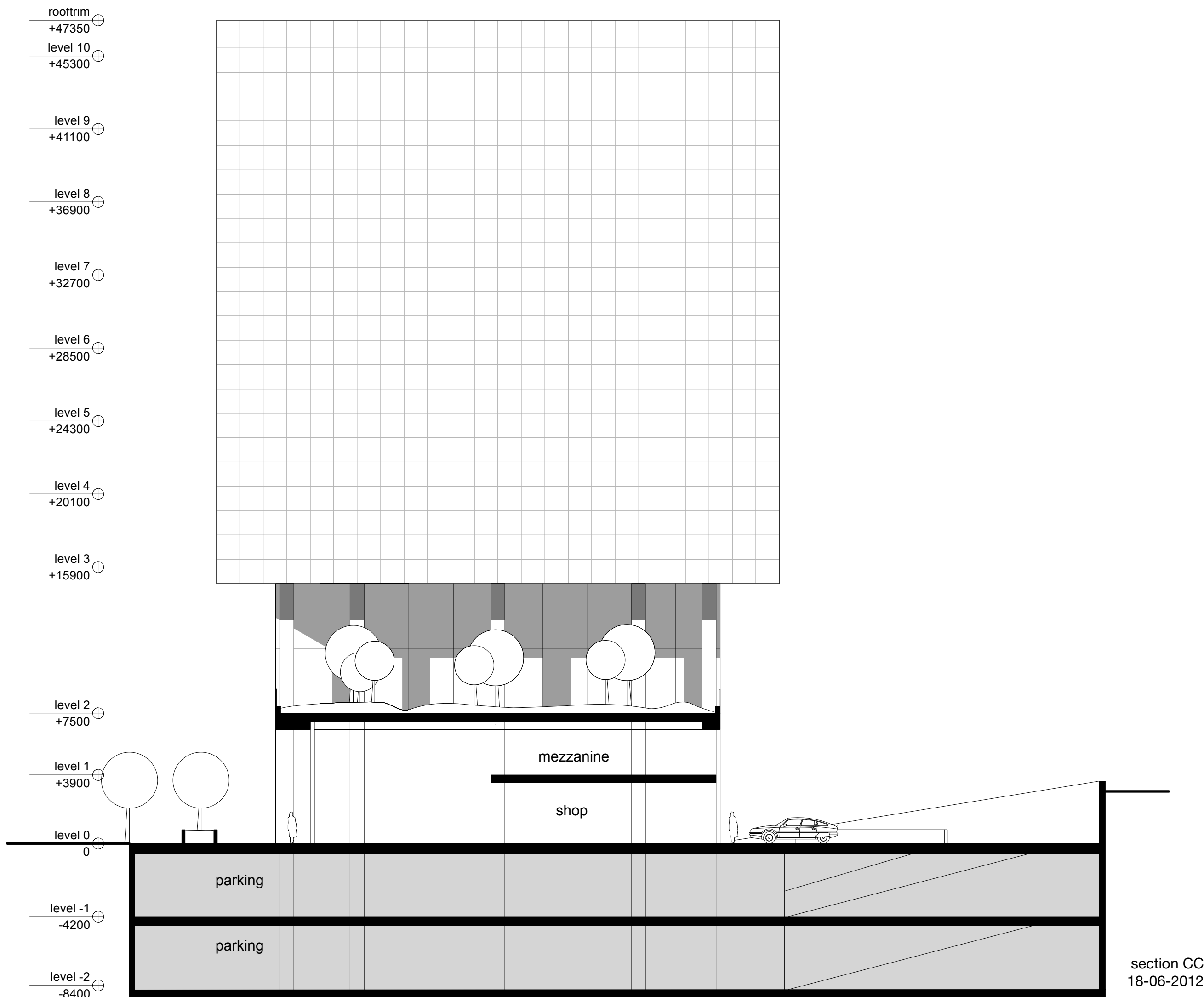
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0

