

SKYRO

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Akad. rok, semester: 2024/2025, Zimný semester

BIG

STU
FAD

foto
By: Vanessa Šutovská

Libretto

Location and goal

We are located in the Bratislava district Podunajské Biskupice. The surrounding development is primarily residential. There is already an elementary school on our plot and of course a high school (Skyro) to which we are planning an extension in this project. A kindergarten is also currently under construction in the Skyro's building. There is a hospital to the south and a sports complex to the north of this plot. This entire area is well accessible thanks to main roads, public transport and a train station not far from our property.

The goal of this project is to help Skyro achieve its goals of growth, inclusivity, and technology, while creating a space that is usable throughout the day and is also sustainable and eco-friendly.

Architectural solution and design concept

The extension is connected to the northeastern facade of the original building and it is in this point where the new meeting hub in the form of a lobby with a stair seating and main entrance is located. The building contains 31 classrooms, 2 psychology offices, 2 kitchens, lockers, office pods and numerous rest areas. The gym and locker rooms are accessible even outside of school hours. Outside, there is a large football field, 2 basketball courts, 2 playgrounds - one accessible to elementary school and kindergarten children and the other accessible to the public, an outdoor gym, and a courtyard with a pond. There is also bicycle storage with a capacity of 80 bicycles and 31 parking spaces for staff.

Material solution

The building is designed so that its construction can be divided into phases, for this reason it has a skeleton support system and a protruding facade. Shading is solved by fixed vertical slats, supplemented by external horizontal sliding blinds.

The exterior of the building is dark, which contrasts with the use of white plaster, wooden elements, exposed concrete as well as a lot of indoor plants in the interior.

Skyro

The school specializes in new methods of education associated with the latest technologies and the use of AI. There are two specializations:

Development of hybrid applications



Creation of digital games



The main values of skyro:

Communication



Self-management



Team work



Togetherness



Freedom



Social impact



Personal development



Way of education:

Respectful education



Partnership approach



Practice and useful experience

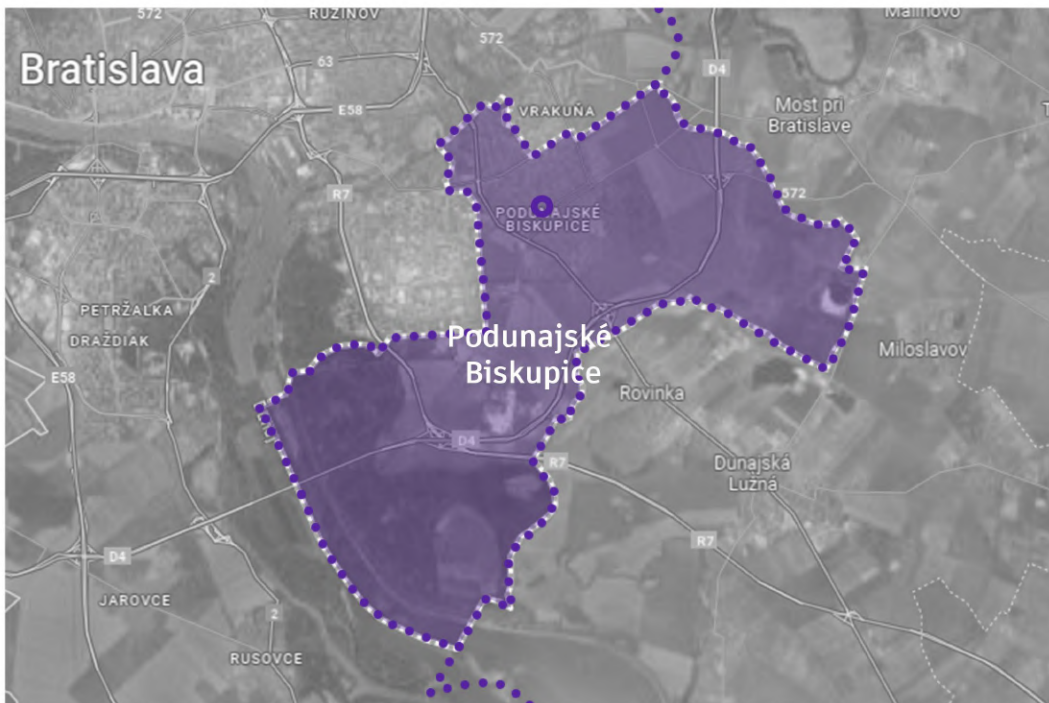
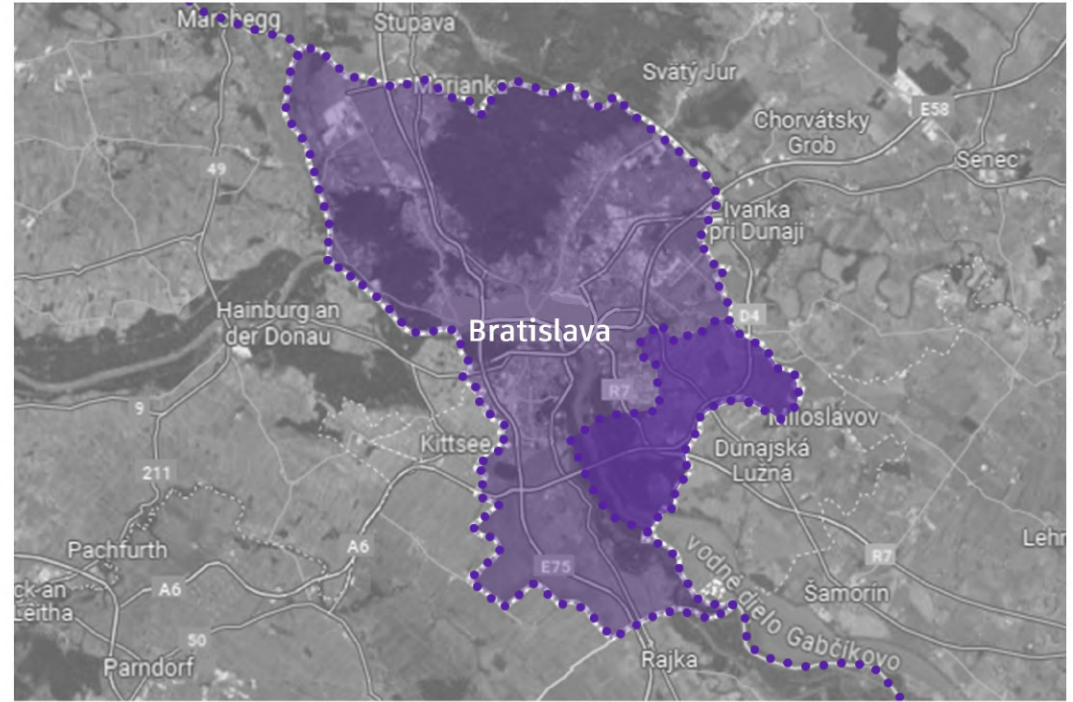
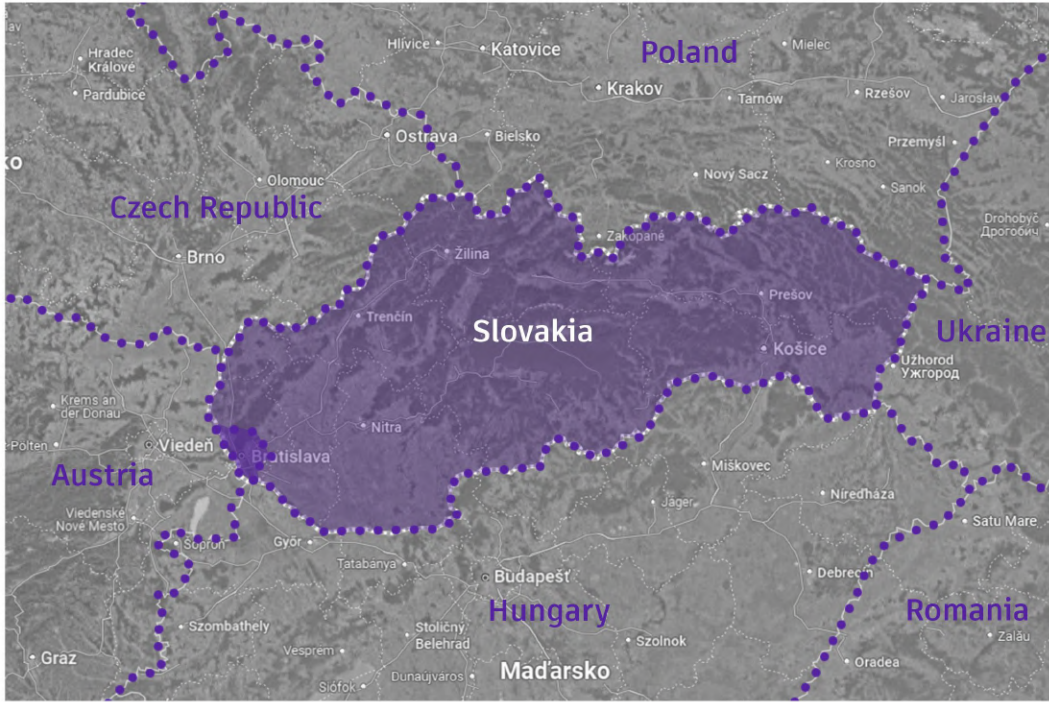


Agile learning procedures



Analyses

Location



Key plots



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105m

Roads and parking







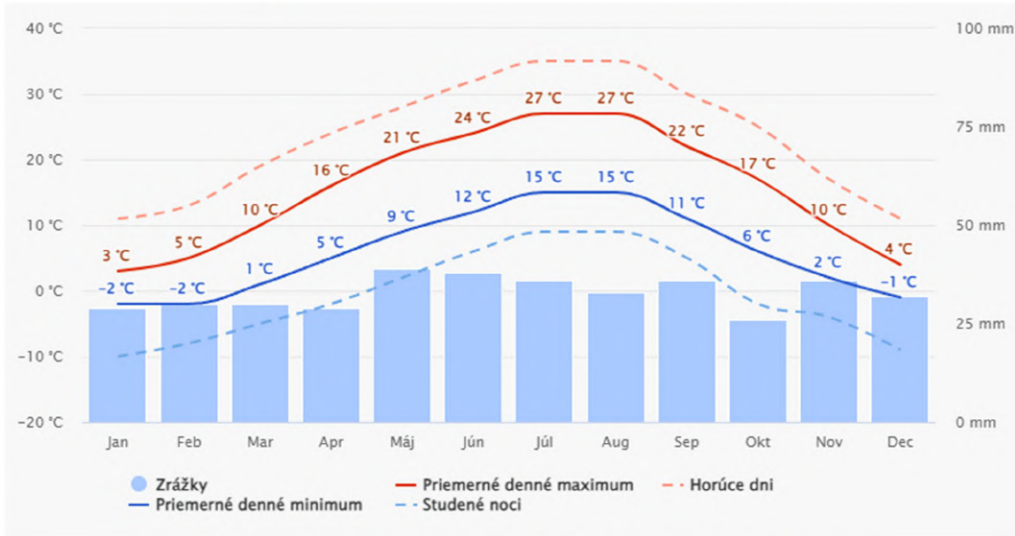


Legend:

