Country /City	Poland
University / School	Cracow University of Technology
Academic year	2022/2023
Title of the project	Revitalization of the area around the Faculty of Mechanical PK
Authors	Tomasz Jaróg

TECHNICAL DOSSIER

Title of the project Revitalization of the area around the Faculty of Mechanical PK

Authors Tomasz Jaróg

Title of the course Diploma

Academic year 2022/2023

Teaching Staff D.Sc. Eng. Arch. Katarzyna Hodor, prof. PK

Department / Section / Program of belonging Faculty of Architecture, Landscape Architecture

University / School Cracow University of Technology

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Written statement, short description of the project in English, no more than 250 words

The object of this project is the area surrounding the Mechanical Faculty of the Cracow University of Technology in Czyżyny. The area is bordered by Jan Pawła II Avenue and Professor Michała Życzkowskiego Street. The whole complex is located nearby the Park of Polish Aviators. The building inside the area is one of the sites on the Krakow Modernism route. This thesis includes: a historical and cultural analysis; an architectural and landscape study; a study of natural conditions with a green inventory and tree management; concepts and design of land development as well as a cubic-type building. The whole process was preceded by detailed social research.

The project was divided into 6 functional sections: dining, chill-out, quiet-and-learning, water, parking and buffer. Each one of these was assigned a specific purpose while some were enriched with new land development elements.

The main objective of the project is to create a new, functional space adapted to the needs of students and university employees. Care has been taken to preserve the existing trees while introducing a new, aesthetically pleasing space development concept, based on an unrestricted arrangement of flower beds and paths. In addition, the proposed vegetation and ecological solutions are intended to improve the quality of the area and have a positive impact on the environment. This area will gain a lot of functionality. The whole process was preceded by detailed social research.

For further information

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12th International Biennal Landscape Barcelona

Barcelona **October 2023**

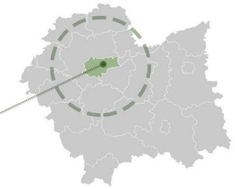
SCHOOL PRIZE

LOCATION

EUROPE

POLAND

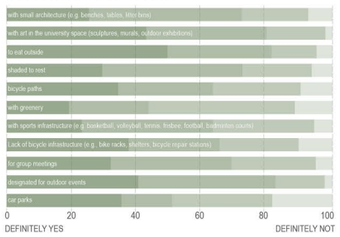
MAŁOPOLSKIE VOIVODESHIP



PUBLIC OPINION SURVEY

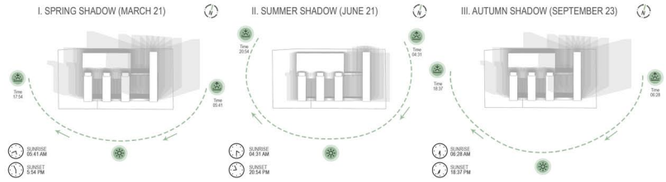
General facts taken from social research:

Is there a sufficient number in the area?



SCHEME TERRAIN TRANSFORMATION

TERRAIN SHADOW DIAGRAM



PHOTOS OF THE EXISTING CONDITION

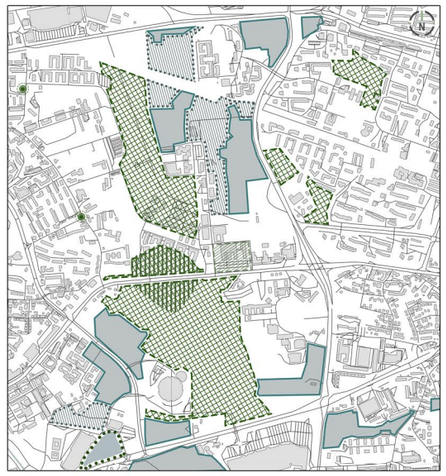
Photos taken from viewpoint (1) on the western side and (2) on the eastern side of the area overlooking the undeveloped greenery.
Photographs taken on December 9, 2022, by Tomasz Jaróg