level -1
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level -2
-8400

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scale 1:200

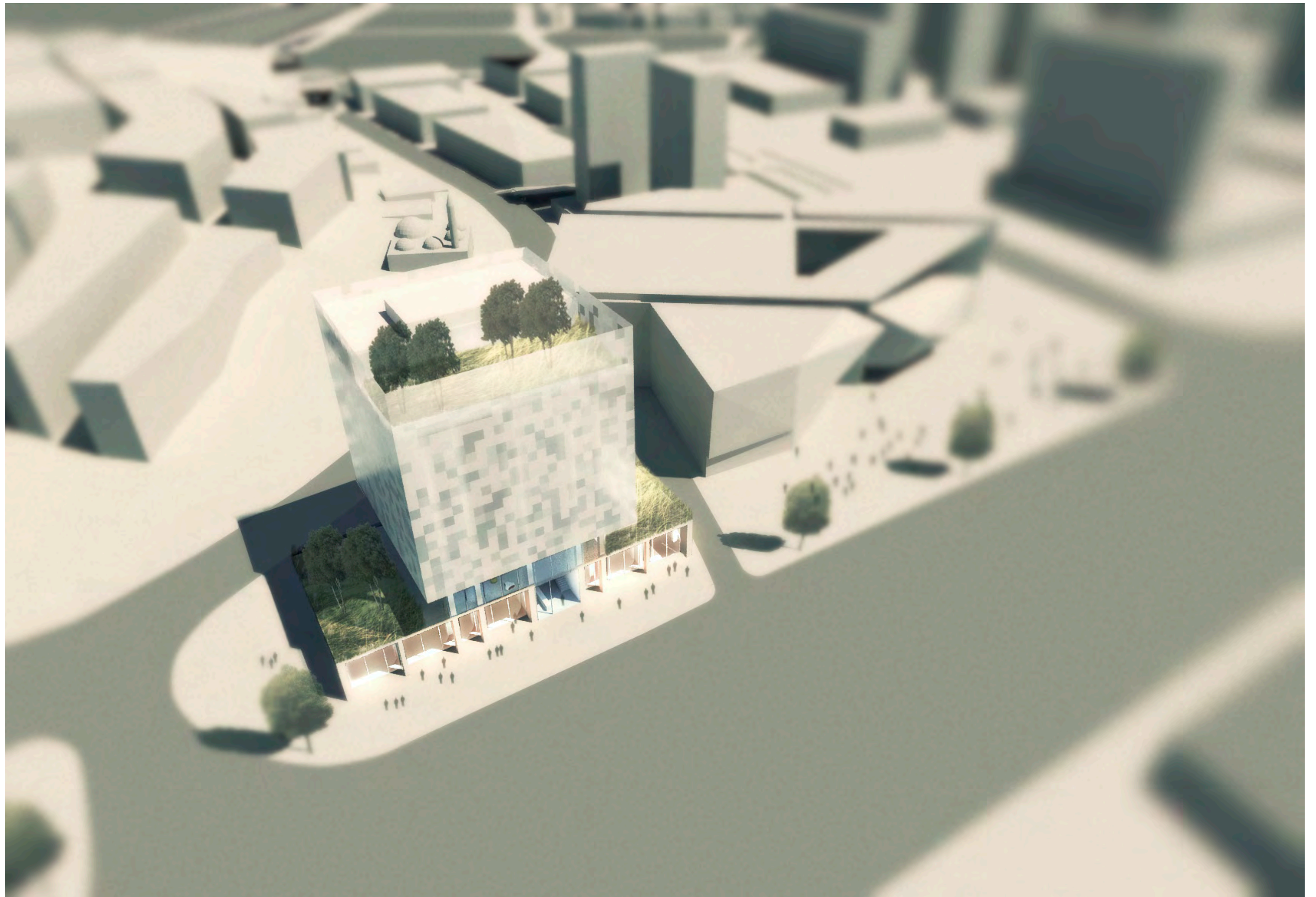




scale 1:200

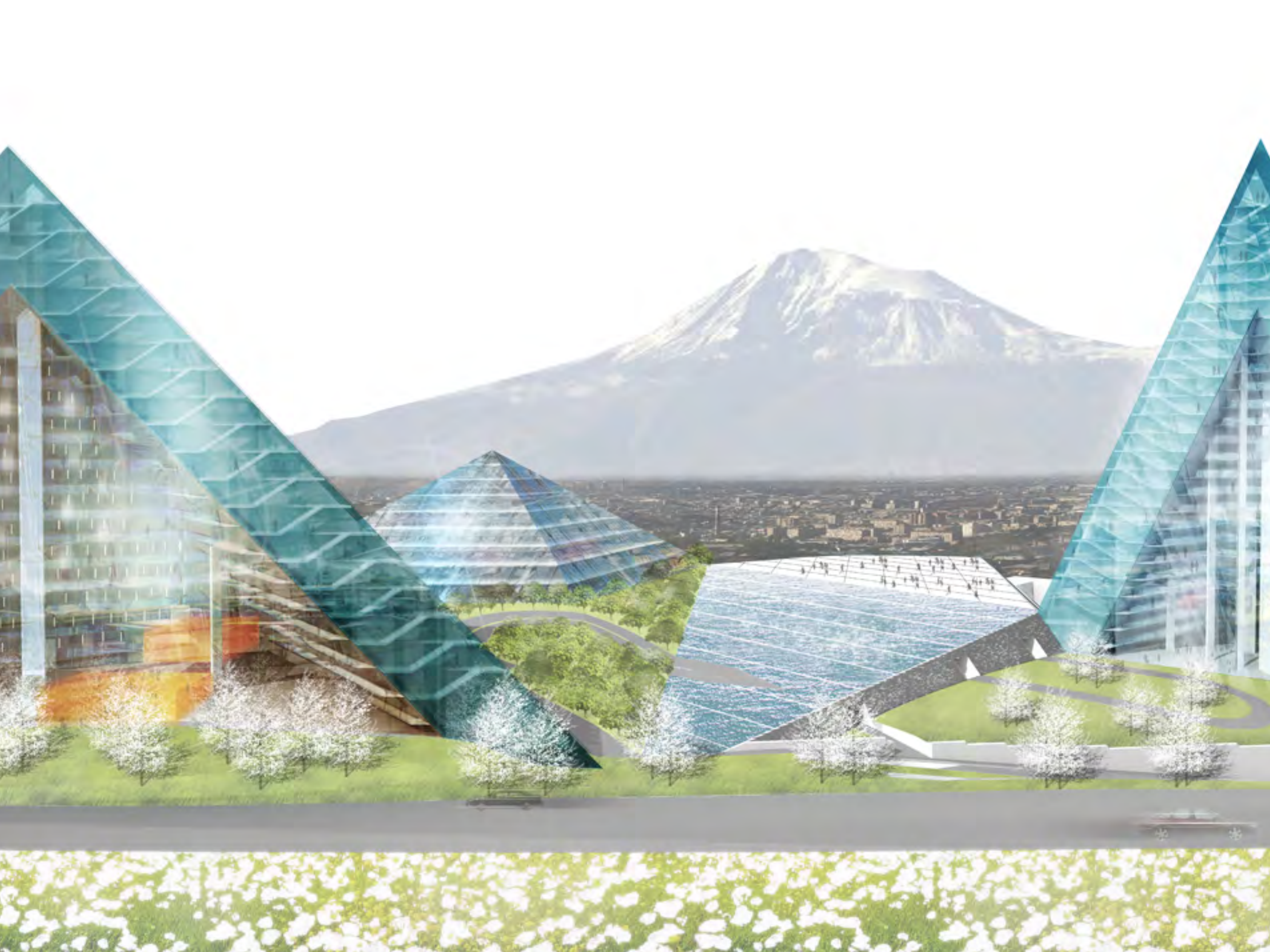
section CC
18-06-2012

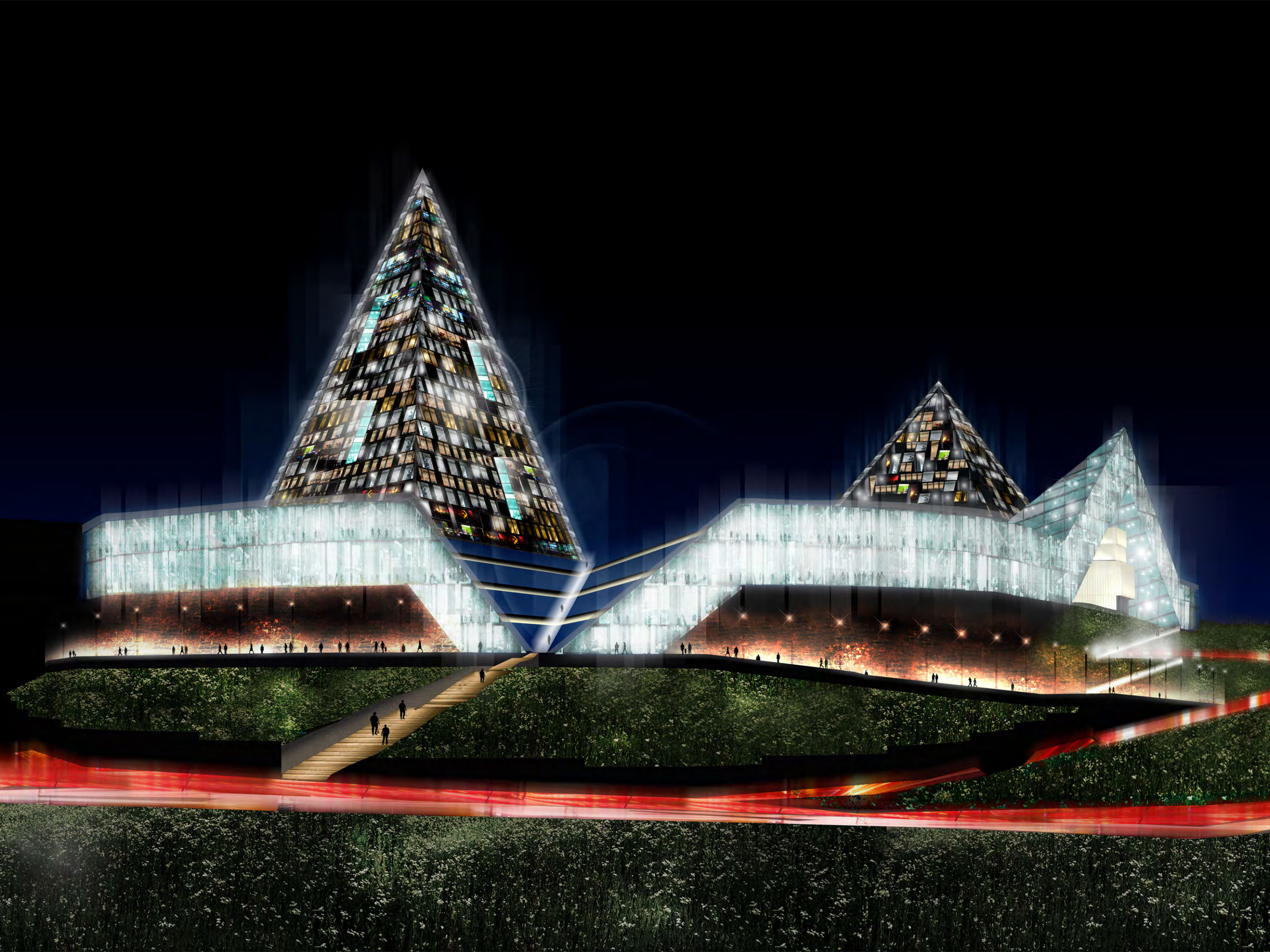


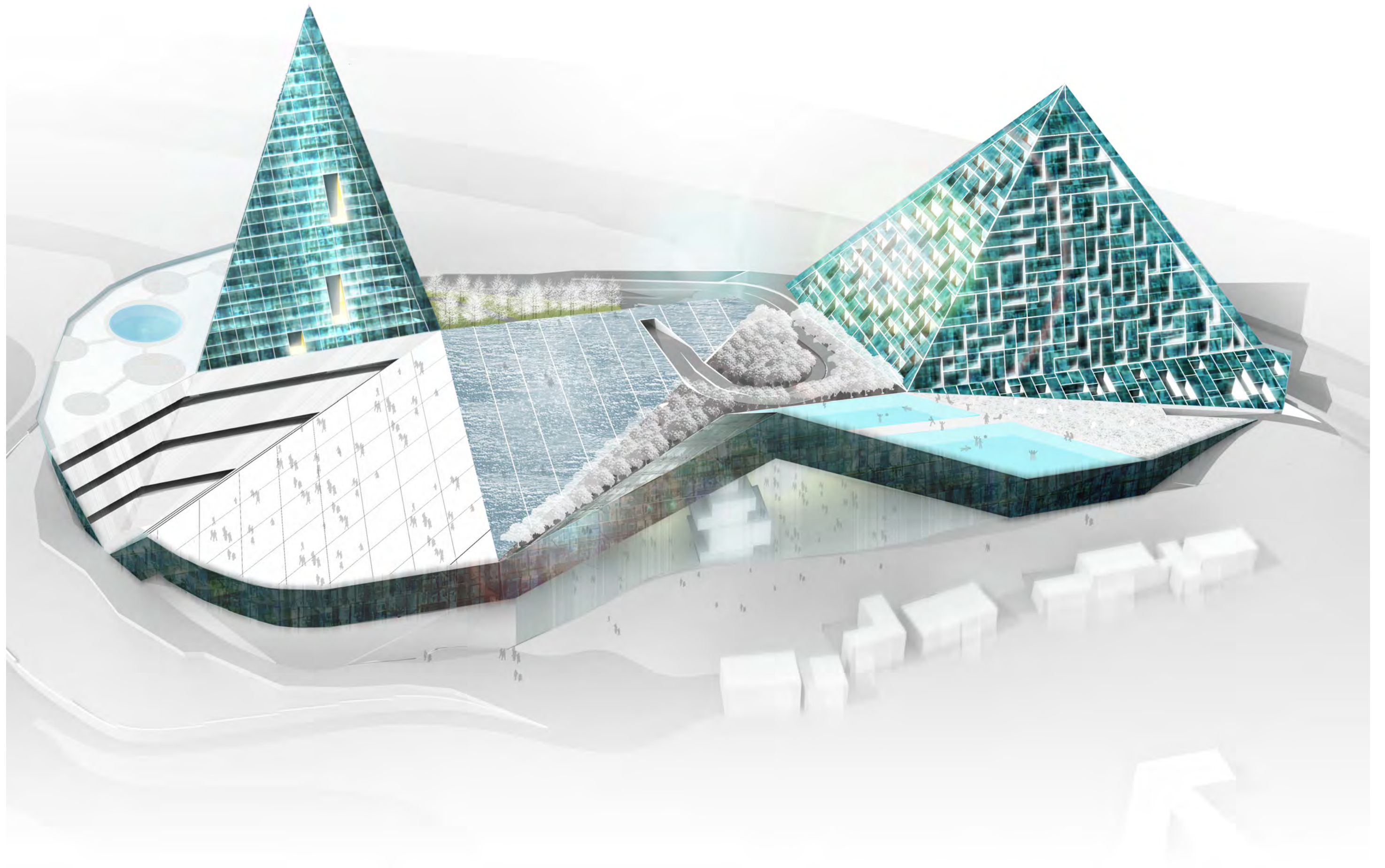


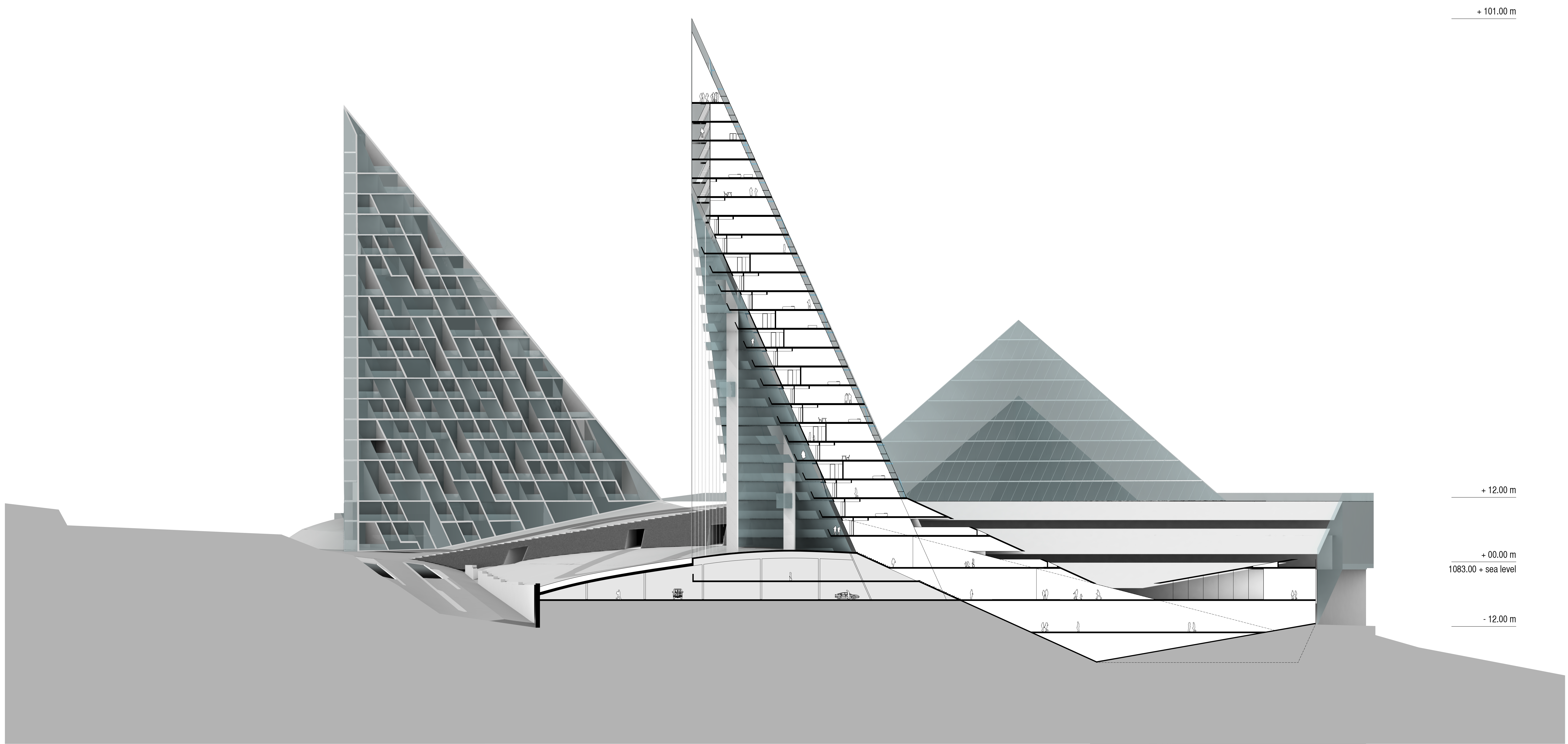
40N44E