- Education
- Gastro
- Accommodation
- Shops
- Services
- Medical facilities

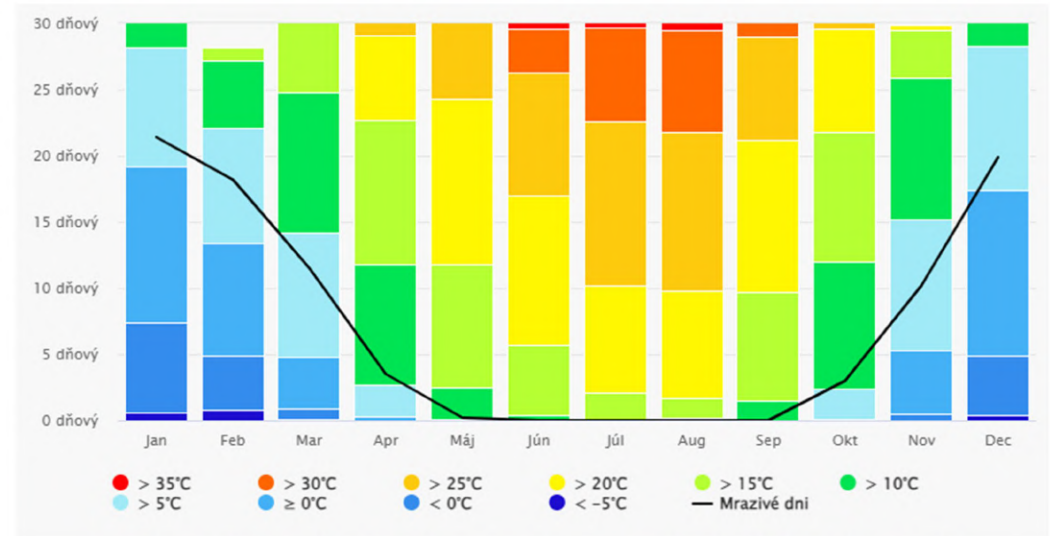
Weather conditions

Average temperatures and total precipitation



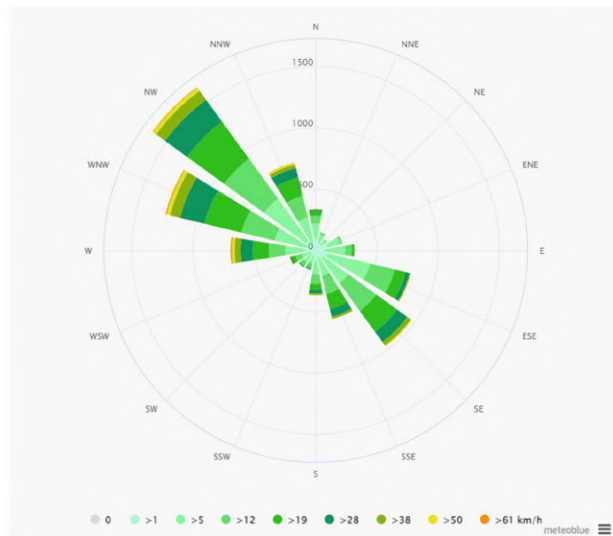
Average maximum and minimum temperatures and precipitation for individual months.

Highest temperatures



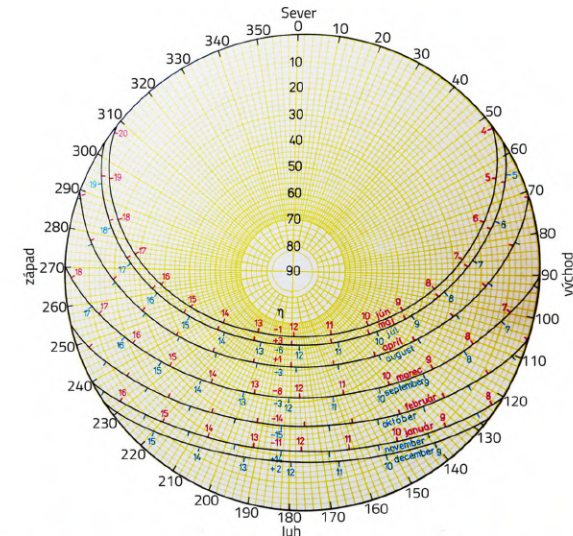
Number of days in certain temperatures, in individual months.

Wind rose



Northwester winds prevail at an average speed of 15 km/h and southeaster winds at an average speed of 10 km/h.

Movement of the sun



Sun trajectory, length of days and ideal cardinal direction.

What do they want?

Keep the playground / Football field / Basketball court / Running track / Multipurpose sport area / Connect the existing building with the new one



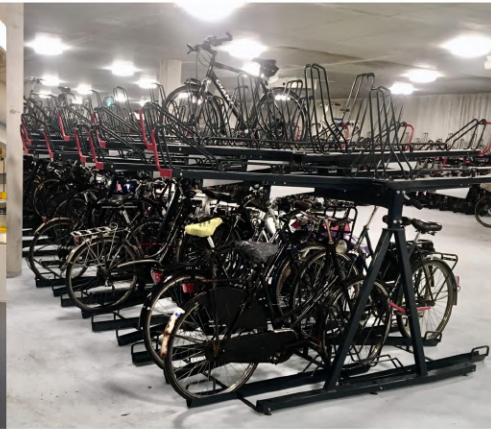
What do they miss?

Bigger kitchen / Office pods / Stand by tables in kitchen / More colors / Chill psychological office / Healthy snack options / Eko / Neutral toilets



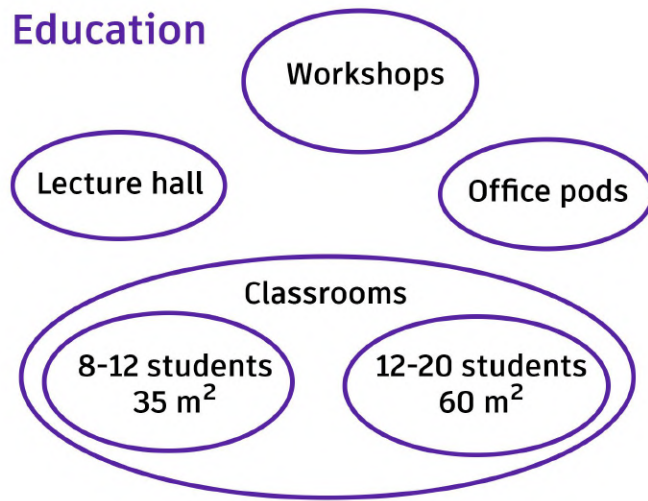
What do I want to bring?

Chill out zones / Bike storage / Modifiable classrooms / School spirit / Courtyard / Recording room / Workshops / Design connection with Skyro