Photos taken between the Faculty of Mechanical Engineering building and the laboratory building.
Photographs taken on December 9, 2022, by Tomasz Jaróg

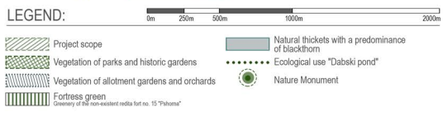
Photos taken along (5) the main visual axis towards Professora Michała Życzkowskiego Street and (6) on the green strip in front of the buildings.
Photographs taken on December 9, 2022, by Tomasz Jaróg

HISTORICAL CONDITIONS

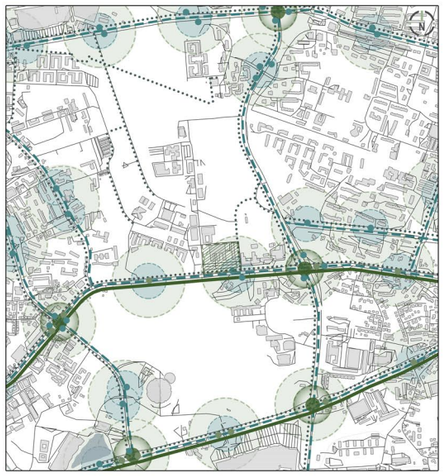
NATURAL ANALYSIS



LEGEND:



COMMUNICATION ANALYSIS



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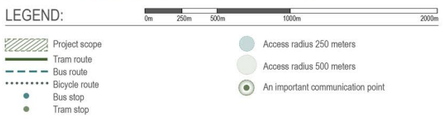
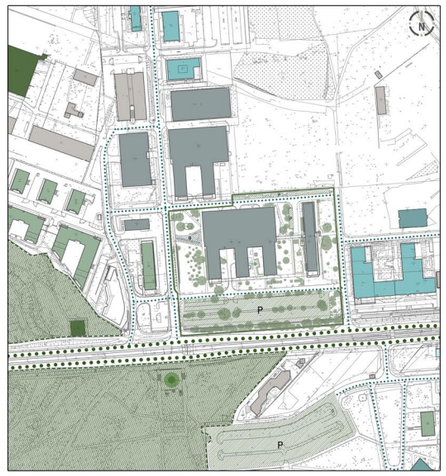


FUNCTIONAL ANALYSIS

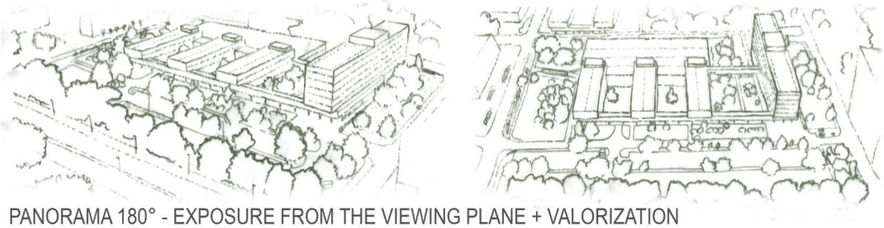


LEGEND:

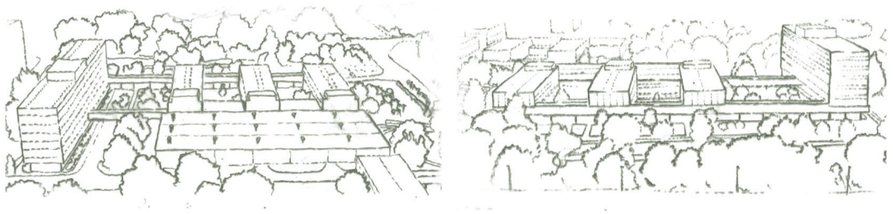
NOISE ANALYSIS

LEGEND:

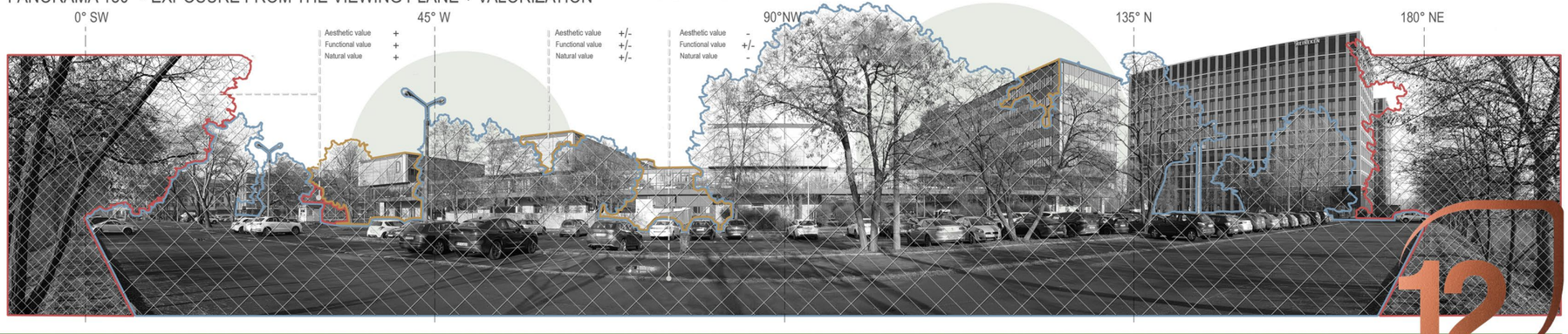
AERIAL VIEW FROM SOUTH-WEST AND SOUTH



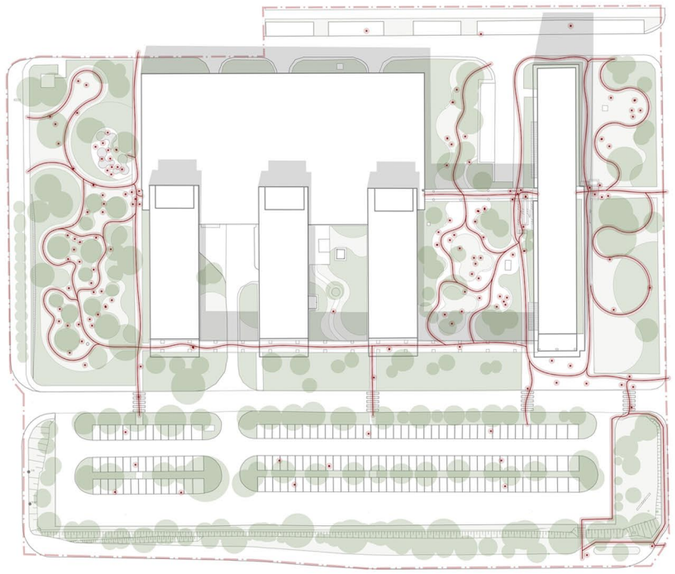
AERIAL VIEW FROM NORTH AND SOUTH



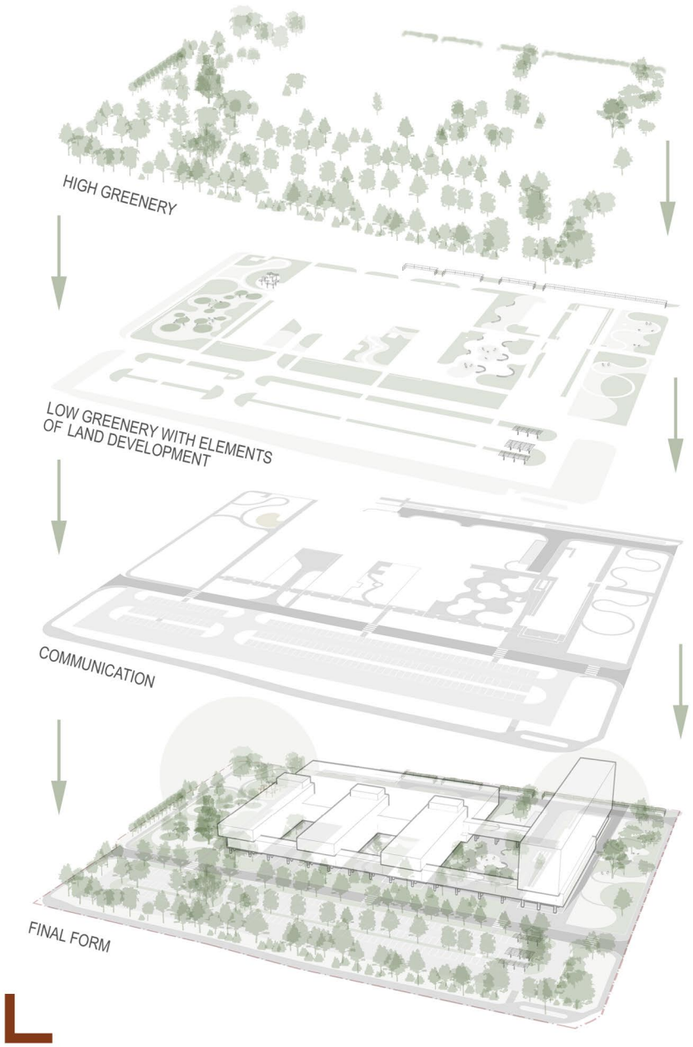
PANORAMA 180° - EXPOSURE FROM THE VIEWING PLANE + VALORIZATION



FORECAST OF POPULATION FLOW AND DENSITY

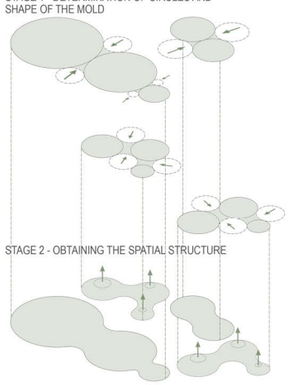


CONCEPT DIAGRAM



SCHEME OBTAINING THE FORM

STAGE 1 - DETERMINATION OF CIRCLES AND SHAPE OF THE MOLD



STAGE 2 - OBTAINING THE SPATIAL STRUCTURE

STAGE 3 - DEVELOPMENT AND ASSIGNING A FUNCTION

DEVELOPMENT ELEMENTS

OPENWORK GASTRONOMY ROOFING

ROCKER-CHAIRS WITH THE POSSIBILITY OF CHARGING A LAPTOP

SEATS INTO A FREE COMPOSITION

DESCRIPTION OF ZONES - FUNCTIONS

GASTRONOMY ZONE

The gastronomic zone is a place where employees and students can sit and enjoy a meal or spend quality time with friends. The area features a wooden platform with openwork canopies that reflect the overall design of the space. The entire zone is surrounded by perennial vegetation and trees consisting of native species.

CHILLOUT ZONE

The main theme of the chillout zone is relaxation. Simple solutions based on raised mounds have been proposed, with trees planted on top to provide shade and create a pleasant interior atmosphere. The entire area is surrounded by perennial flower beds, and the zone is furnished with newly designed swinging loungers.

QUIET AND LEARNING ZONE

The quiet and learning space is a place where students can carry out their tasks outdoors between breaks or after classes. The zone has been equipped with tables, concrete seats, and swinging loungers. The surroundings have been enhanced with abundant native vegetation.

WATER ZONE

There is a space between the building and the parking lot at the lowest point of the entire planned area, which serves as an "emergency reservoir" designed to collect water during excessive rainfall. Additionally, wooden walkways have been proposed in this area, and the whole space has been landscaped with native vegetation that thrives in moist and wet soil conditions.