Yerevan, Armenia









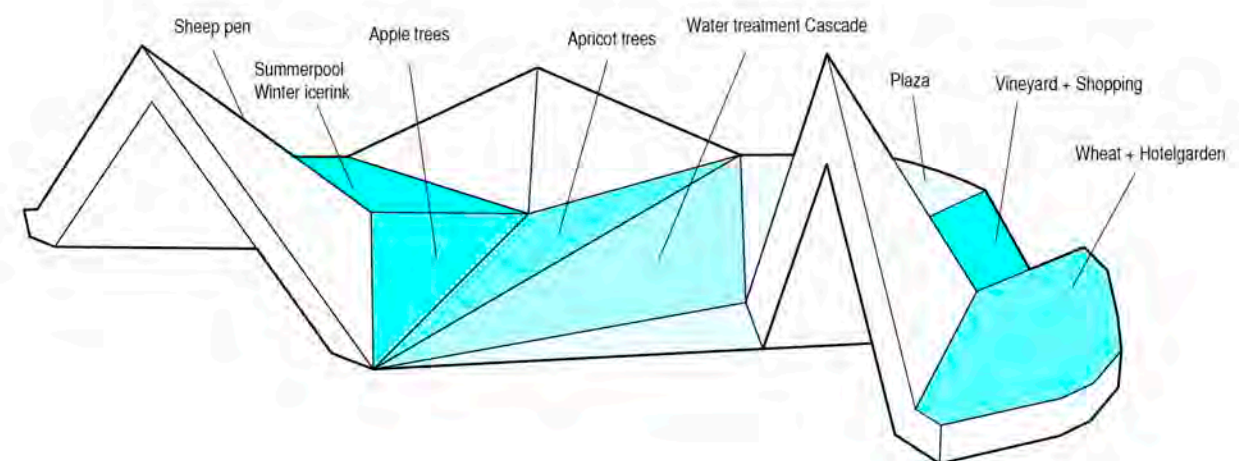
+ 101.00 m

+ 12.00 m

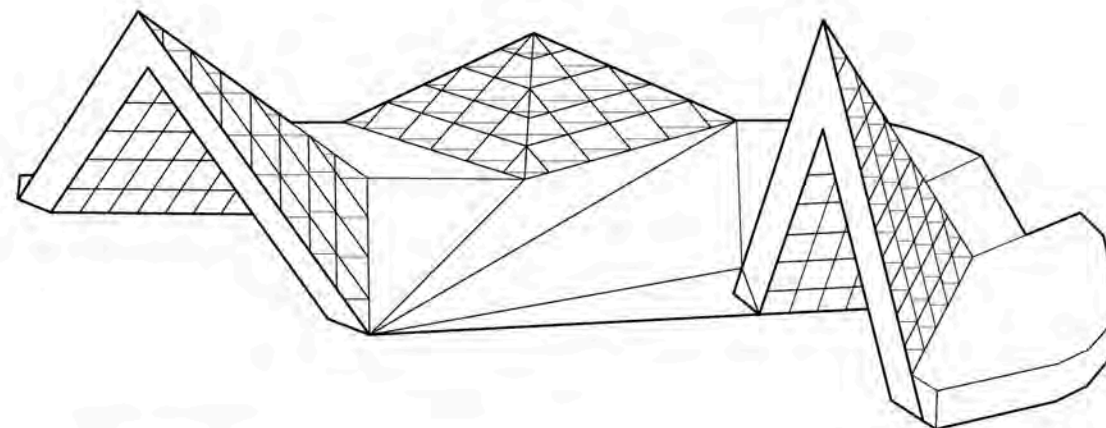
+ 00.00 m

1083.00 + sea level

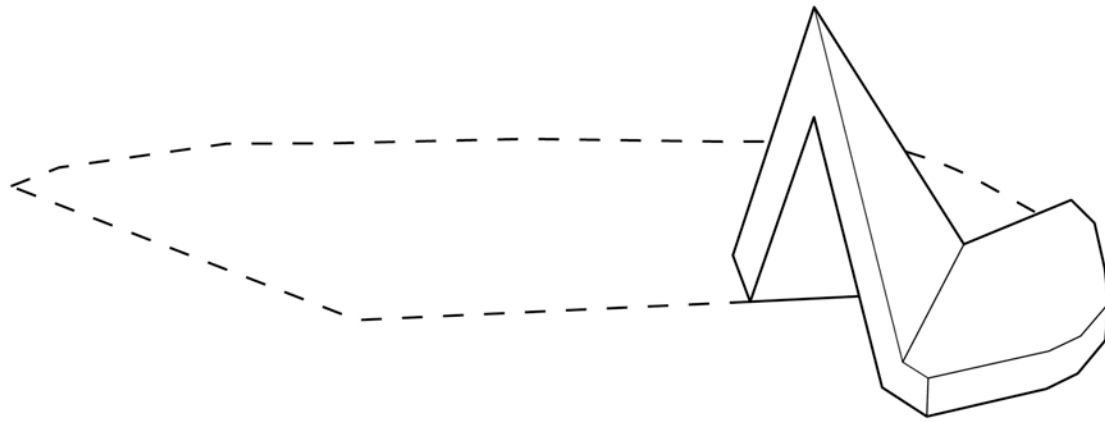
- 12.00 m



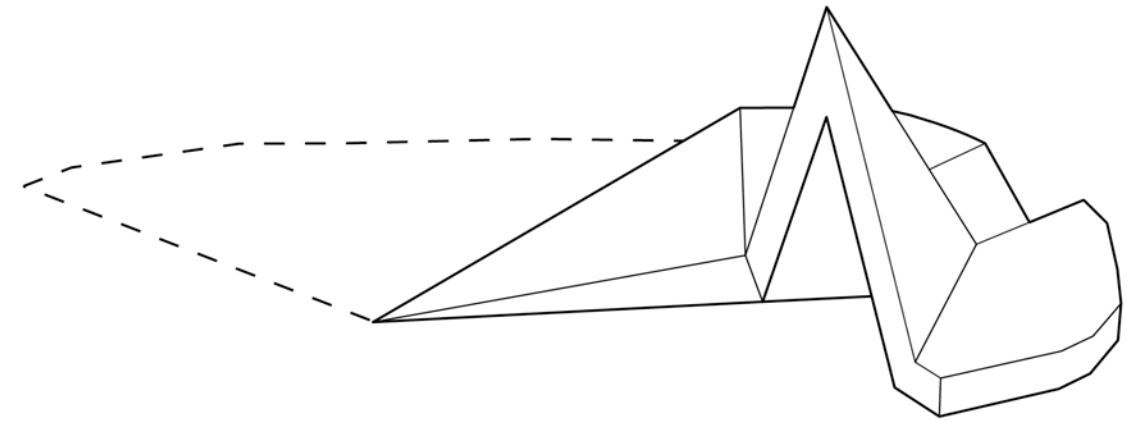
DECK



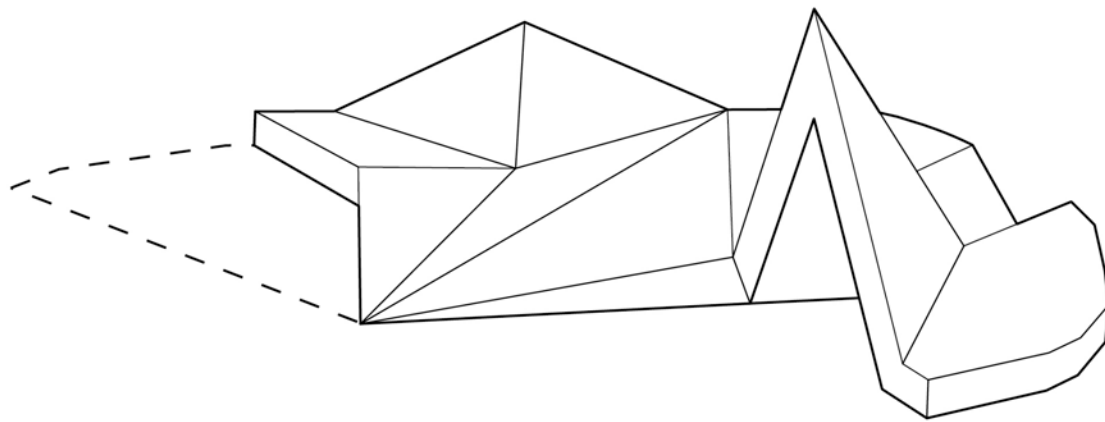
CONSTRUCTION SCHEME



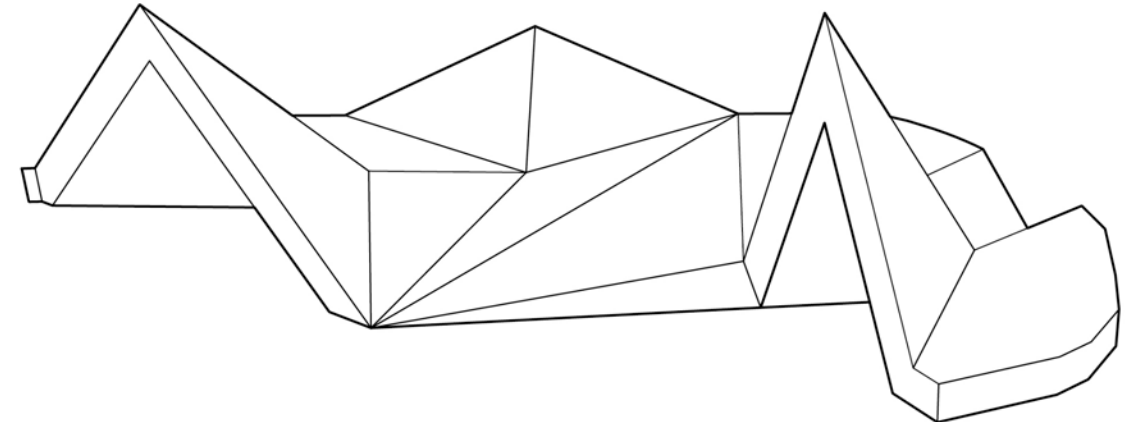
PHASE 1: Intercontinental Hotel & Apartments