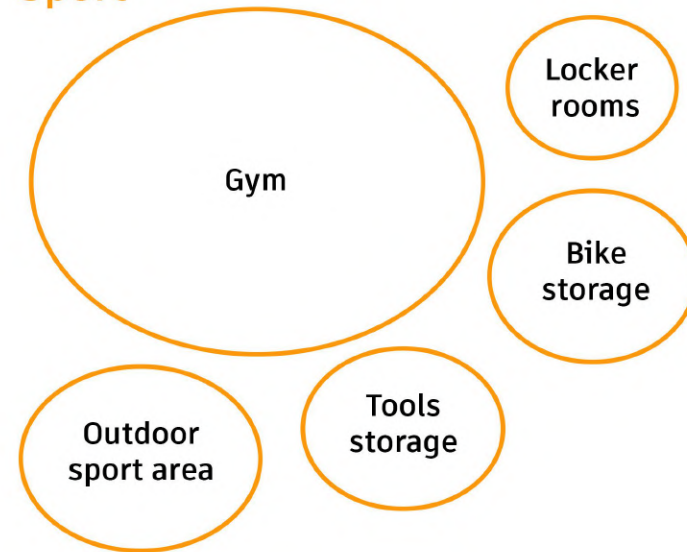


Types of functions

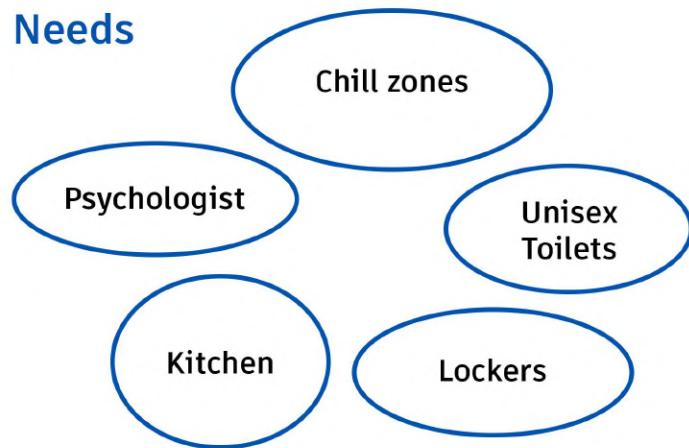
Education



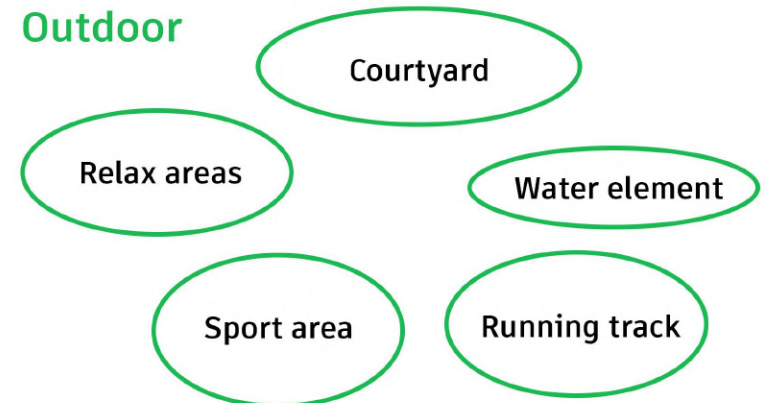
Sport



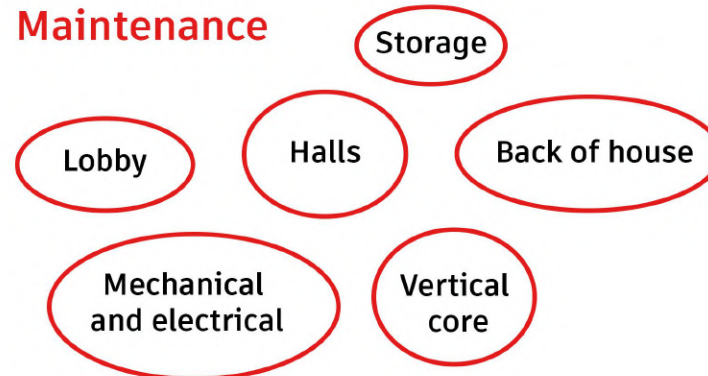
Needs



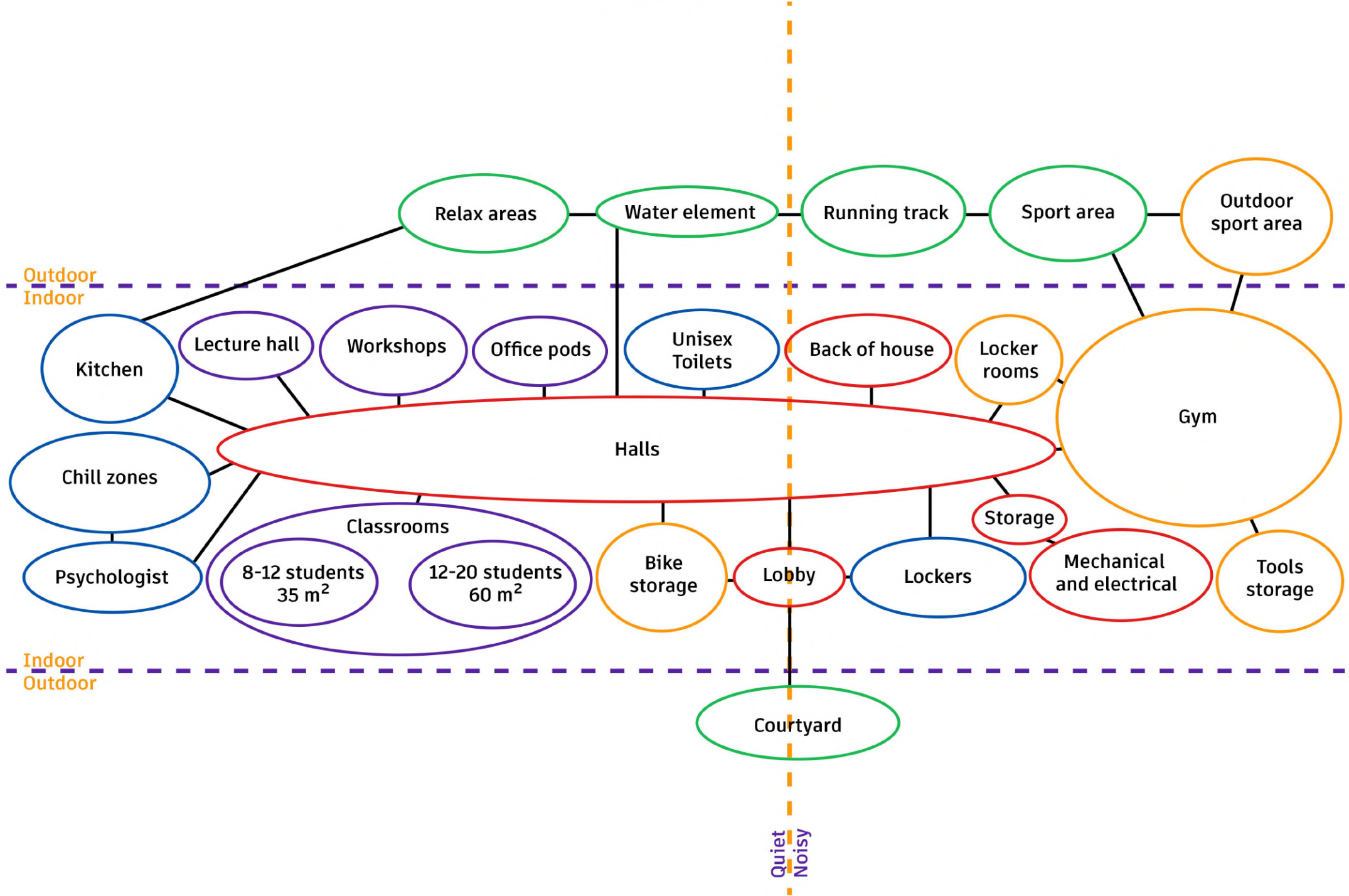
Outdoor



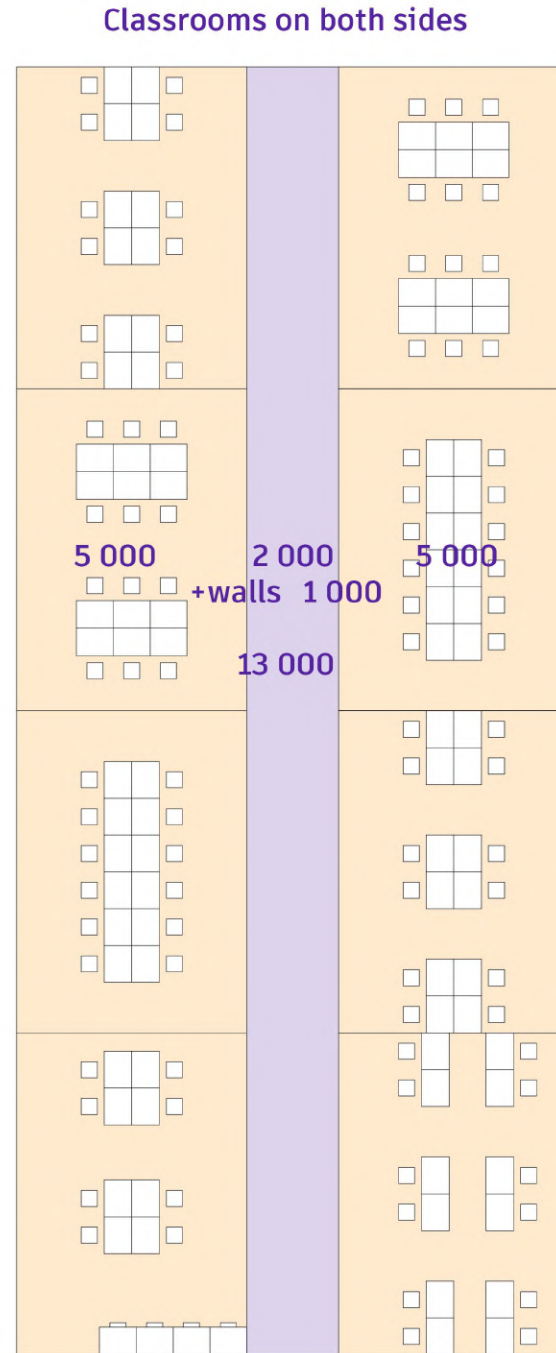
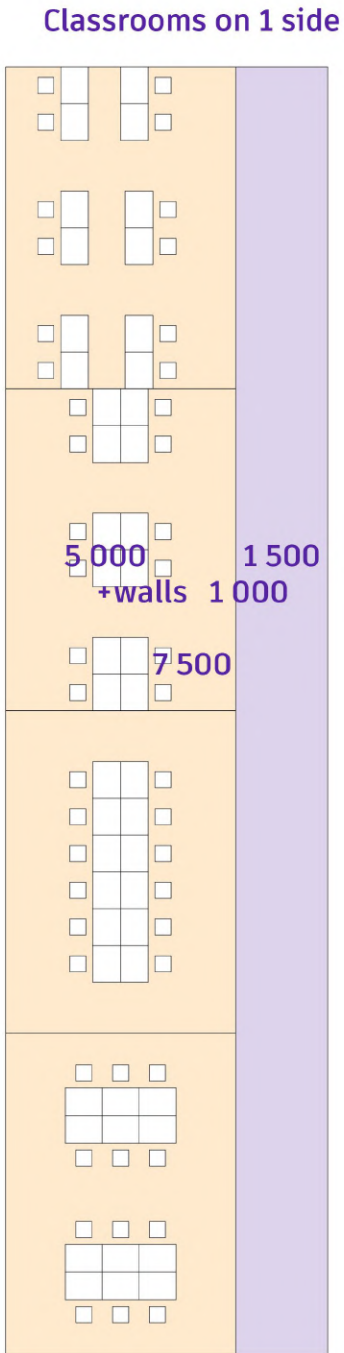
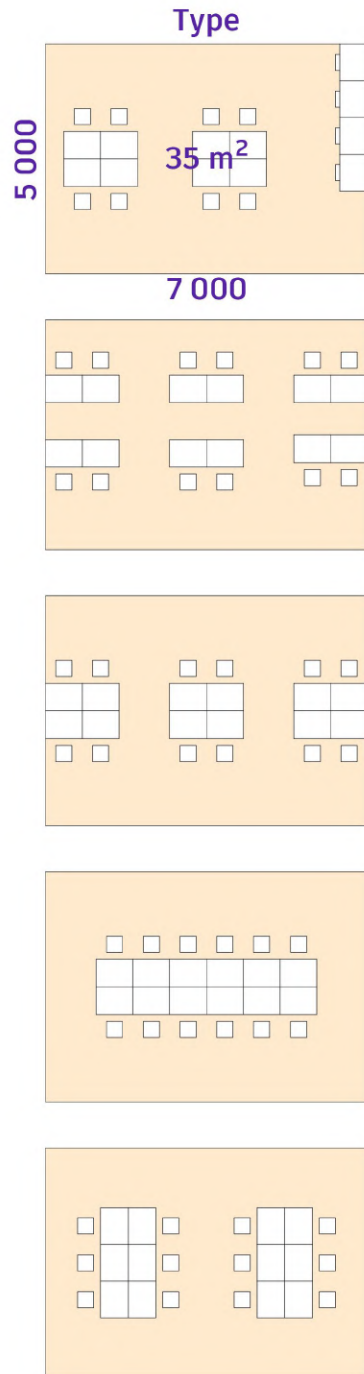
Maintenance