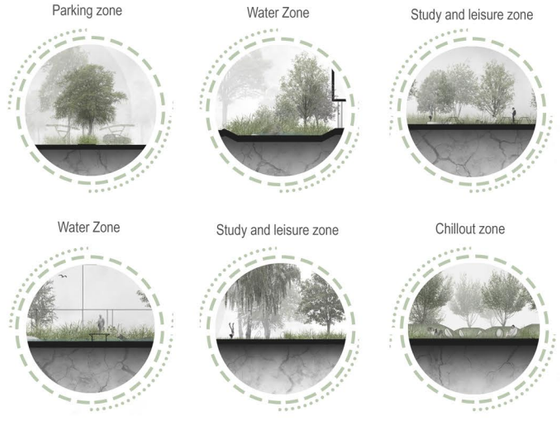
PARKING ZONE

In the parking area, a new permeable surface has been proposed, which is environmentally friendly. Thanks to its porous structure, the surface has the ability to allow vegetation to grow. Additionally, the entire area, thanks to this solution, does not heat up to very high temperatures. Between the parking sectors, lush greenery in the form of perennials and trees has also been proposed.

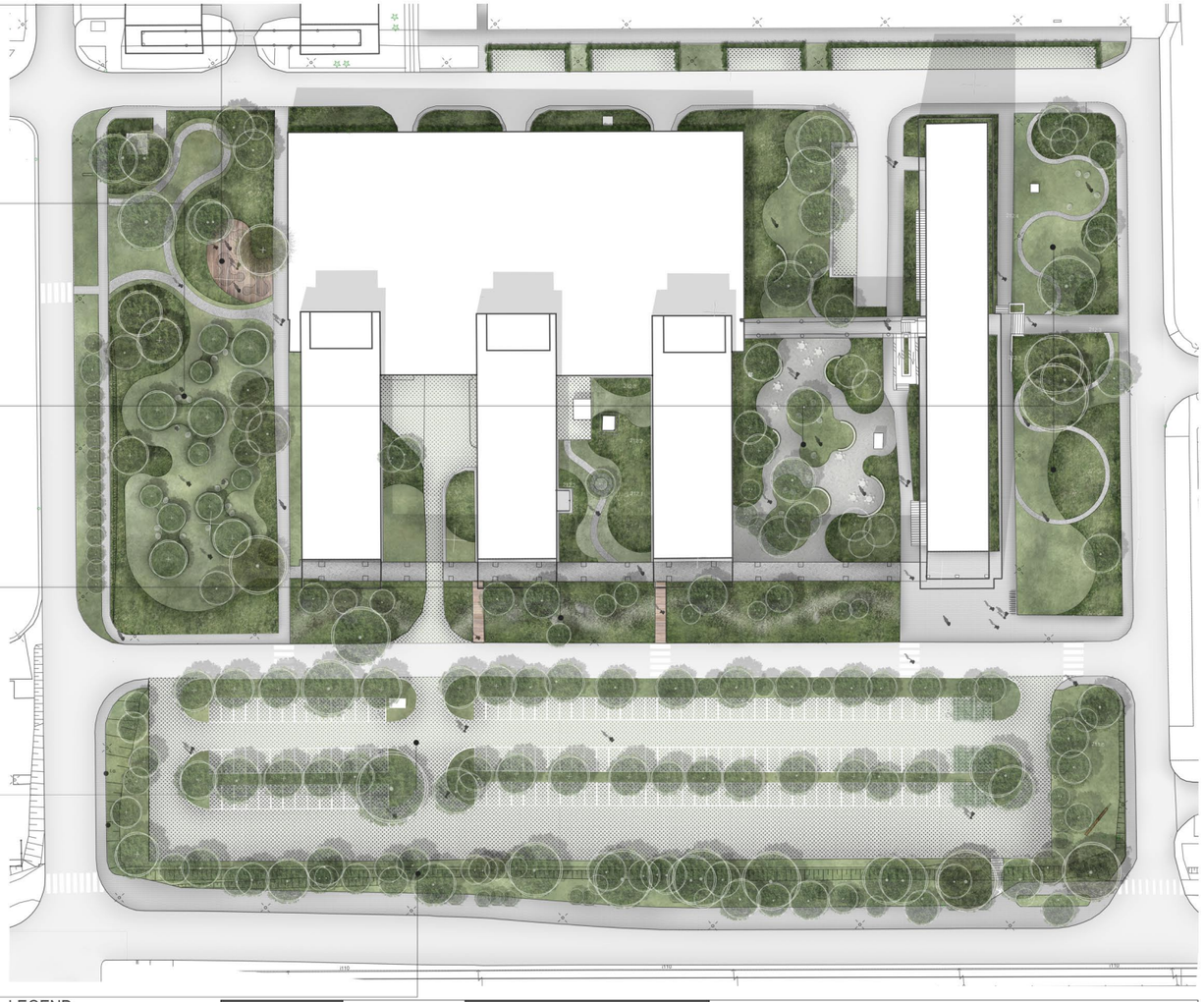
BUFFER ZONE

The buffer zone is created by a green strip that separates the space from the street noise. It plays a very important role in the project, which is why the existing greenery there has been carefully maintained. Jana Pawła II street is one of the busiest streets, so it was important to propose an increased amount of greenery to further reduce noise and dust emissions.