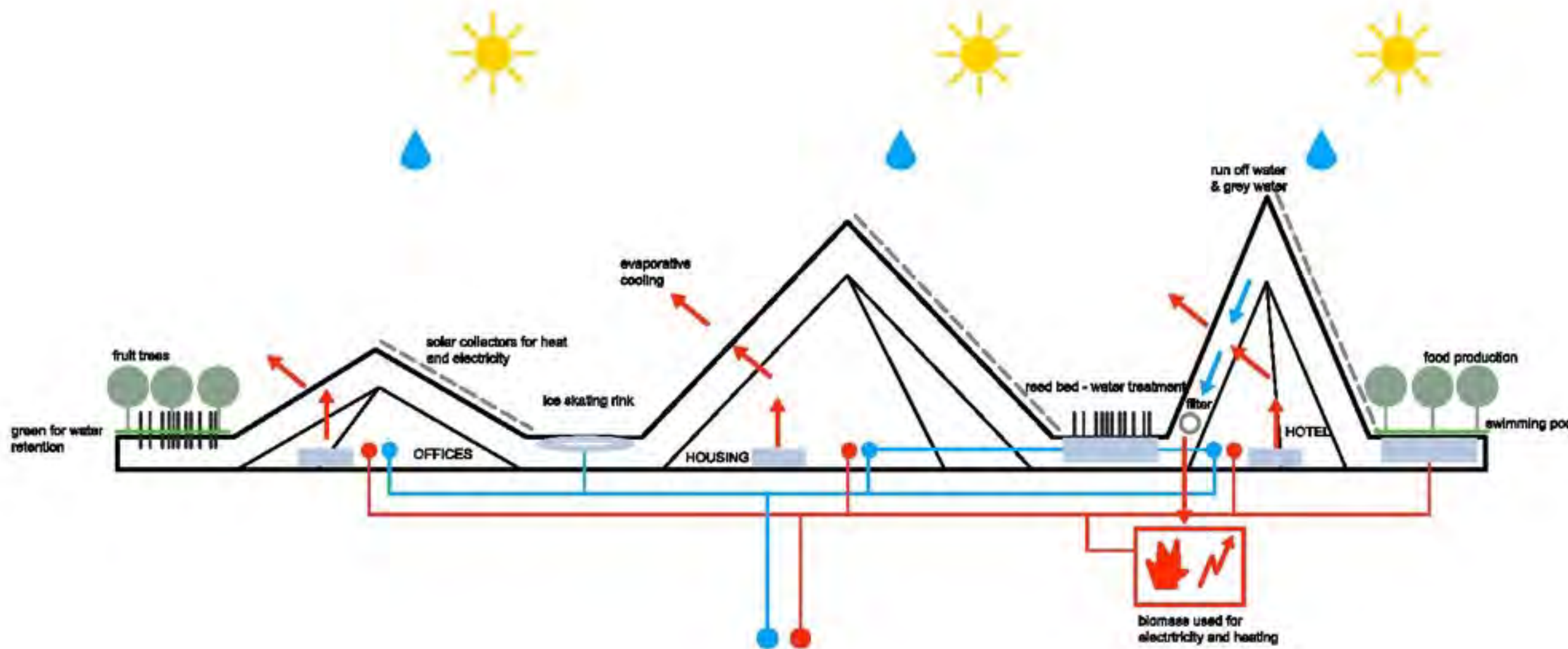
PHASE 2: Shopping Center

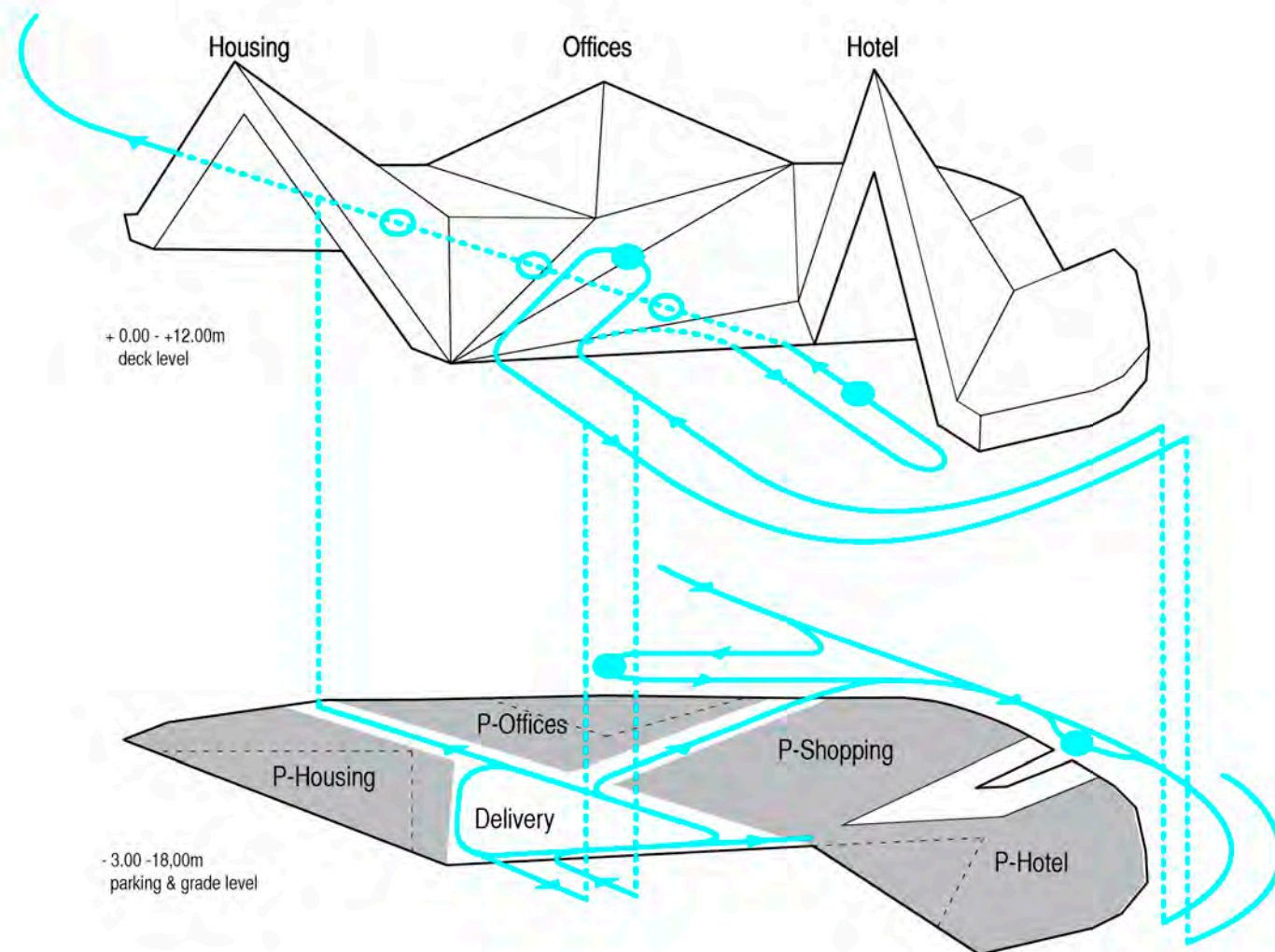


PHASE 3: IBA International Business Center

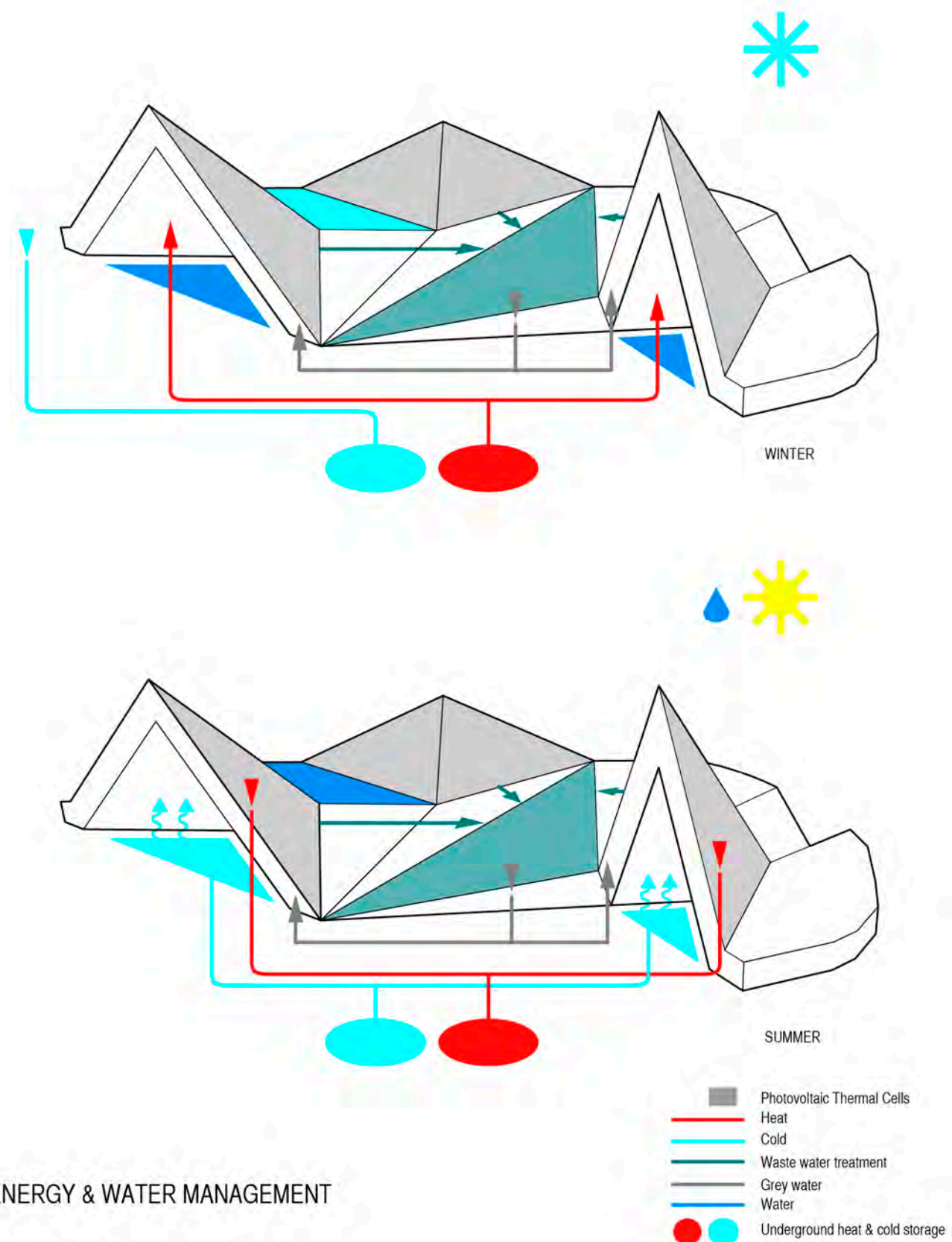


PHASE 4: Apartment building





ROUTING



ENERGY & WATER MANAGEMENT

Skanderbeg Square
Tirana, Albania



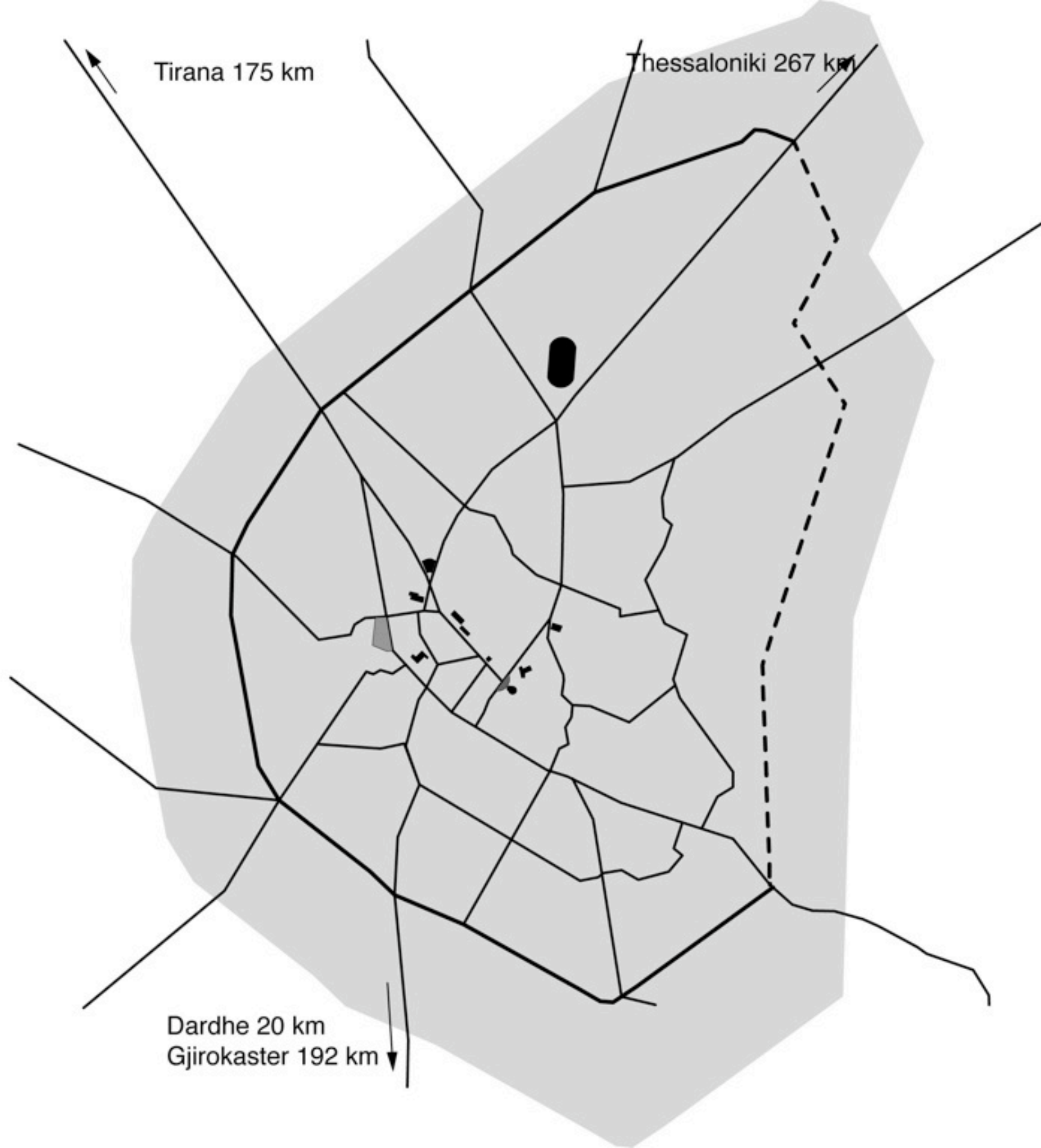


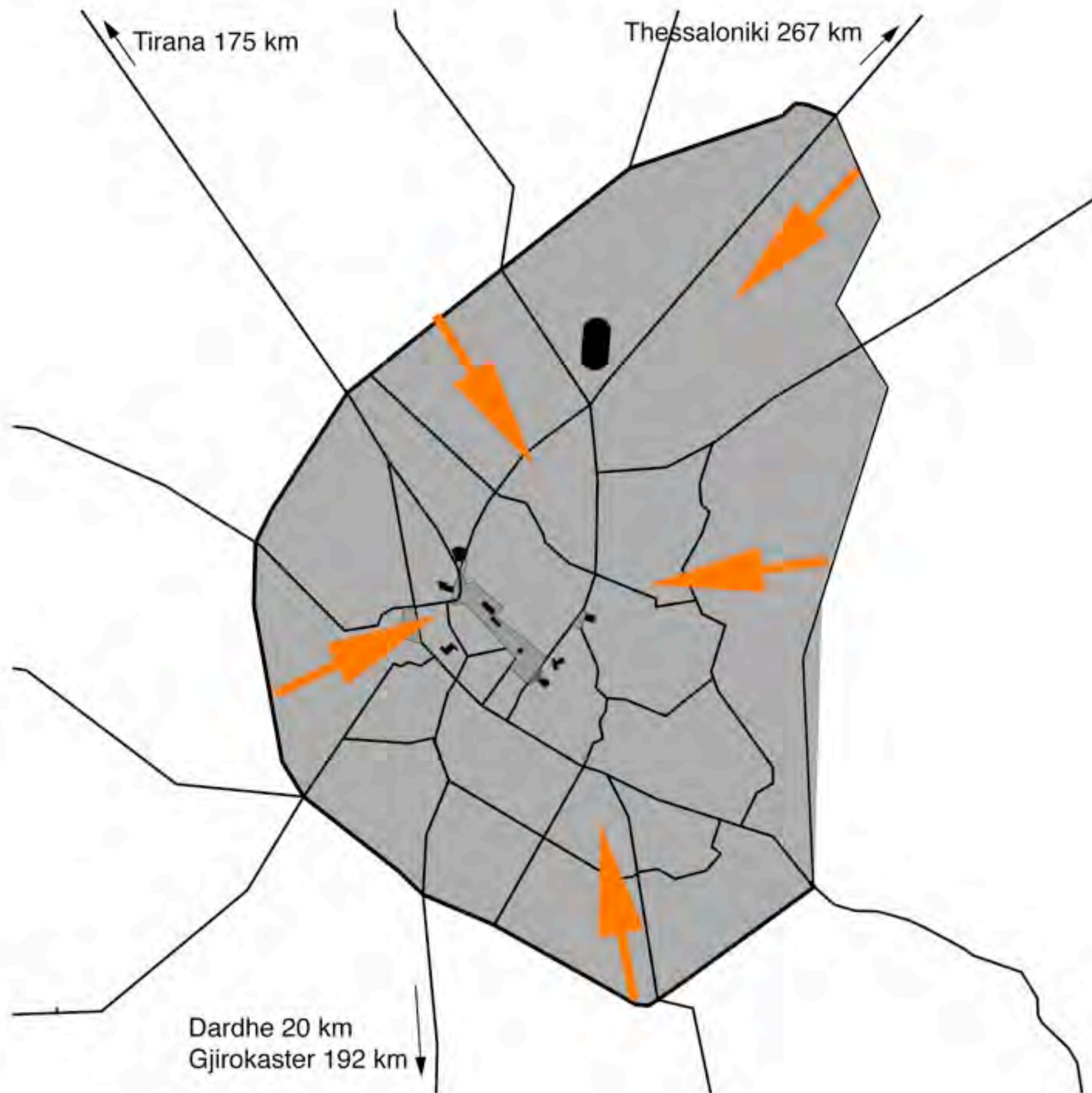




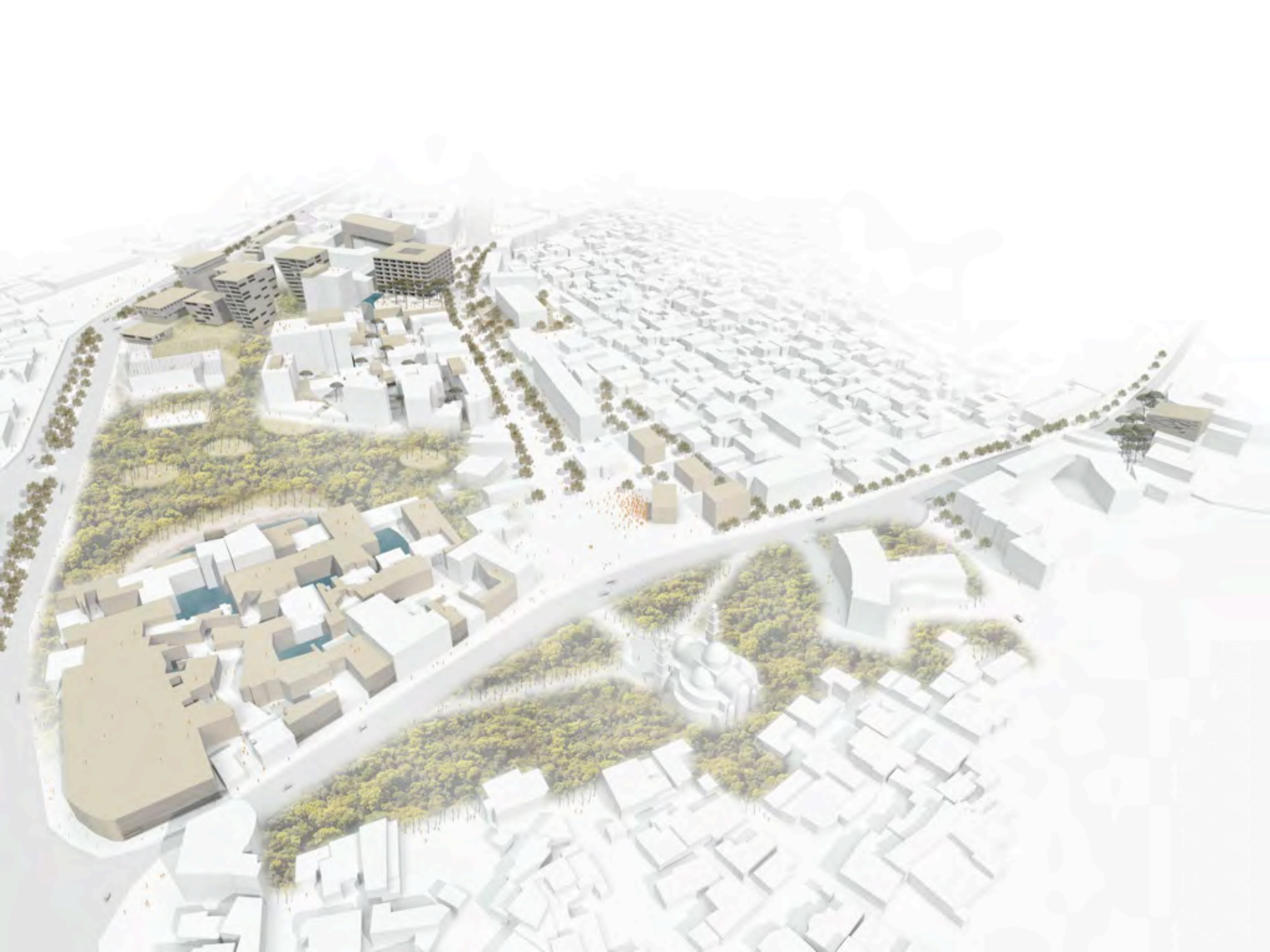
Korca
Albania





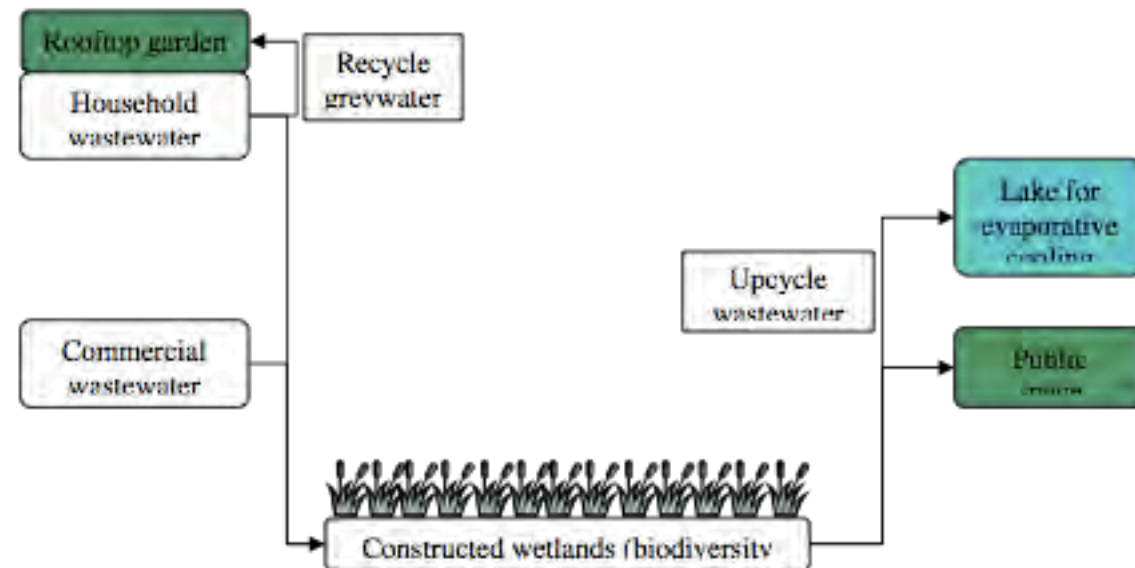






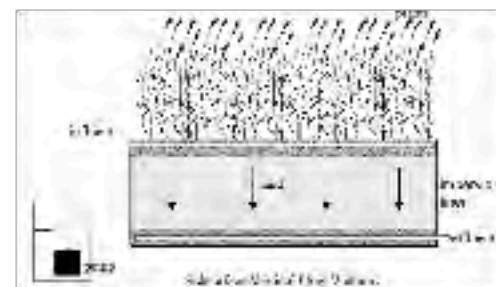
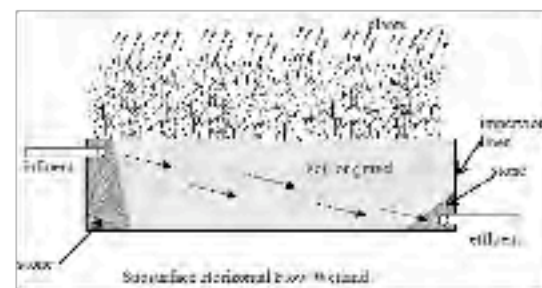
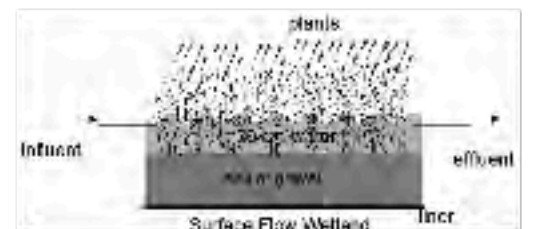