Linking of functions



Classrooms

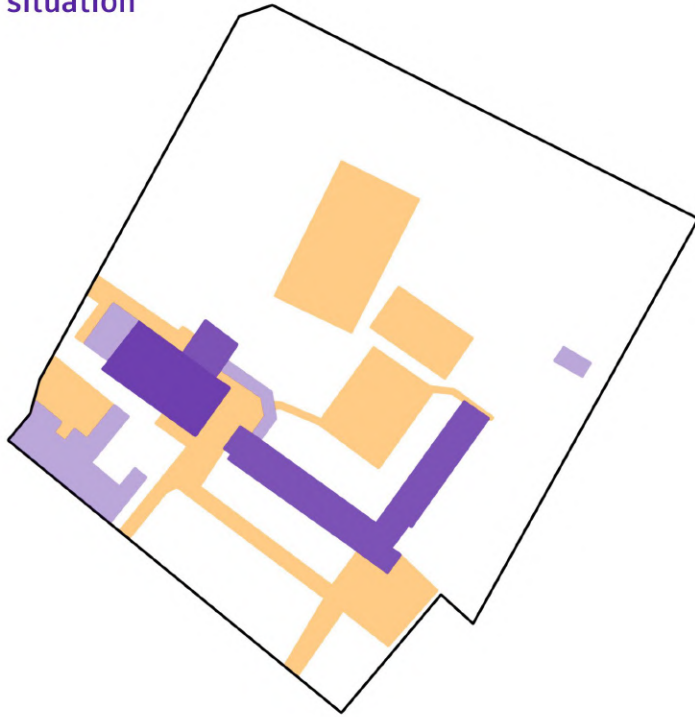


Main goal

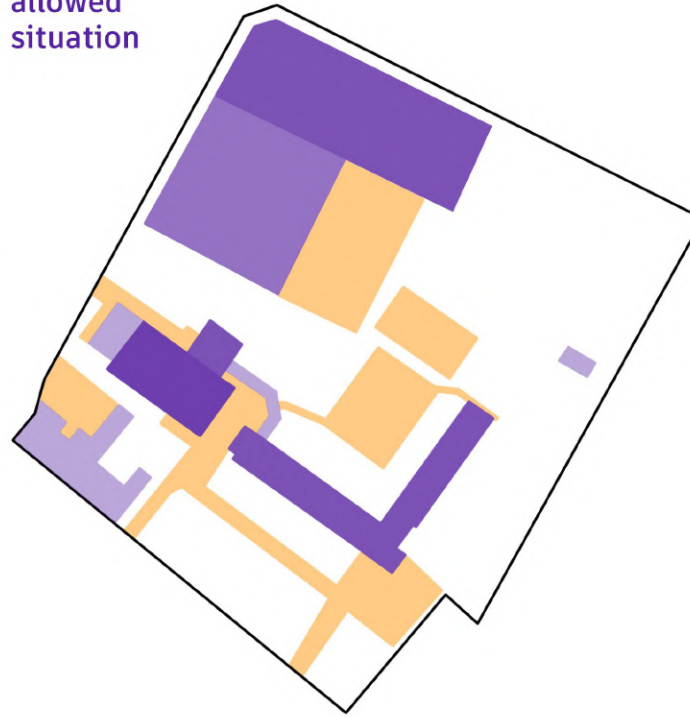


Creating a school that is **inclusive** to all with a strong sense of **community**. Open to the latest **technologies** and yet still **sustainable** and **eco-friendly**. Although it is an **IT school**, it supports students physical and mental health through **sports** and **activities**. We are focused on creating a space that is easy to navigate both during **studies** and during **free time activities**.

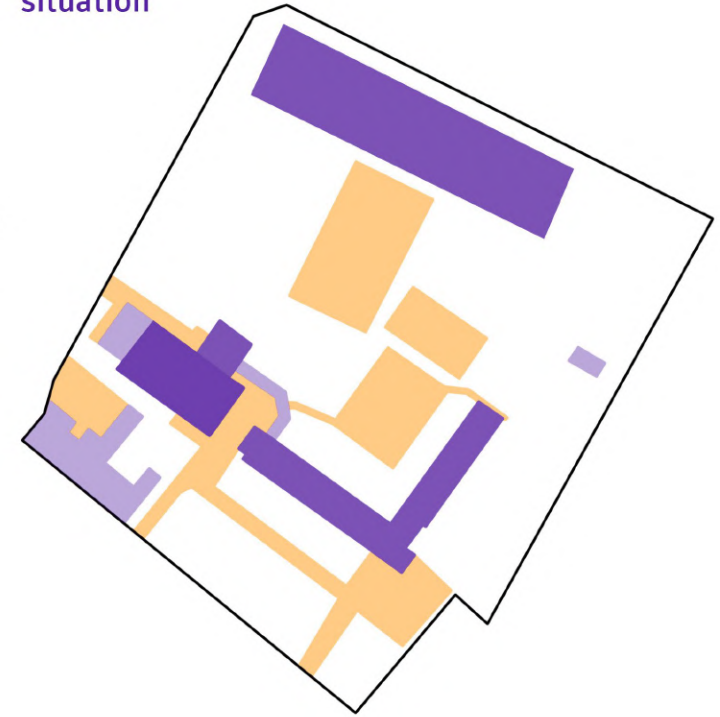
Current situation



Maximum allowed situation



Ideal situation



Built-up

- 1 above-ground floor
- 2 above-ground floors
- 3 above-ground floors
- 4 above-ground floors
- Reinforced surfaces

Functional block area 28 138 m²

Built-up area 3 003 m²
 Gross floor area 7 769 m²
 Reinforced surfaces 6 983 m²
 Areas of greenery 18 152 m²

Built-up area index 0,11
 Floor area index 0,28
 Coefficient of greenery 0,65

Functional block area 28 138 m²

Built-up area 7 878 m² + 4 875 m²
 Gross floor area 19 815 m² 75 m x 65 m
 Reinforced surfaces 6 983 m²
 Areas of greenery 13 277 m²

Built-up area index 0,28
 Floor area index 0,70
 Coefficient of greenery 0,47

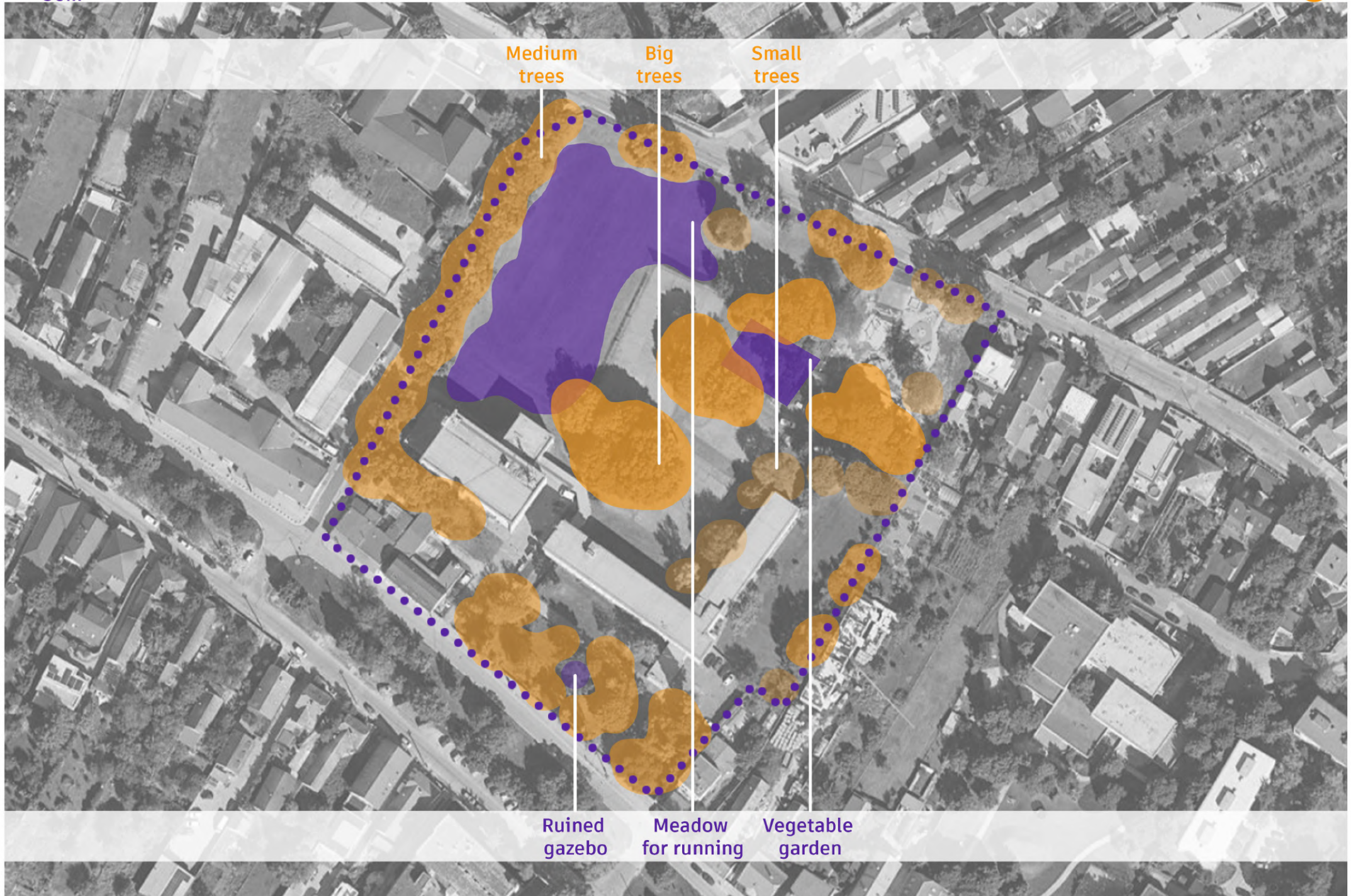
Functional block area 28 138 m²

Built-up area 5 628 m² + 2 625 m²
 Gross floor area 15 644 m² 25 m x 105 m
 Reinforced surfaces 6 983 m²
 Areas of greenery 15 527 m²