IMPORTANT PLACES IN THE PROJECT



TOP VIEW OF THE LAND DEVELOPMENT



LEGEND:

0m 25m 50m 100m 200m

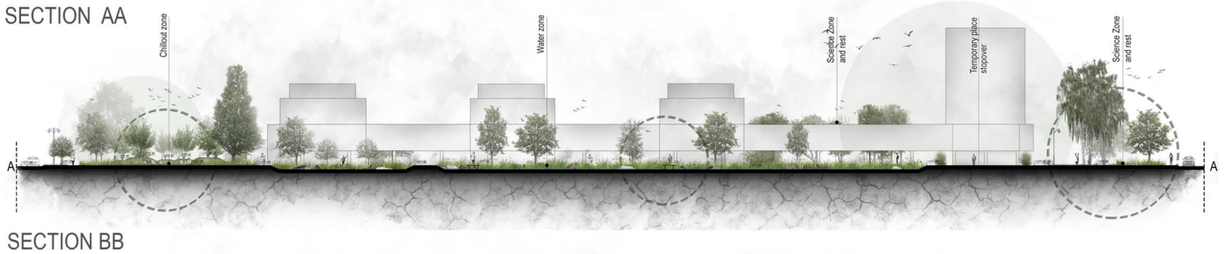
MAP CONTENT:
- Project scope
- Entrance to the project site
- Entrance to the building
- Escarpment
- 212.1 Height points

COMMUNICATION
- Hansegrand mineral surface
- Cobblestone surface
- Surface made of openwork slabs
- Wooden platform - passage over the retention ditch
- Parking place
- Parking spaces for disabled
- Pedestrian crossing
- Terrain stairs

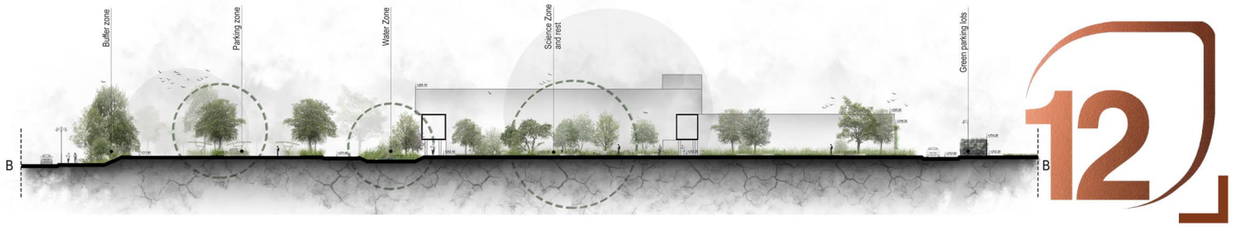
LAND USE
- Wooden platform
- Green parking wall
- Catering canopies
- Parking canopies
- Concrete seats
- Rocking chairs made of concrete
- Tables
- Bicycle racks

GREENERY:
- Lawn mowed
- Perennial discounts
- Creepers
- Existing deciduous tree
- Deciduous tree designed
- Existing deciduous shrub
- Deciduous shrub designed