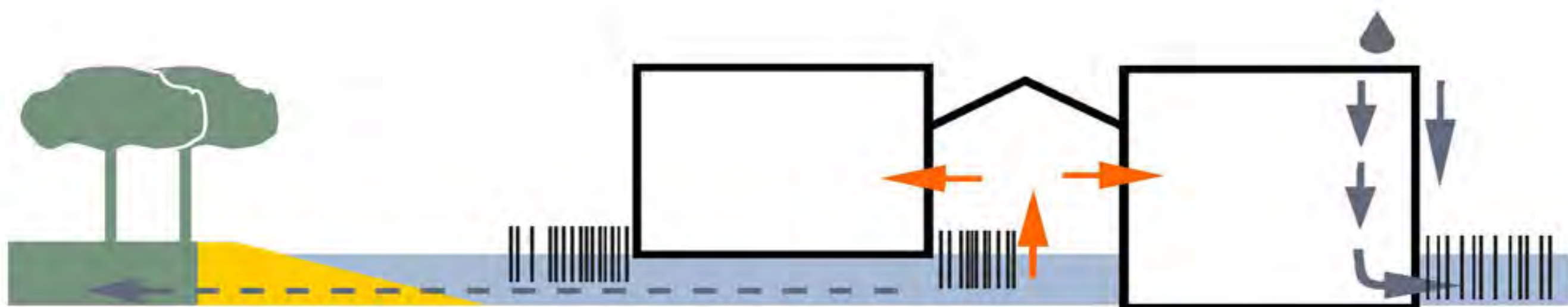


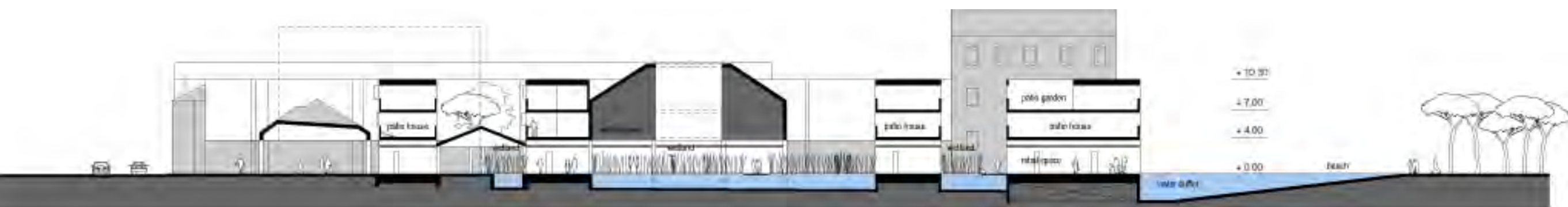
This can be sold on 2 points. First by separating the grey from black water of the residents, we are greatly reducing the wastewater flow. Second, we are installing a system where human "pollution" actually promotes biodiversity, well being and ultimately even comfort!

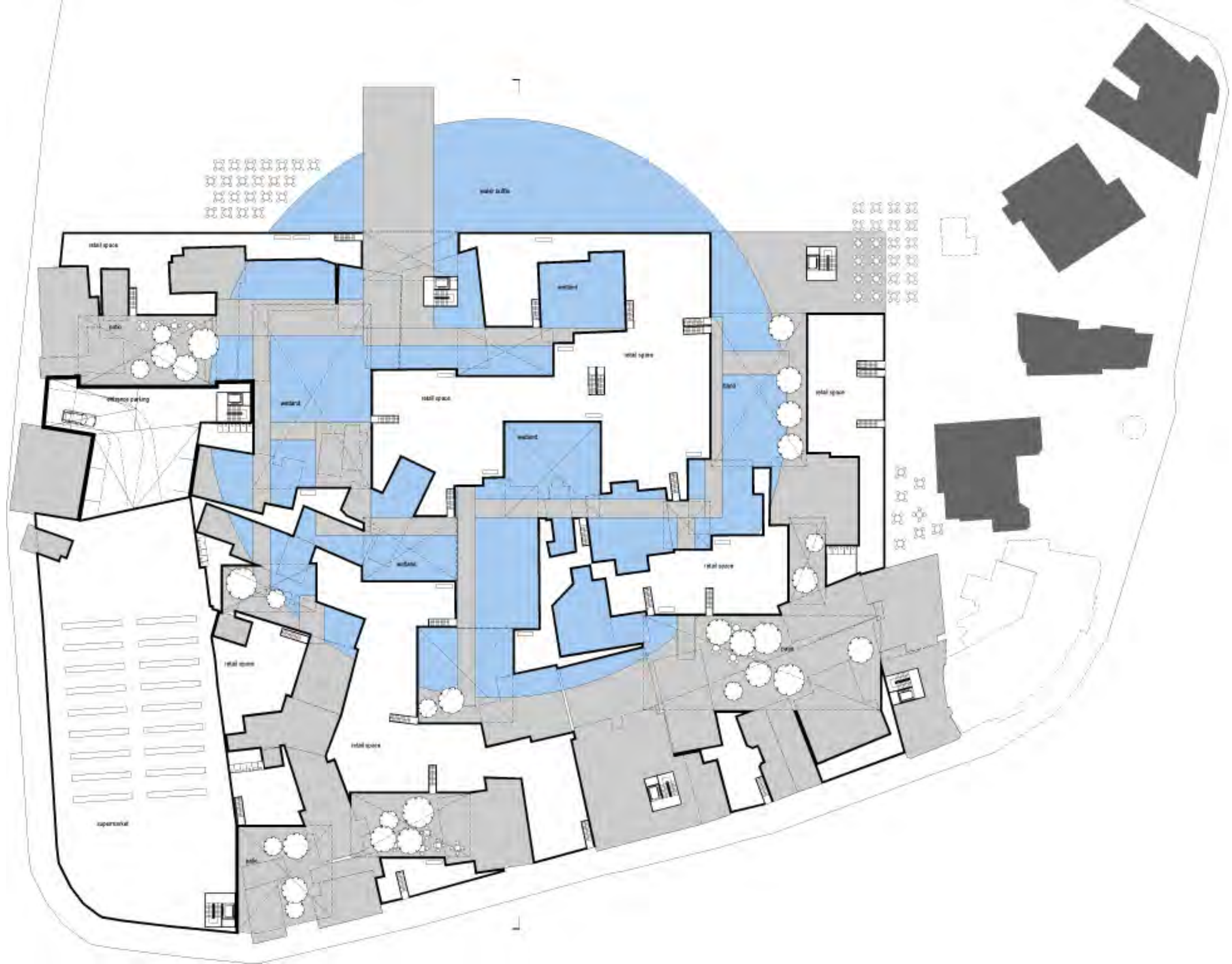
For the reed bed system, these are divided into surface, subsurface and vertical flow systems.



Surface flow are the most spatially demanding, plus can bring problems for odour. Subsurface has less odour problems and is more compact. Vertical flow is more compact