Built-up area index 0,20
 Floor area index 0,56
 Coefficient of greenery 0,55

Existing school built-up







Possibility of separate relax area for EM and Skyro

Preservation of 75% of big greenery

Connection of buildings

Parking for teachers

Keeping the playground in its original place



Destruction of 25% of large greenery





Protected from both sides / inner block

New entrance from the other side next to bus stop

Preservation of all the greenery

Parking for teachers

Keeping the playground in its original place



No connection of buildings





Creating big open field
in the middle of the plot

Preservation of 75%
of big greenery

Connection
of buildings

Parking
for teachers

Opening the plot from
the other side too



Having to move
the playground

Destruction of 25%
of large greenery



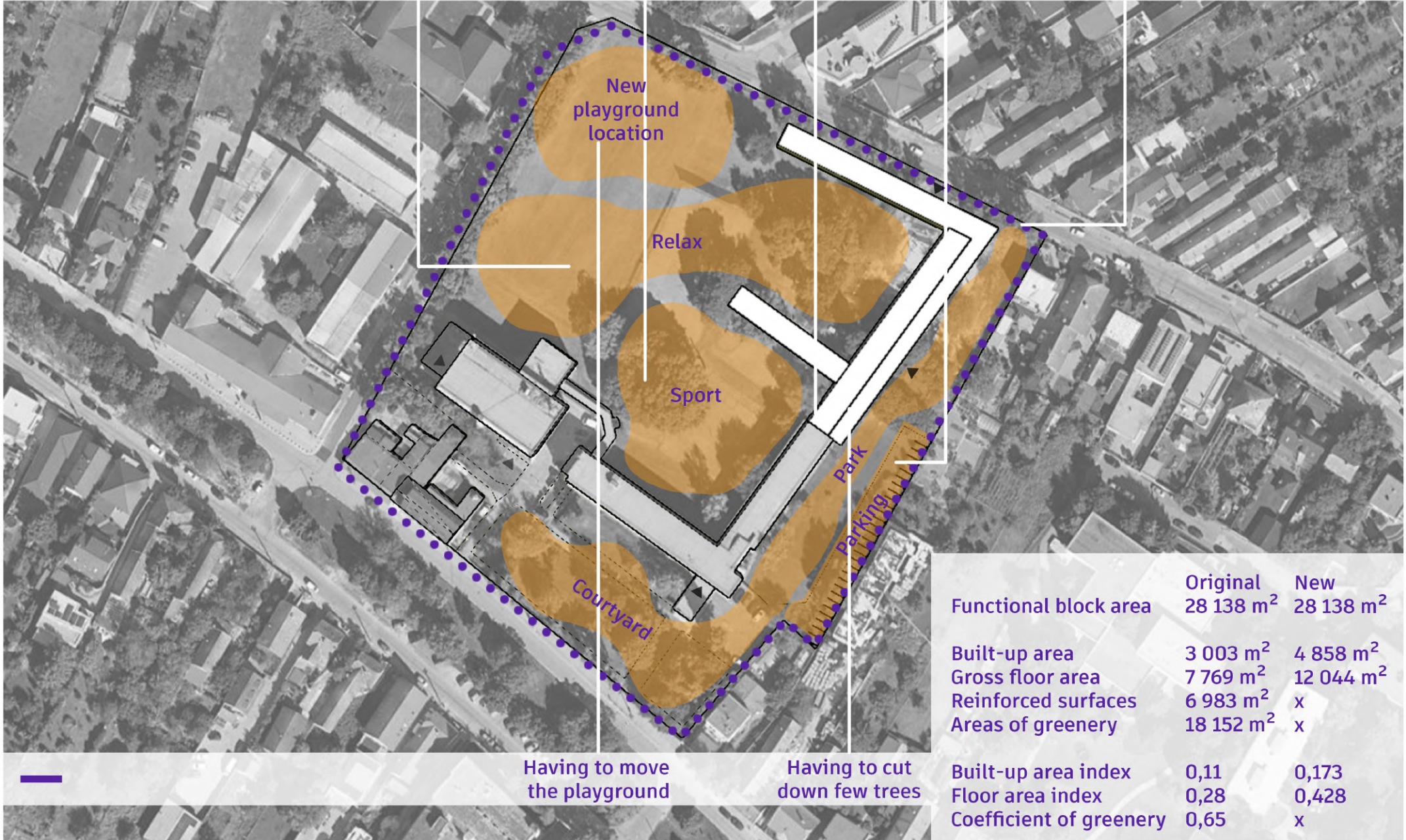
Creating big area in the middle of the plot for relax

Sport in the "inner block" - less noise

Connection of buildings

Parking for teachers

Opening the plot from the other side too



Having to move the playground

Having to cut down few trees

Functional block area	Original 28 138 m ²	New 28 138 m ²
Built-up area	3 003 m ²	4 858 m ²
Gross floor area	7 769 m ²	12 044 m ²
Reinforced surfaces	6 983 m ²	x
Areas of greenery	18 152 m ²	x
Built-up area index	0,11	0,173
Floor area index	0,28	0,428
Coefficient of greenery	0,65	x



Creating separated area for relax as well as area for gardening

Sport in the inner block - no noise

Connection of buildings

Parking for teachers

Opening the plot from the other side too



	Original	New
Functional block area	28 138 m ²	28 138 m ²
Built-up area	3 003 m ²	4 713 m ²
Gross floor area	7 769 m ²	11 189 m ²
Reinforced surfaces	6 983 m ²	x
Areas of greenery	18 152 m ²	x
Built-up area index	0,11	0,167
Floor area index	0,28	0,398
Coefficient of greenery	0,65	x

Too long walking distances and too closed off

Having to move the playground

Having to cut down few trees



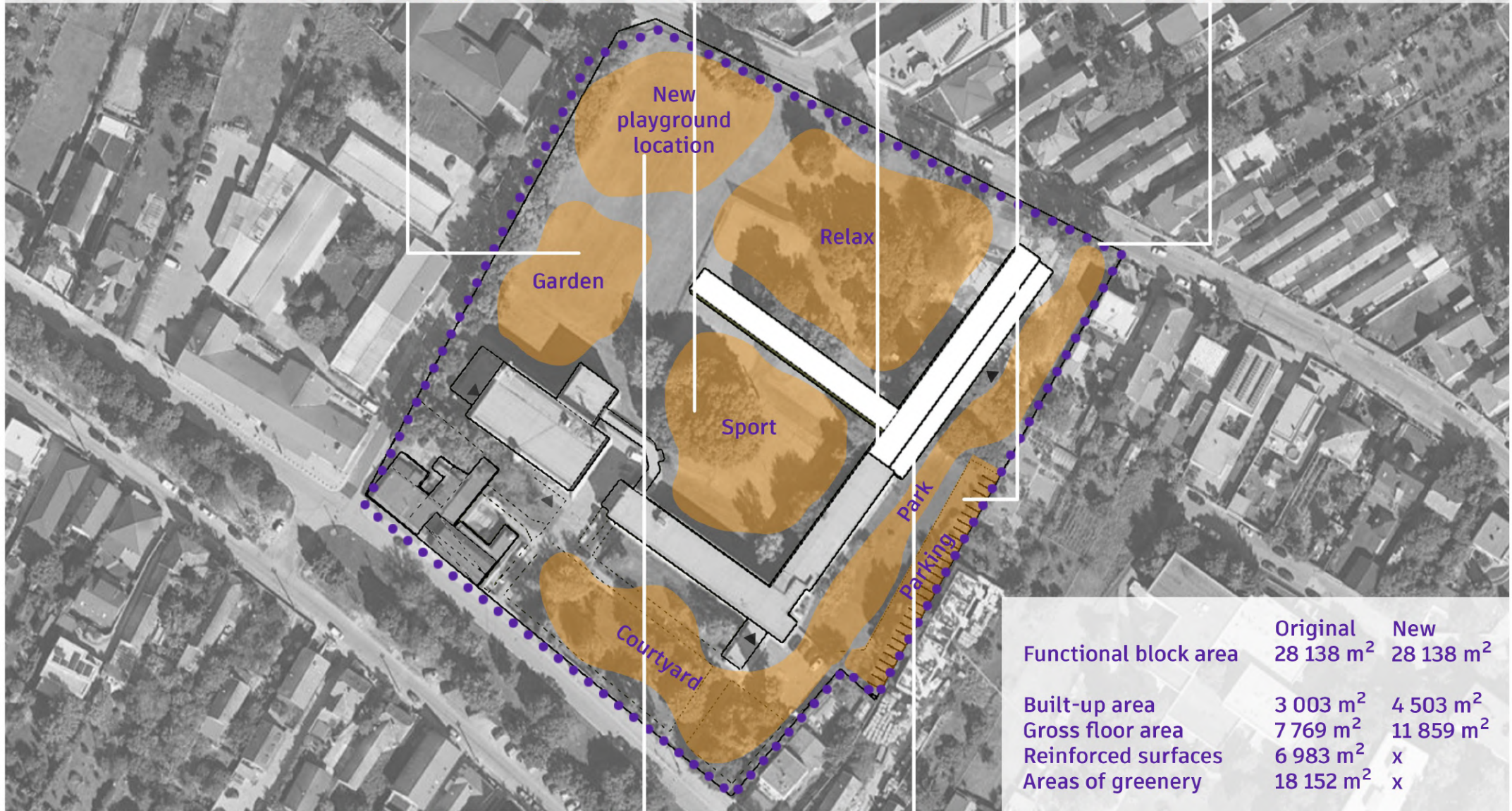
Creating separated area for relax as well as area for gardening

Sport in the inner block - no noise

Connection of buildings

Parking for teachers

Opening the plot from the other side too



	Original	New
Functional block area	28 138 m ²	28 138 m ²
Built-up area	3 003 m ²	4 503 m ²
Gross floor area	7 769 m ²	11 859 m ²
Reinforced surfaces	6 983 m ²	x
Areas of greenery	18 152 m ²	x
Built-up area index	0,11	0,16
Floor area index	0,28	0,421
Coefficient of greenery	0,65	x