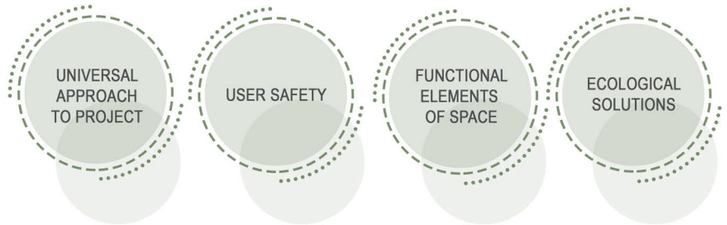
SECTION AA



SECTION BB



ASPECTS ADOPTED

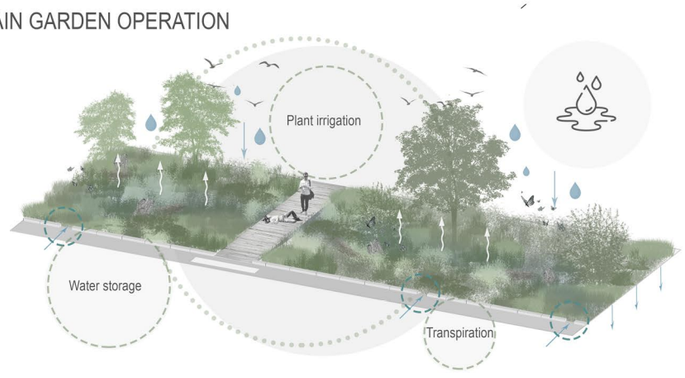


WAYS OF TRANSFORMING THE FORM

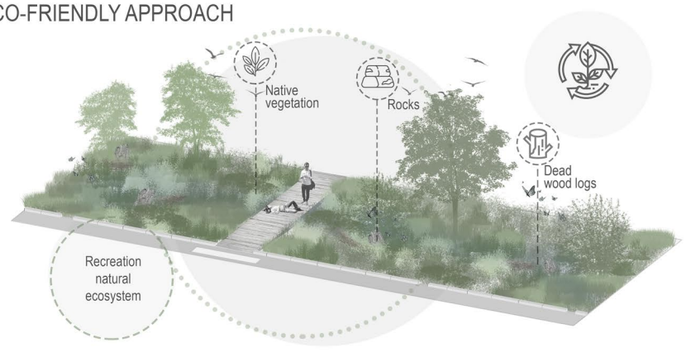
ELEVATIONS OF THE OBJECT

ECOLOGICAL APPROACH TO SPACE

RAIN GARDEN OPERATION

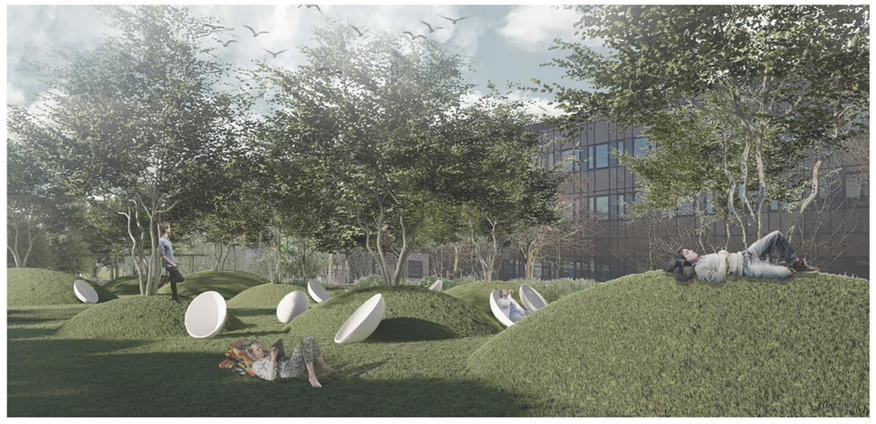


ECO-FRIENDLY APPROACH



VIEW OF THE RAIN GARDEN - EASTERN PART

VIEW OF THE CHILLOUT ZONE



VIEW ON THE GASTRONOMY ZONE

VIEW OF THE ENTIRE FACILITY