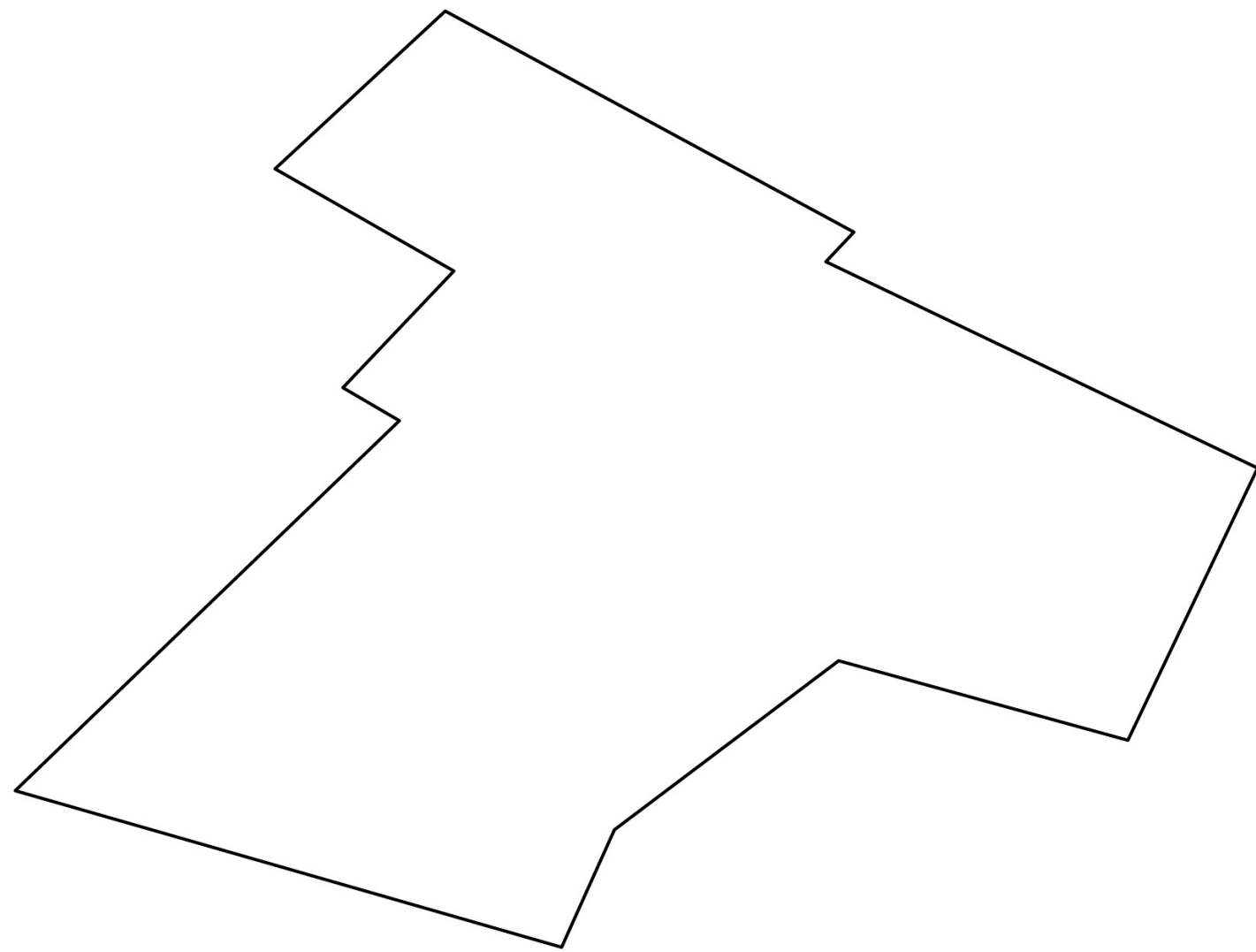




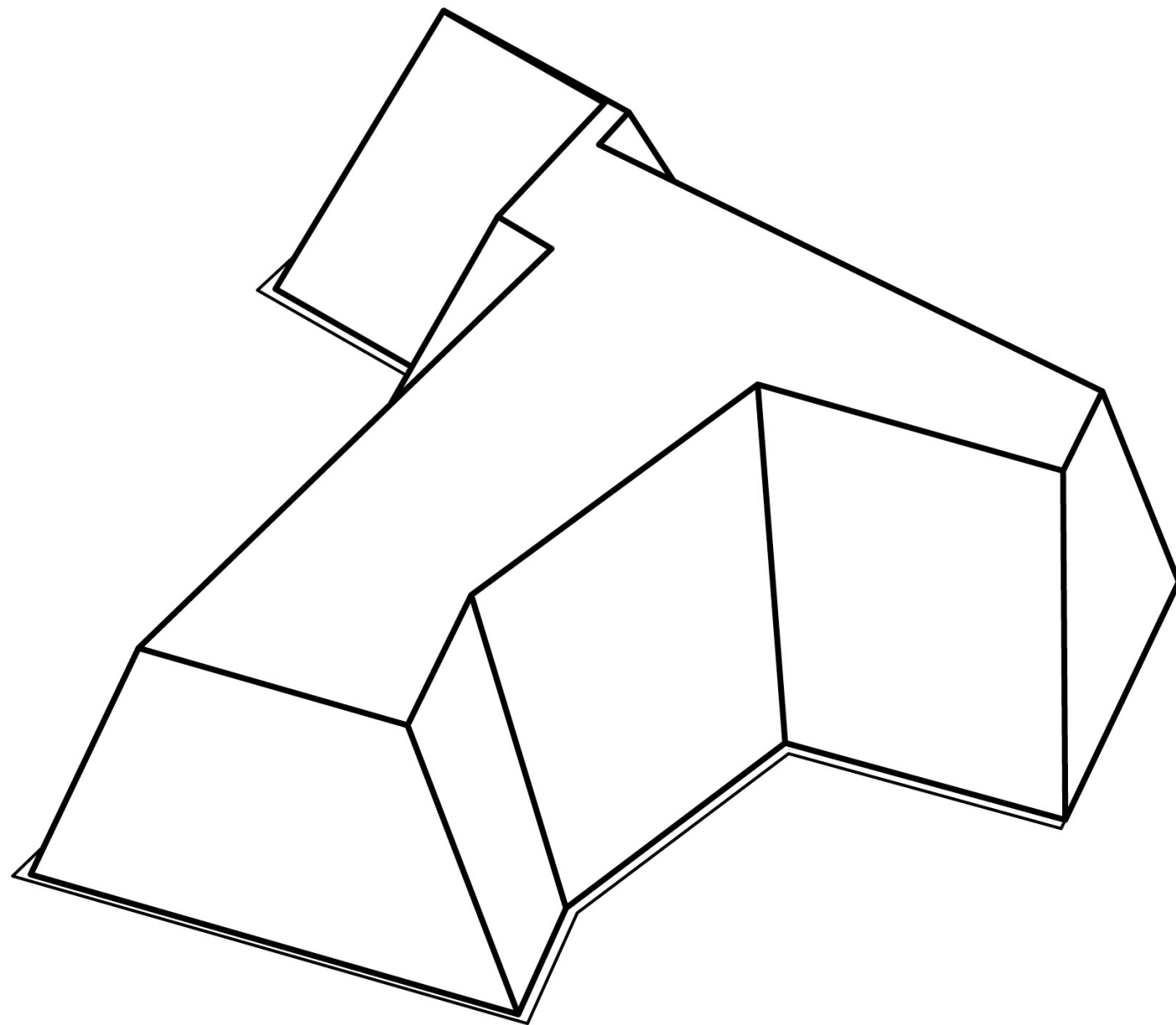


Greenside out
Tirana, Albania

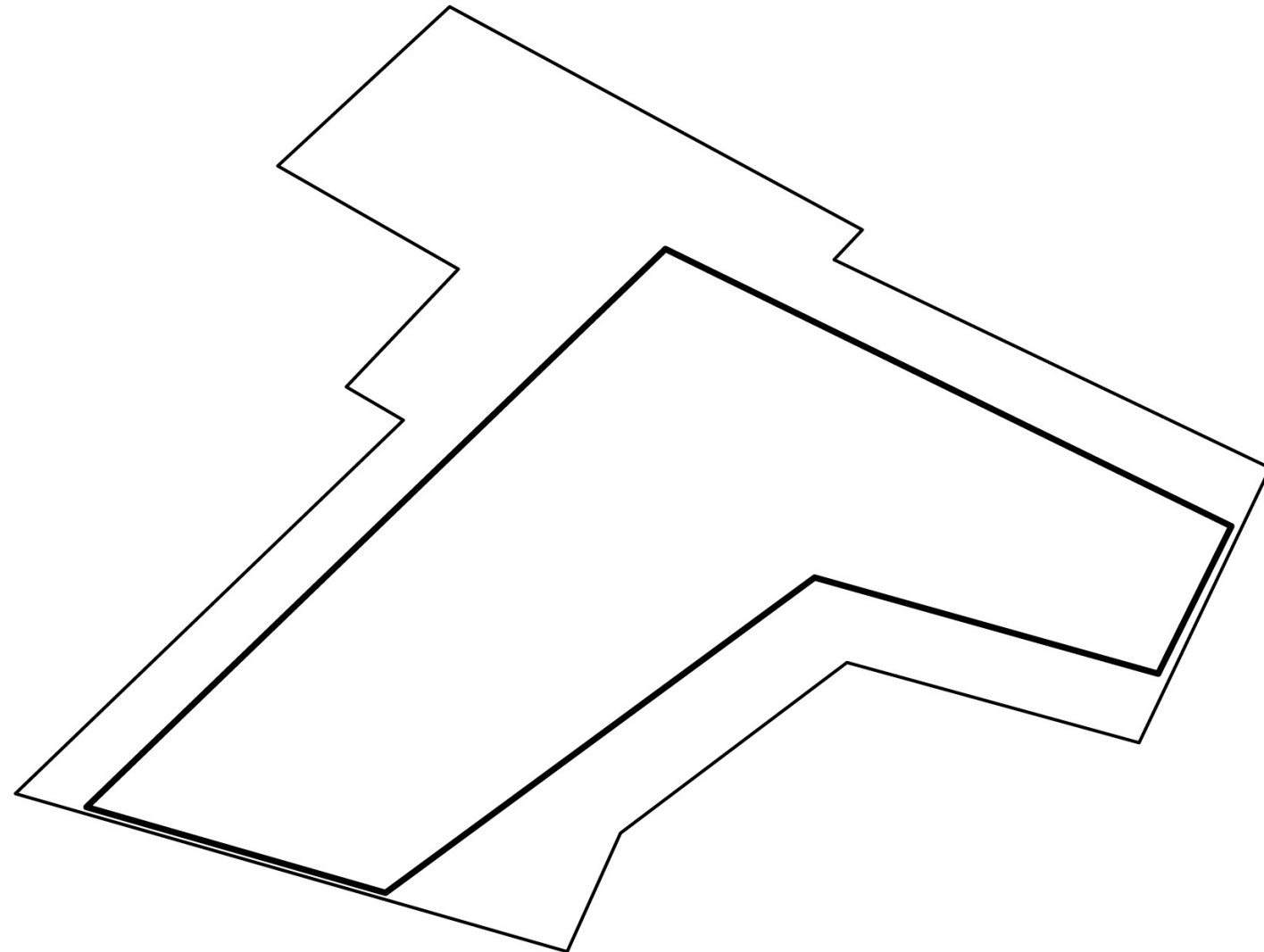




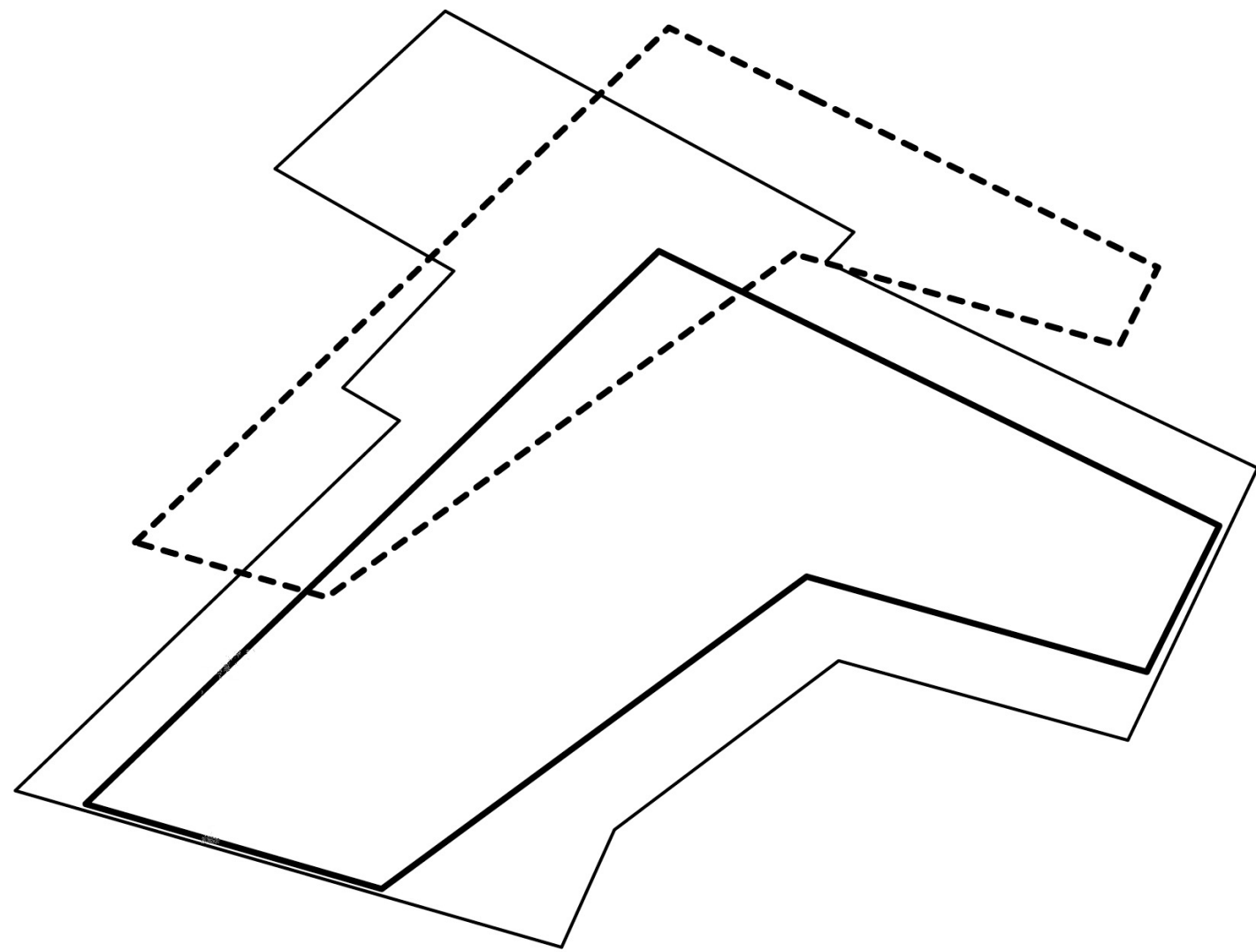
Site



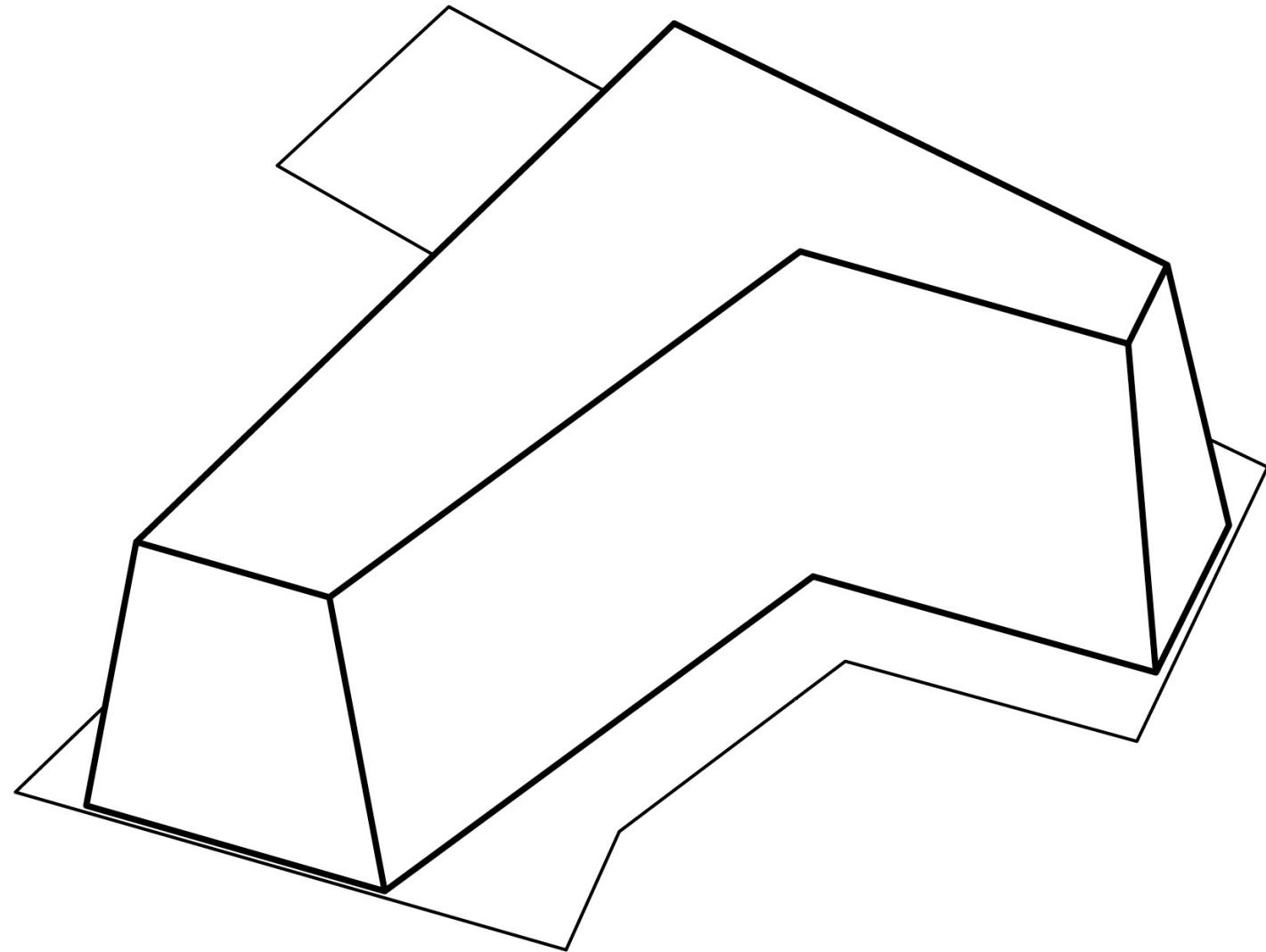
Max. Volume