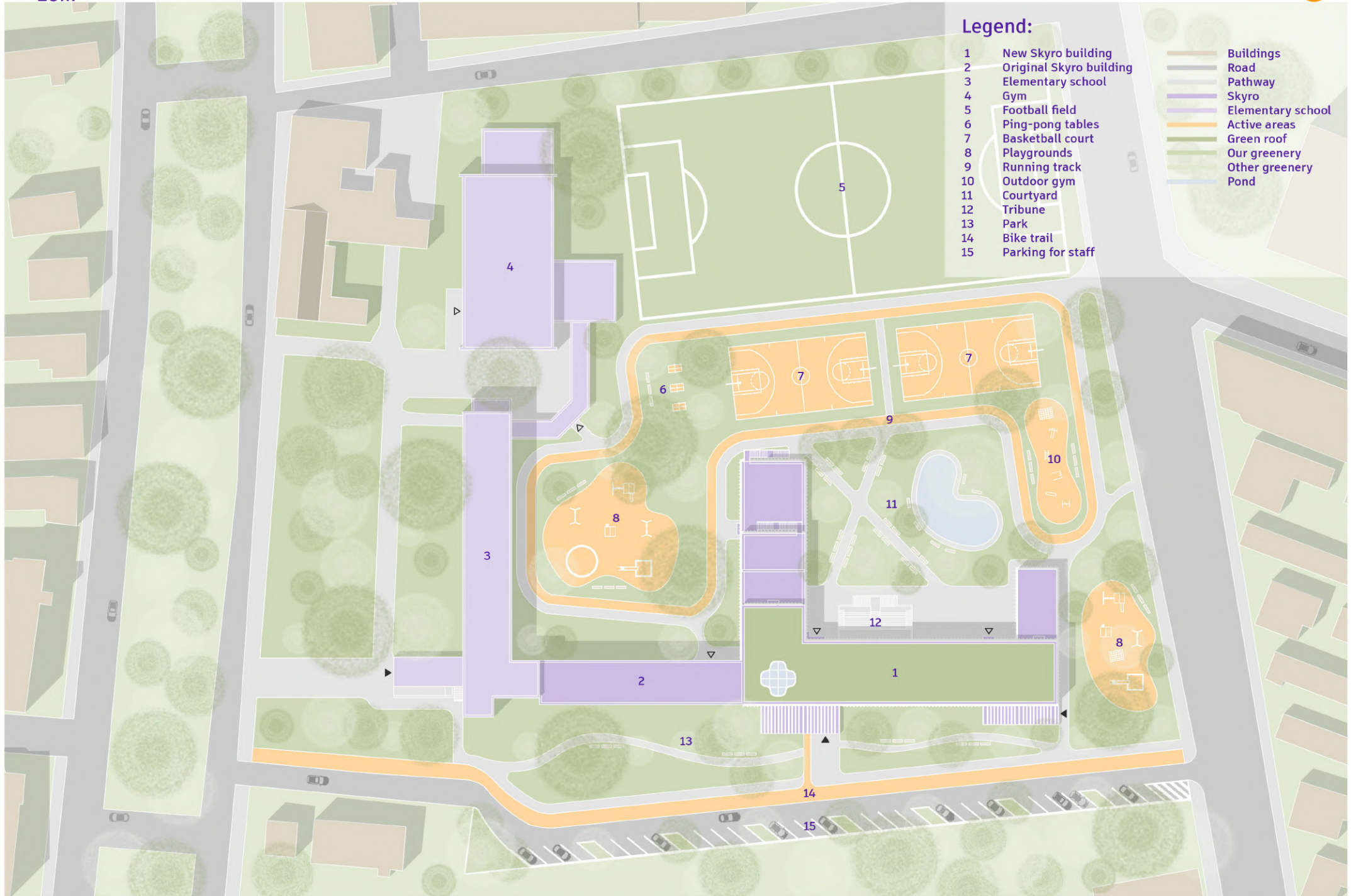
Maybe a little too open

Having to move the playground

Having to cut down few trees

Building

Master plan

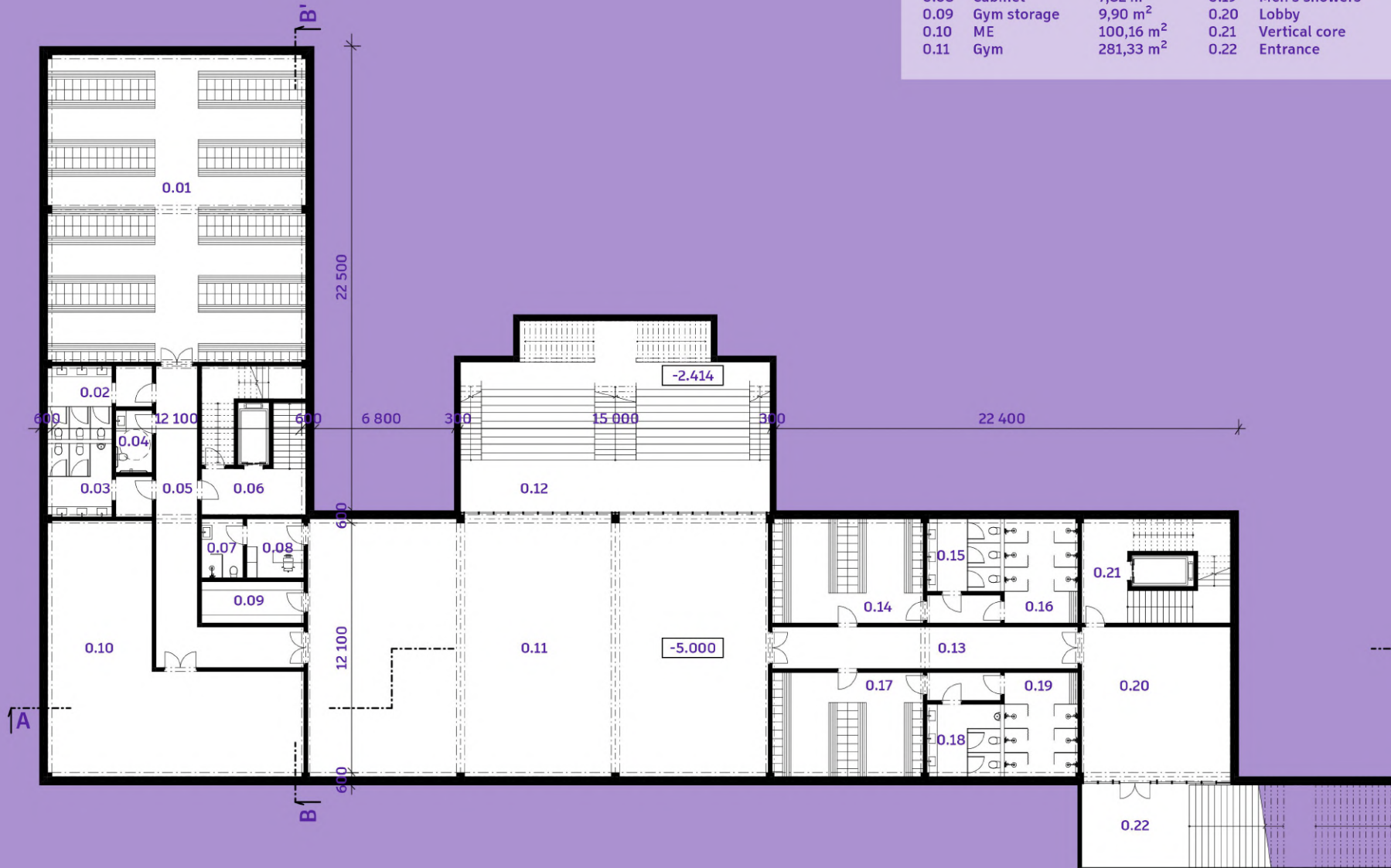


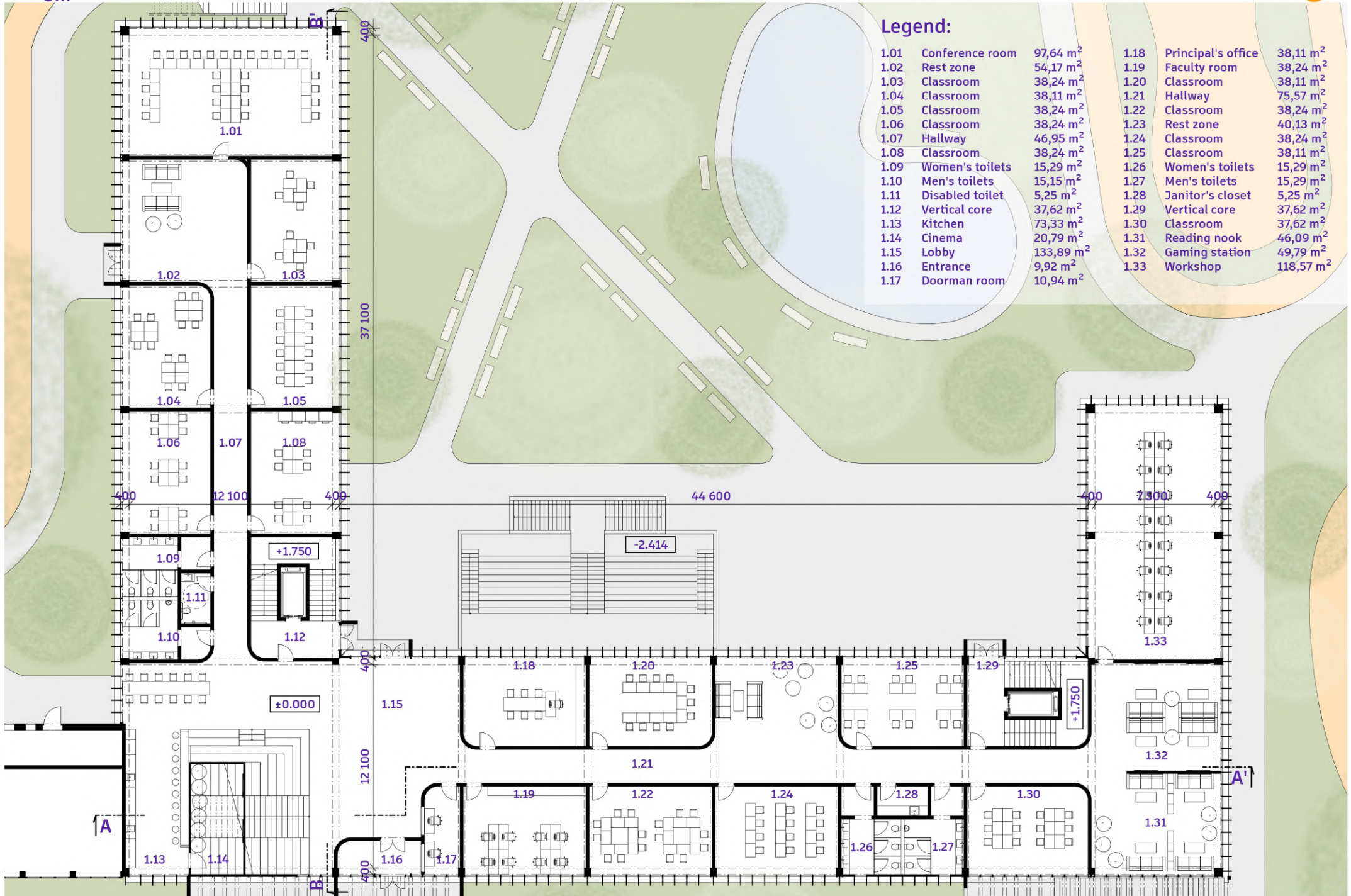
1. Underground floor



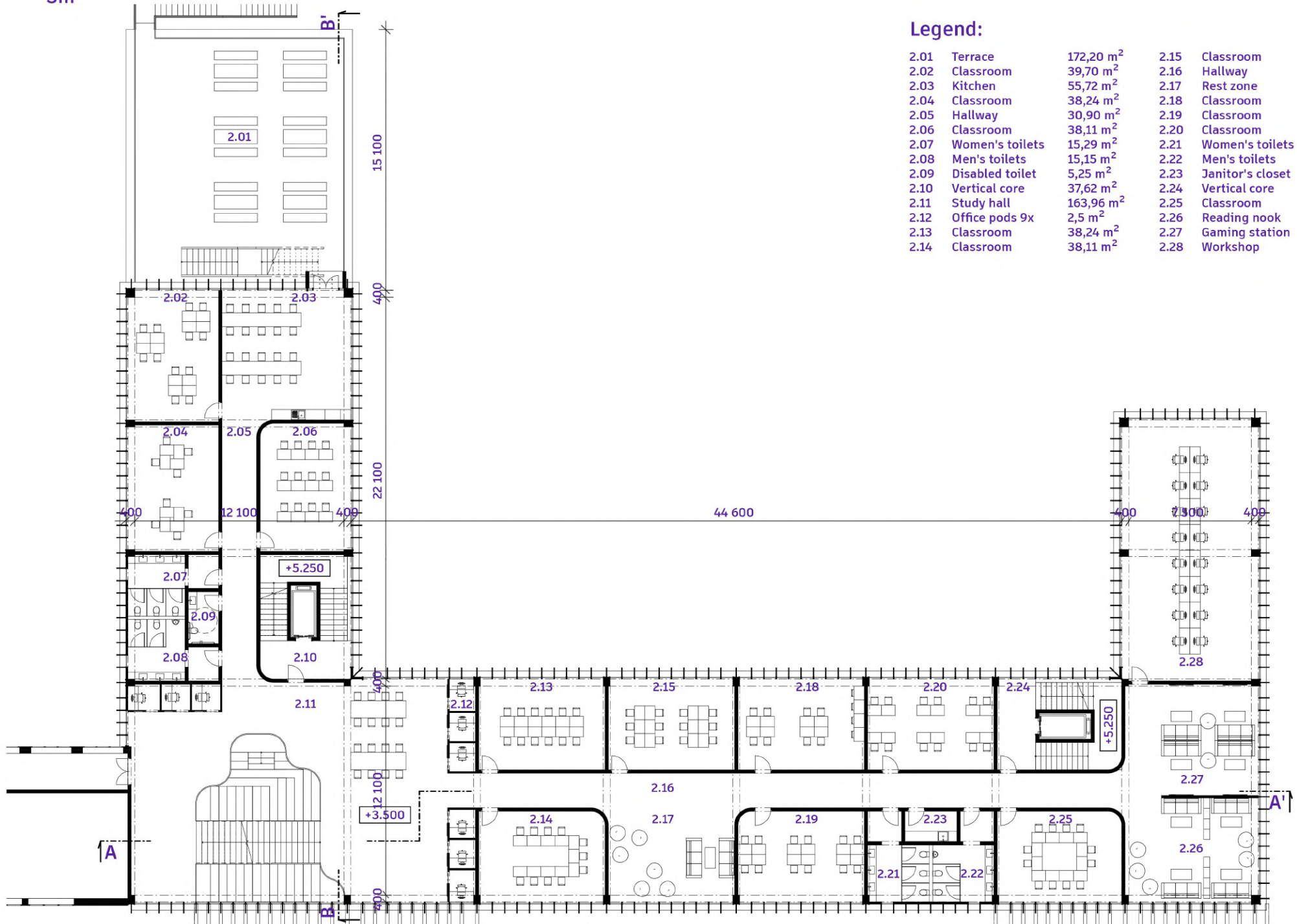
Legend:

0.01	Locker room	186,11 m ²	0.12	Tribune	128,04 m ²
0.02	Women's toilets	14,60 m ²	0.13	Hallway	29,60 m ²
0.03	Men's toilets	14,60 m ²	0.14	Women's changing rooms	41,82 m ²
0.04	Disabled toilet	5,25 m ²	0.15	Women's toilets	12,40 m ²
0.05	Hallway	39,38 m ²	0.16	Women's showers	17,91 m ²
0.06	Vertical core	36,34 m ²	0.17	Men's changing rooms	41,82 m ²
0.07	Bathroom	5,70 m ²	0.18	Men's toilets	12,40 m ²
0.08	Cabinet	7,82 m ²	0.19	Men's showers	17,91 m ²
0.09	Gym storage	9,90 m ²	0.20	Lobby	53,74 m ²
0.10	ME	100,16 m ²	0.21	Vertical core	36,34 m ²
0.11	Gym	281,33 m ²	0.22	Entrance	20,84 m ²





2. Floor



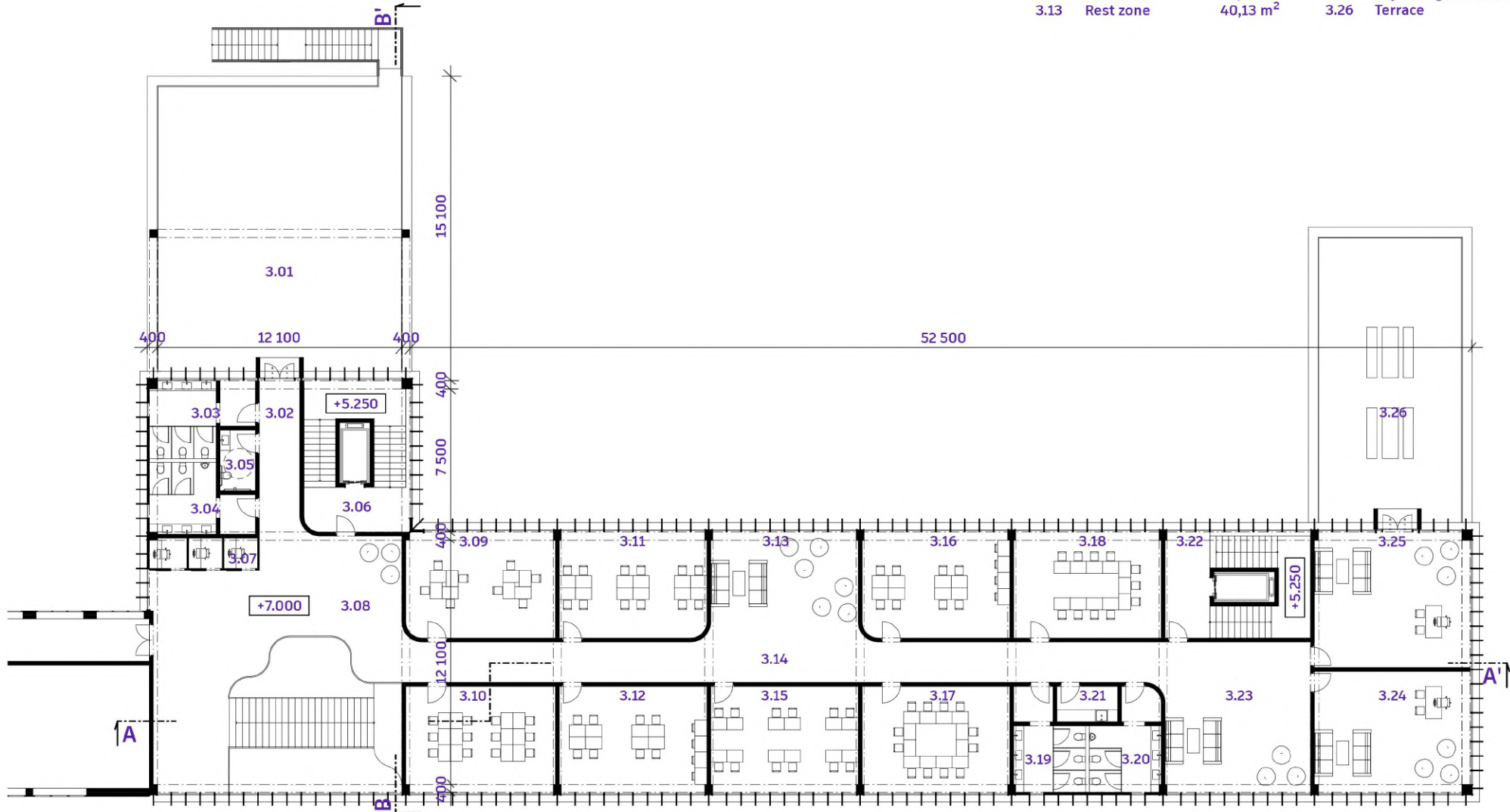
Legend:

2.01	Terrace	172,20 m ²	2.15	Classroom	38,24 m ²
2.02	Classroom	39,70 m ²	2.16	Hallway	78,83 m ²
2.03	Kitchen	55,72 m ²	2.17	Rest zone	40,13 m ²
2.04	Classroom	38,24 m ²	2.18	Classroom	38,24 m ²
2.05	Hallway	30,90 m ²	2.19	Classroom	38,11 m ²
2.06	Classroom	38,11 m ²	2.20	Classroom	38,24 m ²
2.07	Women's toilets	15,29 m ²	2.21	Women's toilets	15,29 m ²
2.08	Men's toilets	15,15 m ²	2.22	Men's toilets	15,29 m ²
2.09	Disabled toilet	5,25 m ²	2.23	Janitor's closet	5,25 m ²
2.10	Vertical core	37,62 m ²	2.24	Vertical core	37,62 m ²
2.11	Study hall	163,96 m ²	2.25	Classroom	37,62 m ²
2.12	Office pods 9x	2,5 m ²	2.26	Reading nook	46,09 m ²
2.13	Classroom	38,24 m ²	2.27	Gaming station	49,79 m ²
2.14	Classroom	38,11 m ²	2.28	Workshop	118,57 m ²



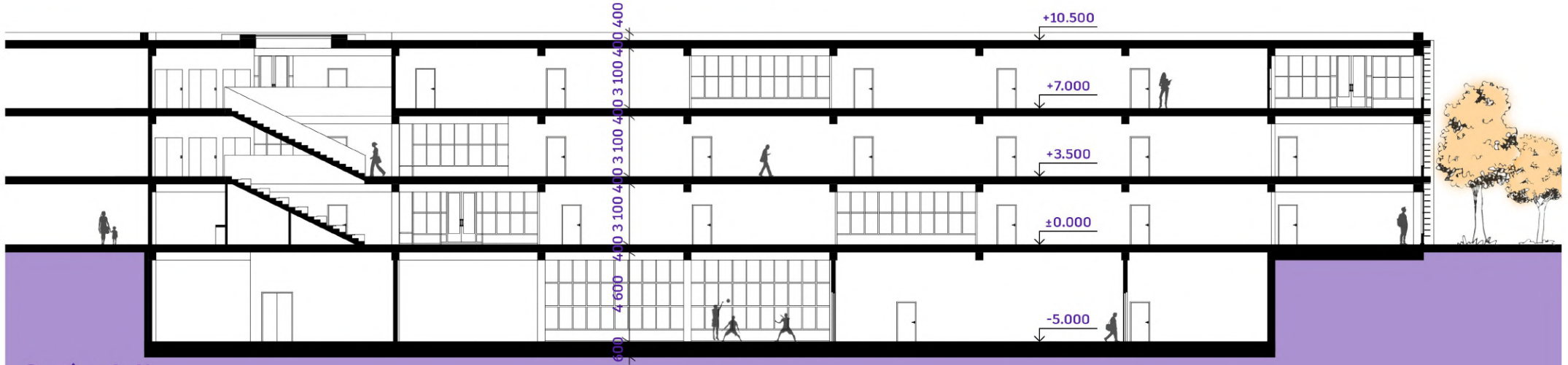
Legend:

3.01	Terrace	172,20 m ²	3.14	Hallway	75,97 m ²
3.02	Hallway	15,65 m ²	3.15	Classroom	38,24 m ²
3.03	Women's toilets	15,29 m ²	3.16	Classroom	38,11 m ²
3.04	Men's toilets	15,15 m ²	3.17	Classroom	38,24 m ²
3.05	Disabled toilet	5,25 m ²	3.18	Classroom	38,24 m ²
3.06	Vertical core	37,62 m ²	3.19	Women's toilets	15,29 m ²
3.07	Office pods 3x	2,5 m ²	3.20	Men's toilets	15,29 m ²
3.08	Hall	90,51 m ²	3.21	Janitor's closet	5,25 m ²
3.09	Classroom	38,11 m ²	3.22	Vertical core	37,62 m ²
3.10	Classroom	38,24 m ²	3.23	Rest zone	53,60 m ²
3.11	Classroom	38,11 m ²	3.24	Psychologist's office	45,90 m ²
3.12	Classroom	38,24 m ²	3.25	Psychologist's office	51,41 m ²
3.13	Rest zone	40,13 m ²	3.26	Terrace	100,60 m ²