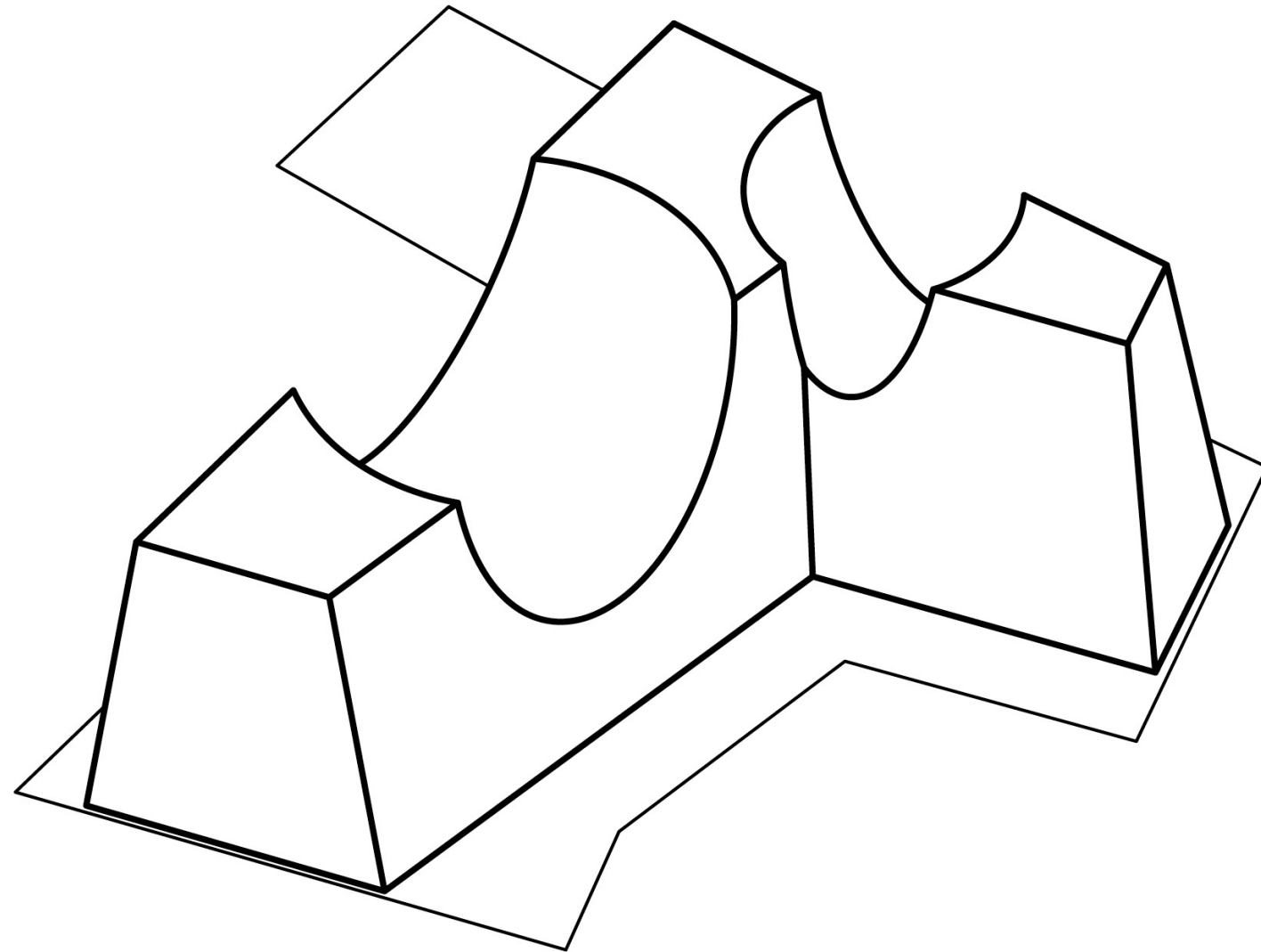
2000 m2 for commercial



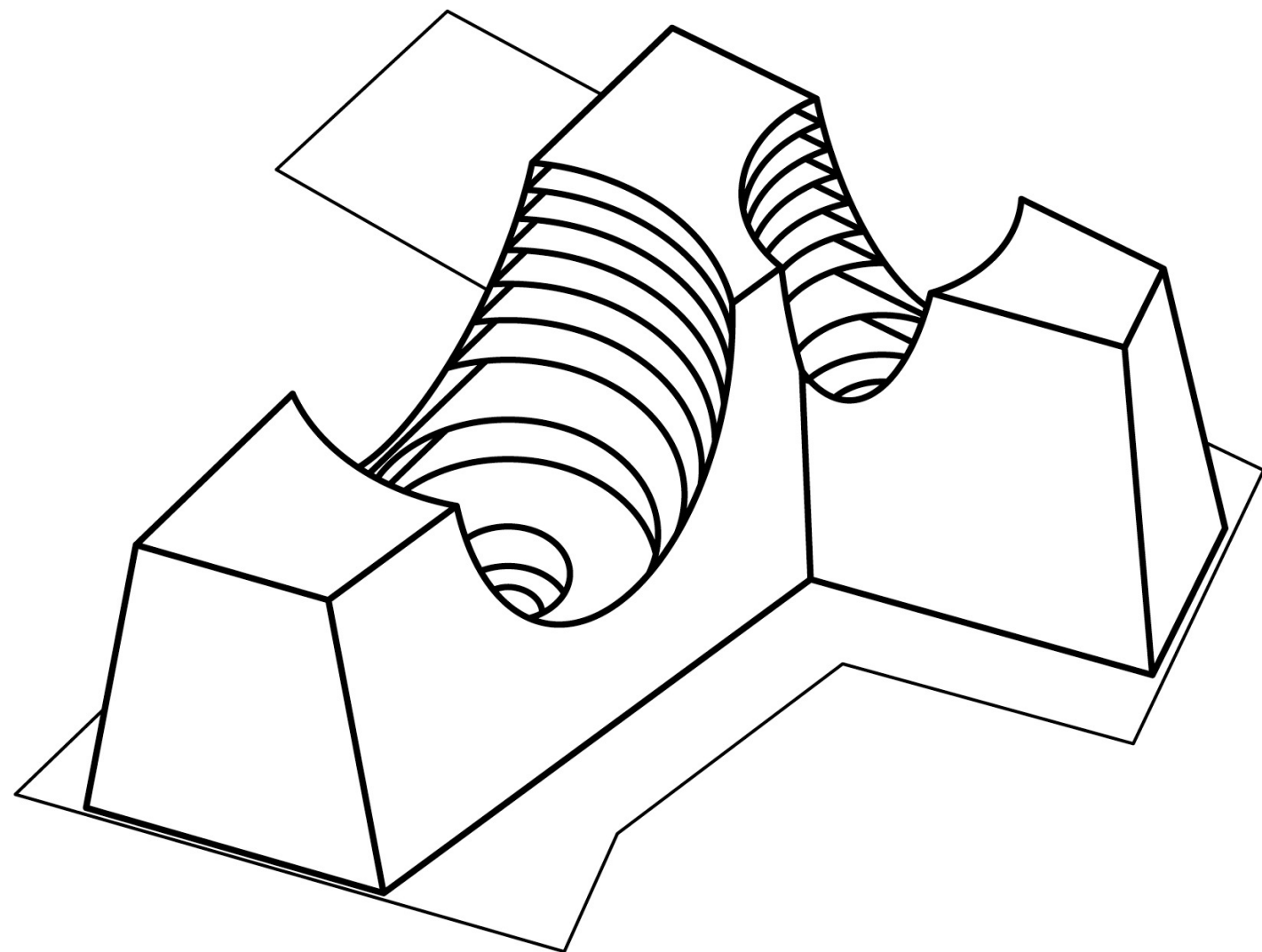
Top floor



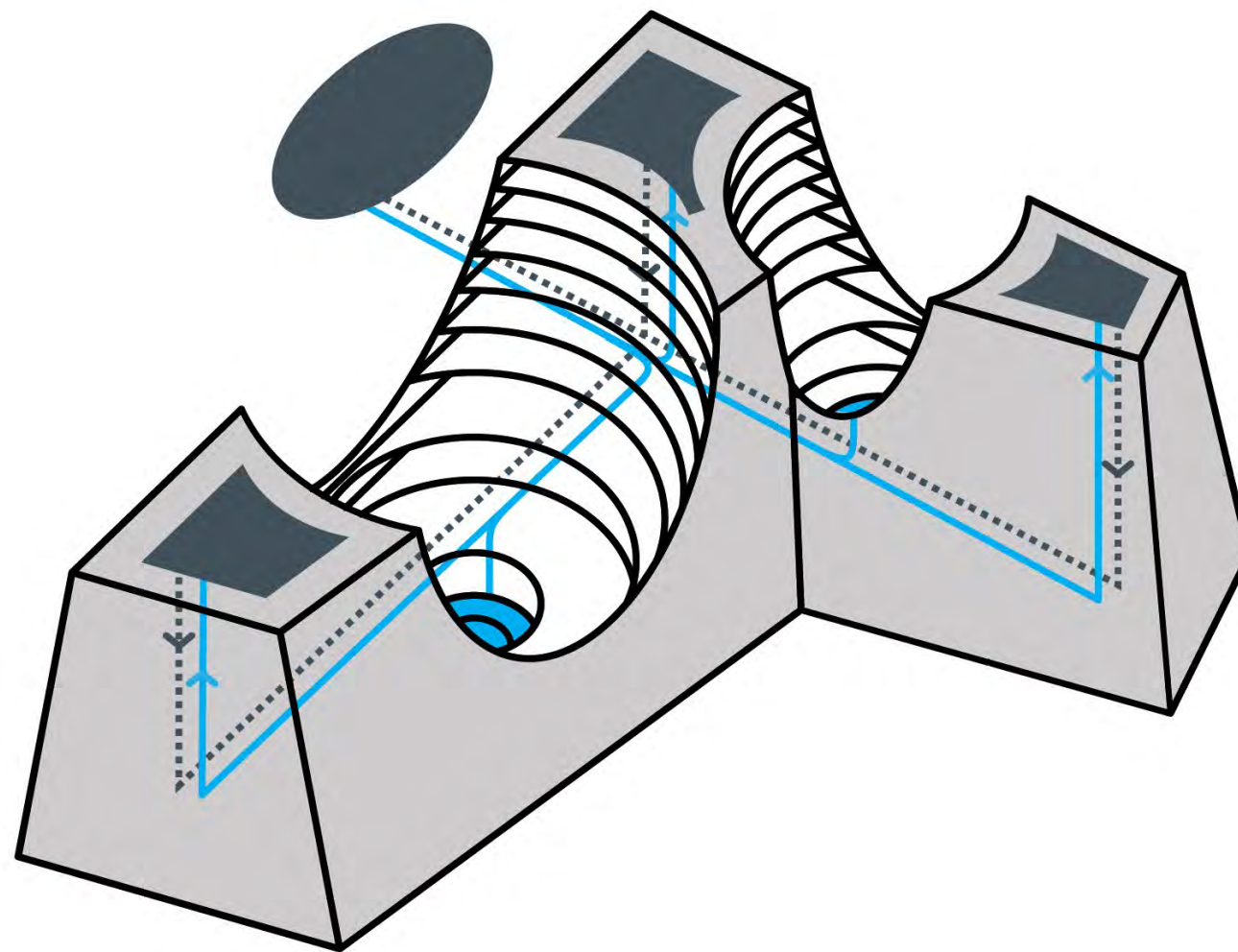
Building volume



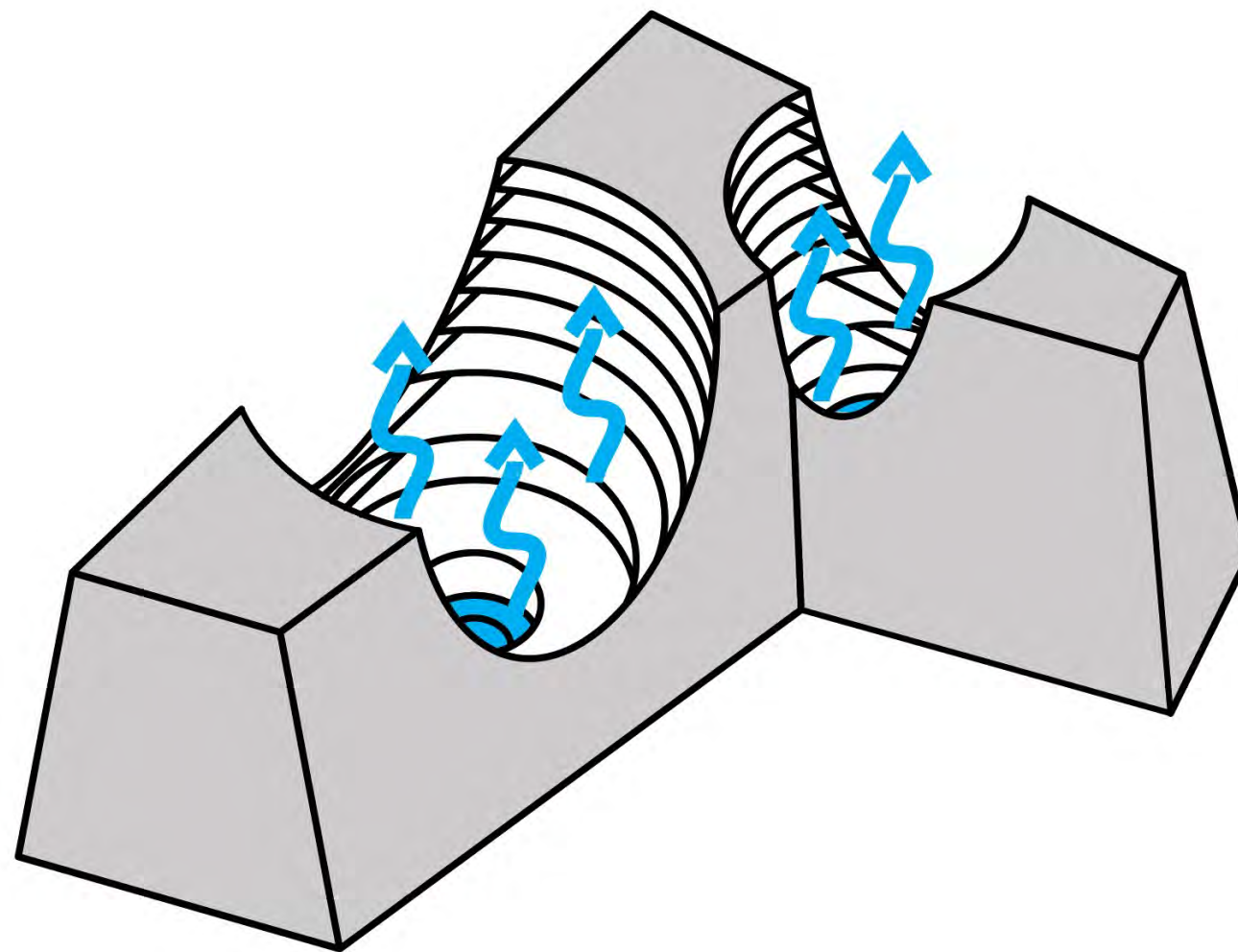
Openings for daylight, views and surface