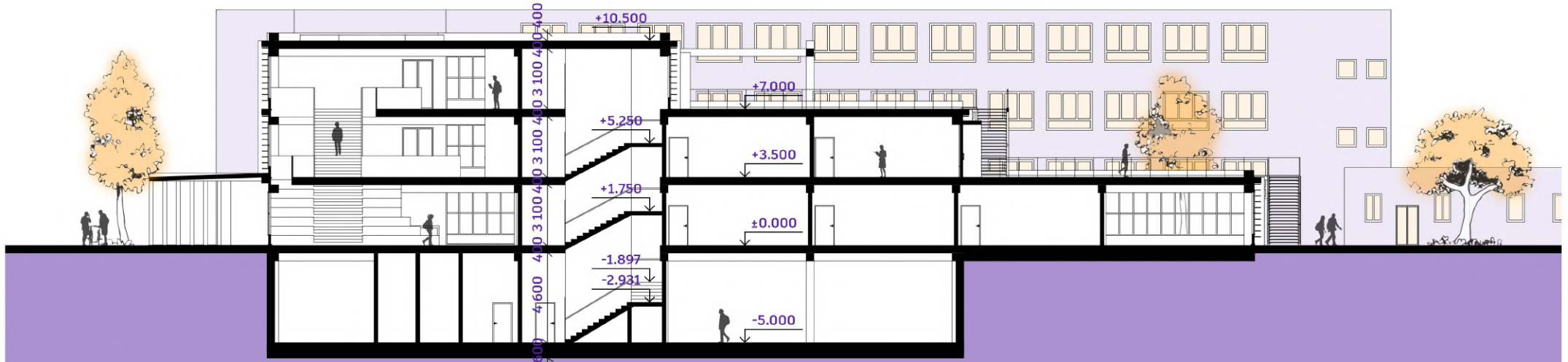


M: 1:200
5m

Sections



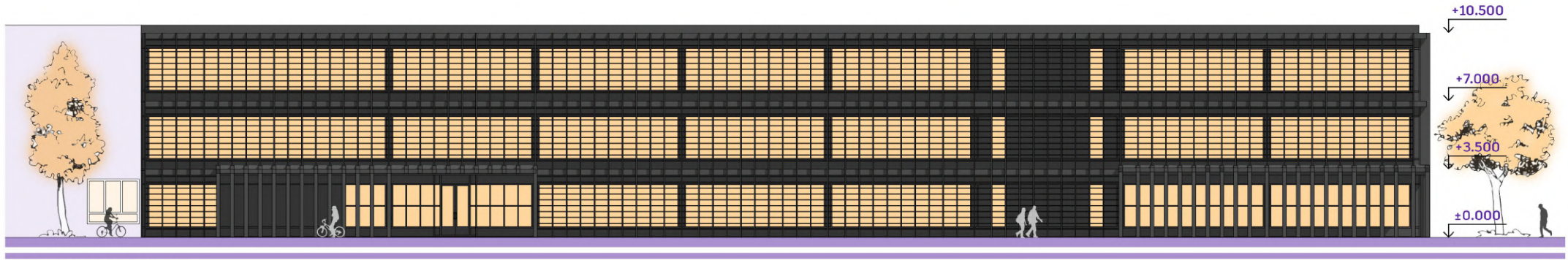
Section A-A'



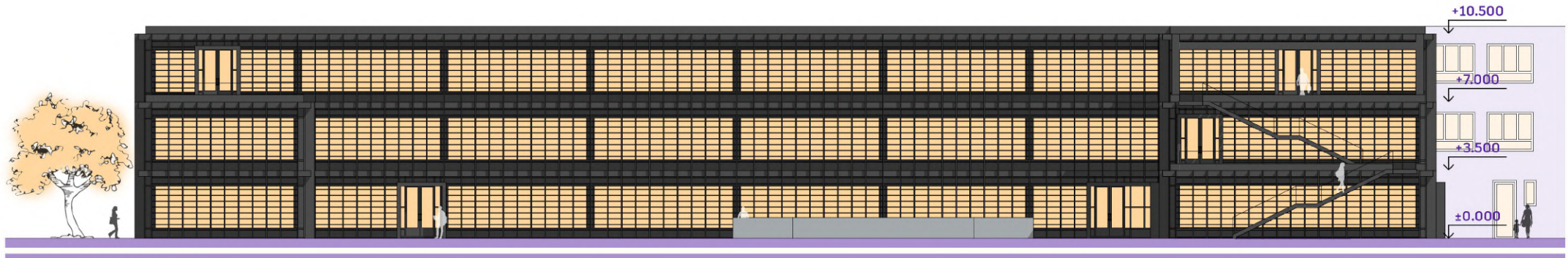
Section B-B'

M: 1:200
5m

Views



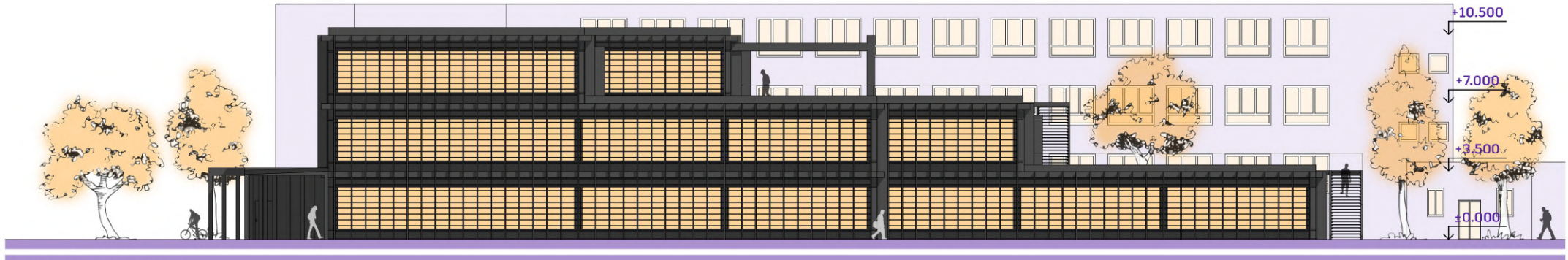
Southeast view



Northwest view

M: 1:200
5m

Views



Northeast view



Southwest view

Visualizations

Visualization



Main entrance

Visualization



Stair seating

Visualization



Staircase

Visualization



Classroom

Visualization



Psychologist's office

Visualization

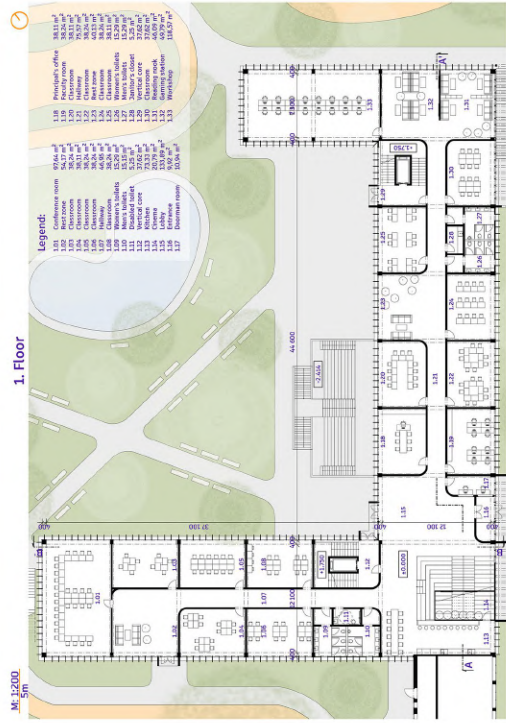


Reading nook

Visualization



Courtyard



Main goal

Creating a school that is **inclusive** to all with a strong sense of **community**. Open to the latest technologies and yet still **sustainable** and **eco-friendly**. Although it is an IT school, it supports students physical and mental health through **sports** and **activities**. We are focused on creating a space that is easy to navigate both during studies and during free time activities.



Libretto

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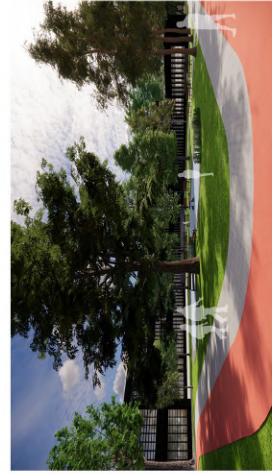
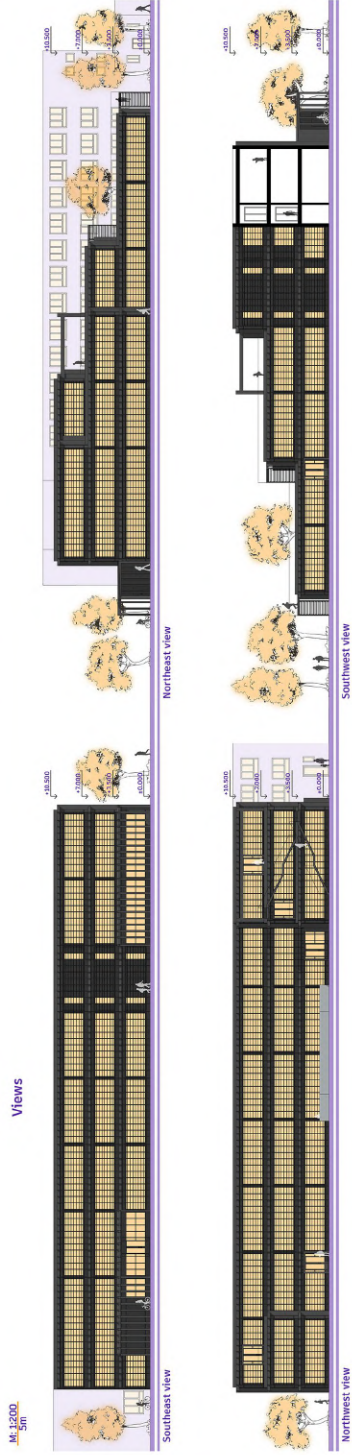
Material solution

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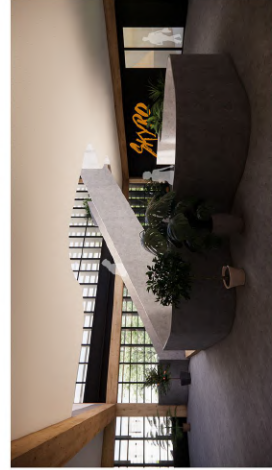
Sections



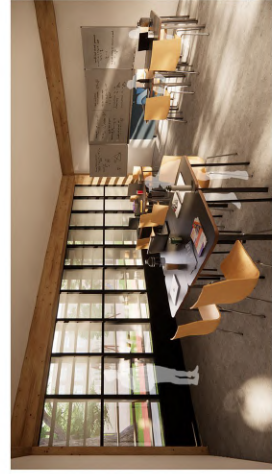
Views



Courtyard



Staircase



Classroom

Thank you for your attention



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By: Vanessa Šutovská