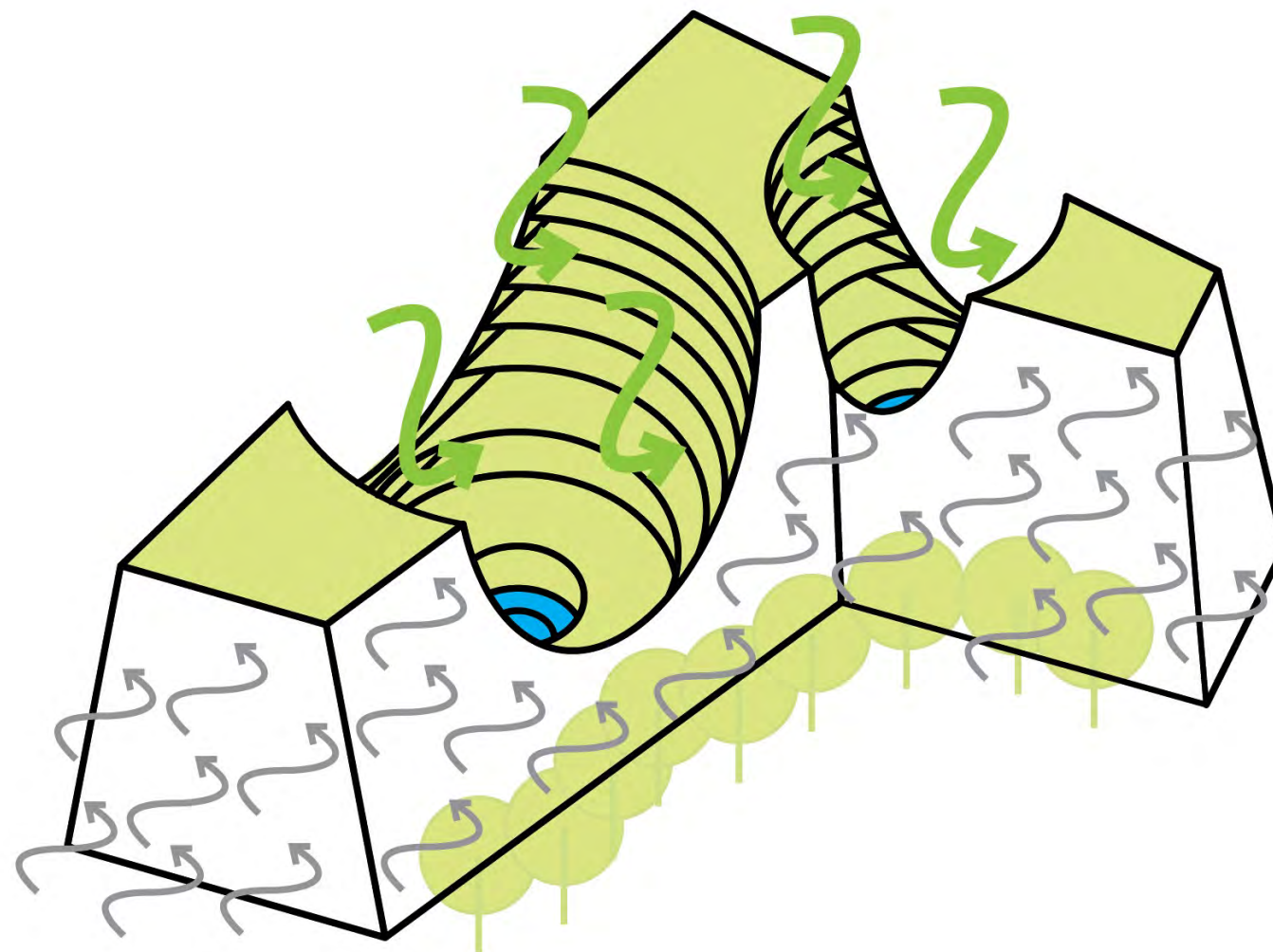
Add floors



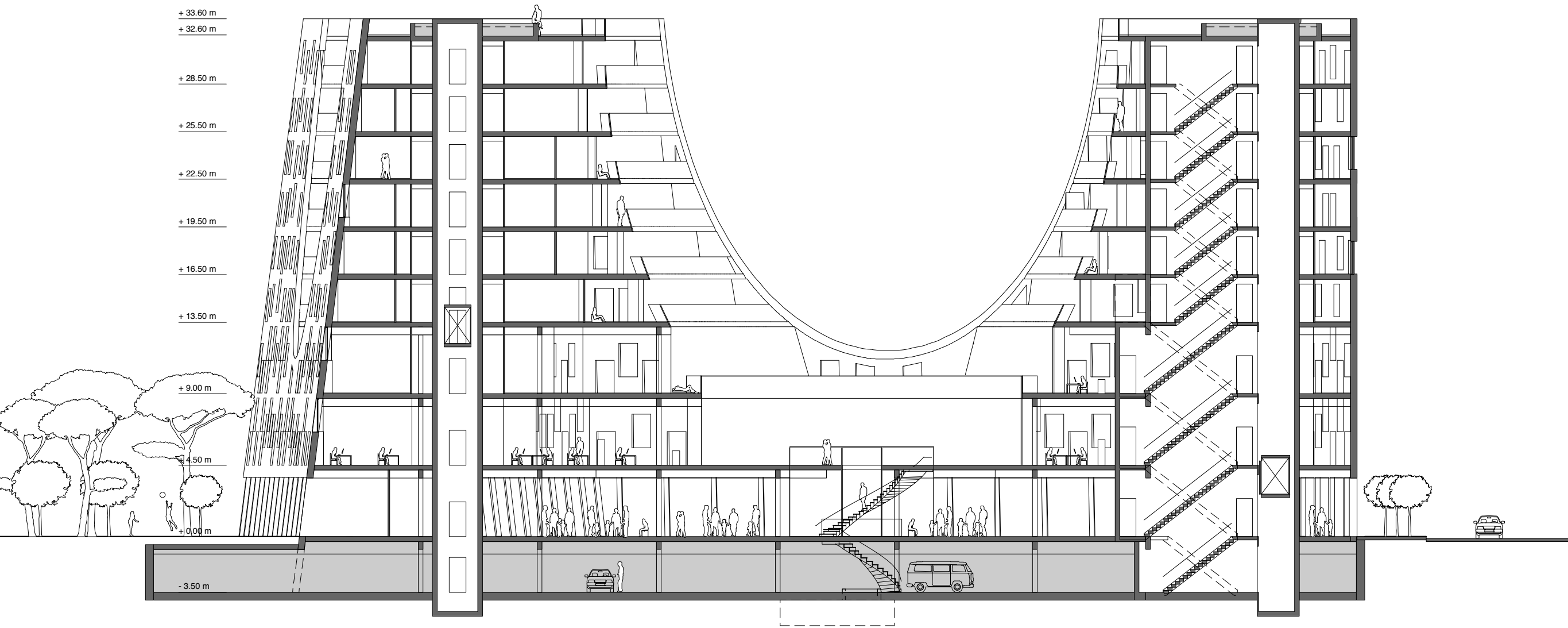
Water cleaning & grey water system

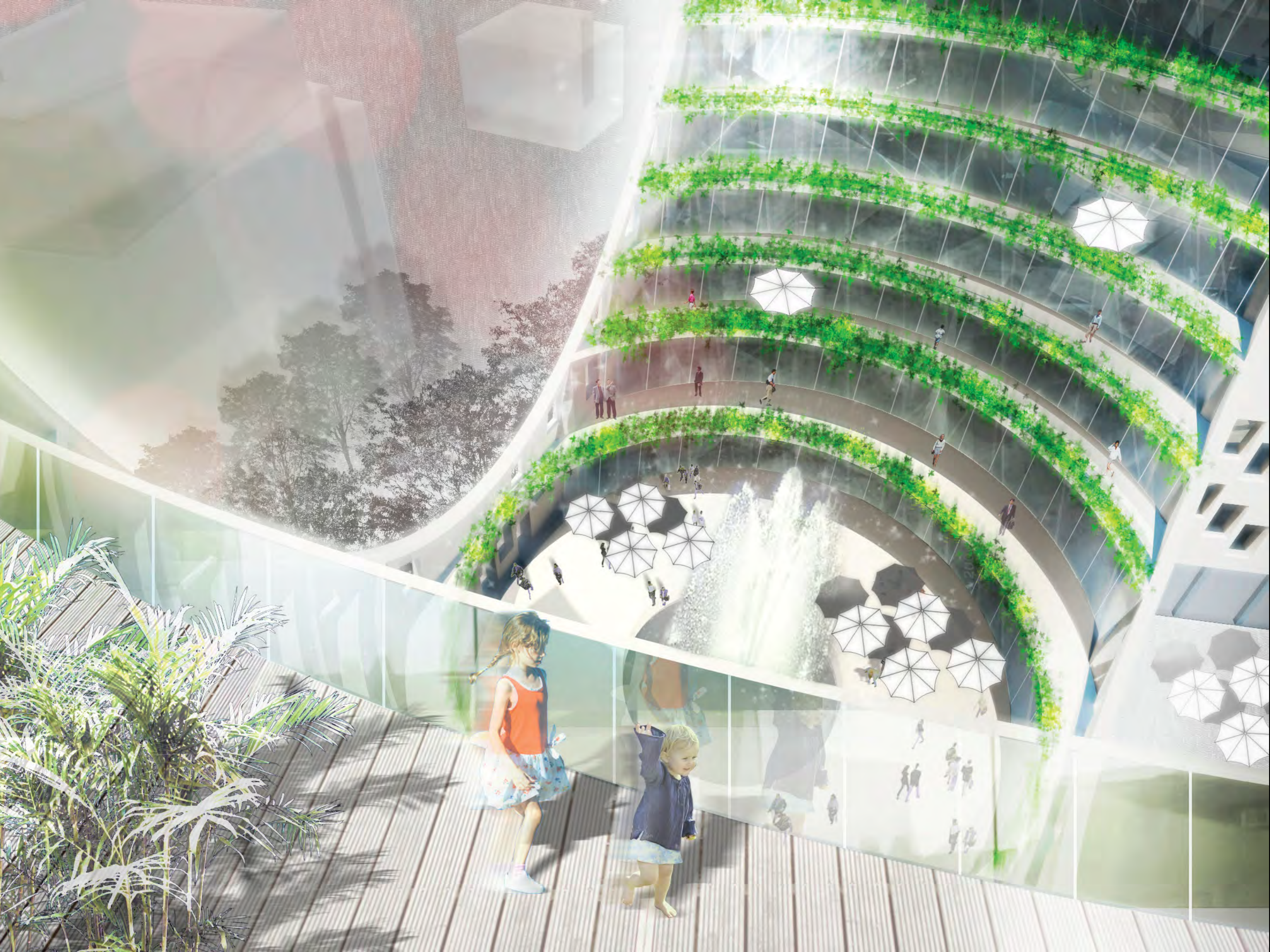


Thermal retention facades & evaporative cooling



Noise reduction in facades & green air filters









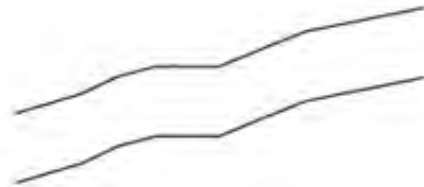
Parklife

Tirana, Albania

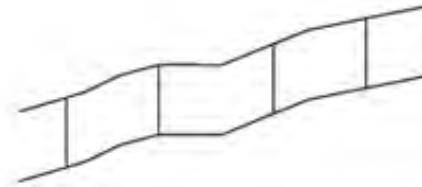




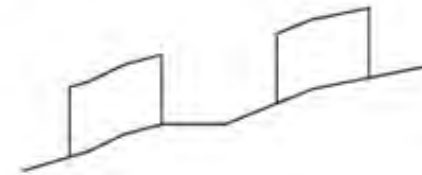
1. Landscape



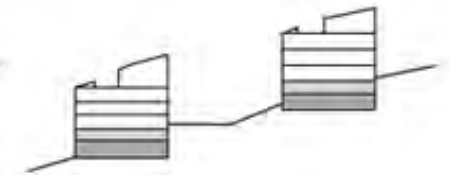
2. Offset allowed height



3. Offset 20 m distance
between buildings



4. Buildings 16 m deep
> 20m distance



5. Add floors + terraces
Parking level adapts to neighbours -
Inbetween layer for:
extra height <2.1m
storage & service <2.1-2.8m>
apartments >2.8m



legend

- access / egress roads
- sidewalks
- paths
- footbridges
- parc / gardens
- sport fields / running track
- swimming pool
- wetlands / reed filter
- x
- x



Masterplan Terrain
scale 1/1000





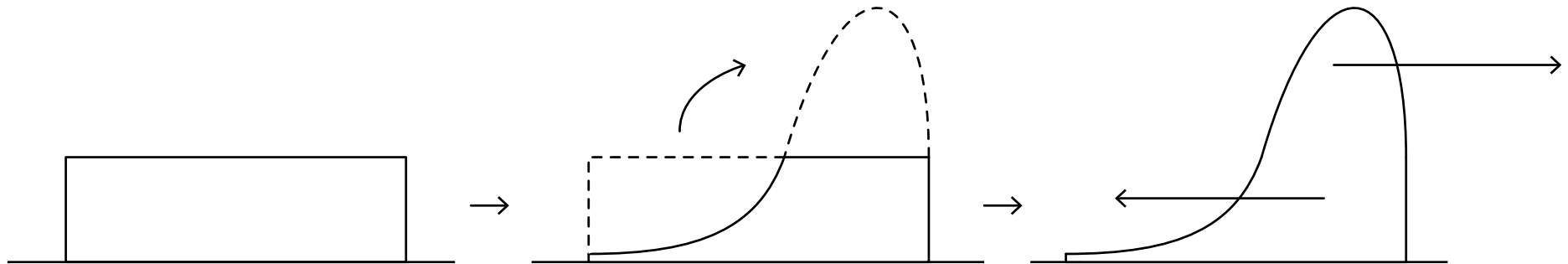




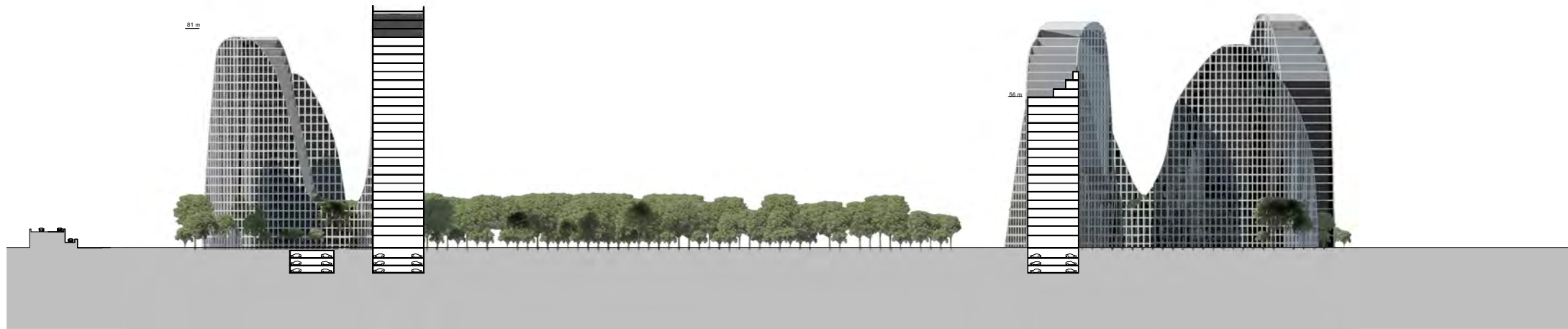
Lakeside
Tirana, Albania



Hills



SECTION 1



0 10 50 M scale 1:2000







Marc Joubert

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Rotterdam, Netherlands