



ARCHITECTURE STUDENT CONTEST

21st INTERNATIONAL EDITION, BELGRADE 2026

Athletes go through intense training to achieve the impossible with their bodies.

However, for them to reach the fullest of their potential, balancing their physical and mental health is crucial. Inspired by the Yachting Club, and the Sava River surrounding it, we want to provide a place of not only living, but relaxation as well.

By bringing water into the buildings and site, the isolated Yachting Club is linked with the new Accommodation, fostering a lifestyle of mental wellness for athletes.



**Water is everywhere around us
It gives us life and culture
Our aim is to embrace that once again**

Excellence is not achieved only through training, but with sufficient rest as well.

An architectural rendering of a modern, multi-story building with a complex, layered design. The building features numerous balconies, terraces, and a prominent external staircase on the left side. Several vertical waterfalls are integrated into the building's facade, cascading down to a central courtyard area. The courtyard is landscaped with green grass, trees, and large rocks, and contains a small stream or pool of water. People are shown walking on the balconies and in the courtyard, adding a sense of scale and life to the scene. The sky is overcast with a few birds flying. The overall aesthetic is clean, modern, and emphasizes a connection to nature through water and greenery.

Rhythm of Water

Excellence Through Body-Mind Balance

The Chinese University of Hong Kong School of Architecture

Team No. 28



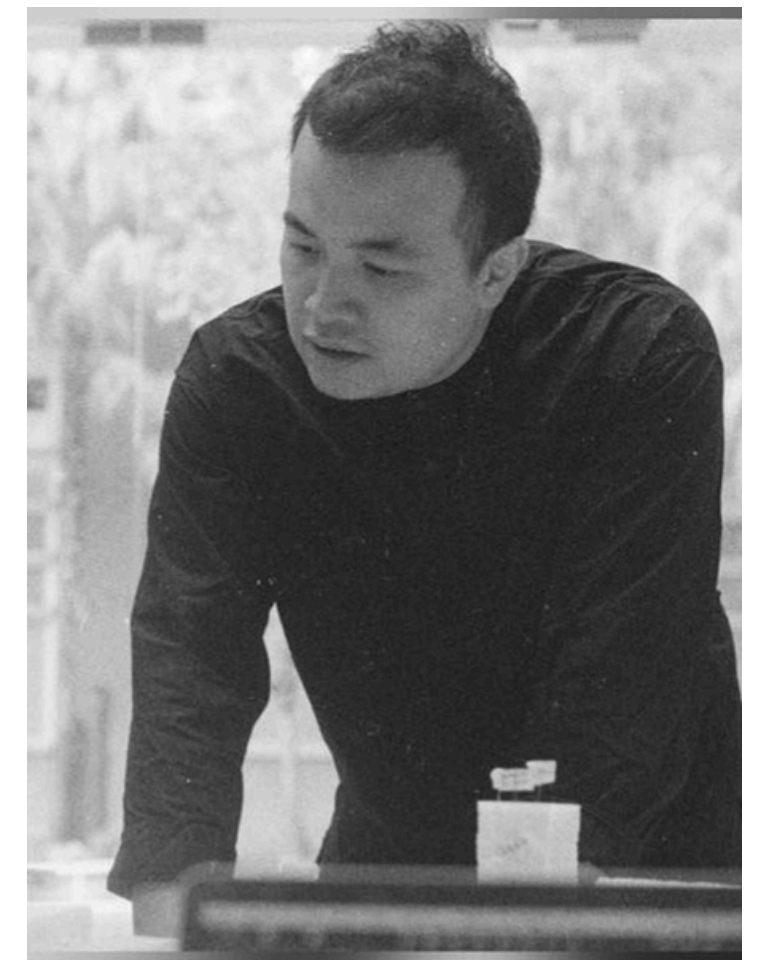
FUNG Wing In Ingrid
Architecture Year 4



LAU Kai Yan Carmen
Architecture Year 4

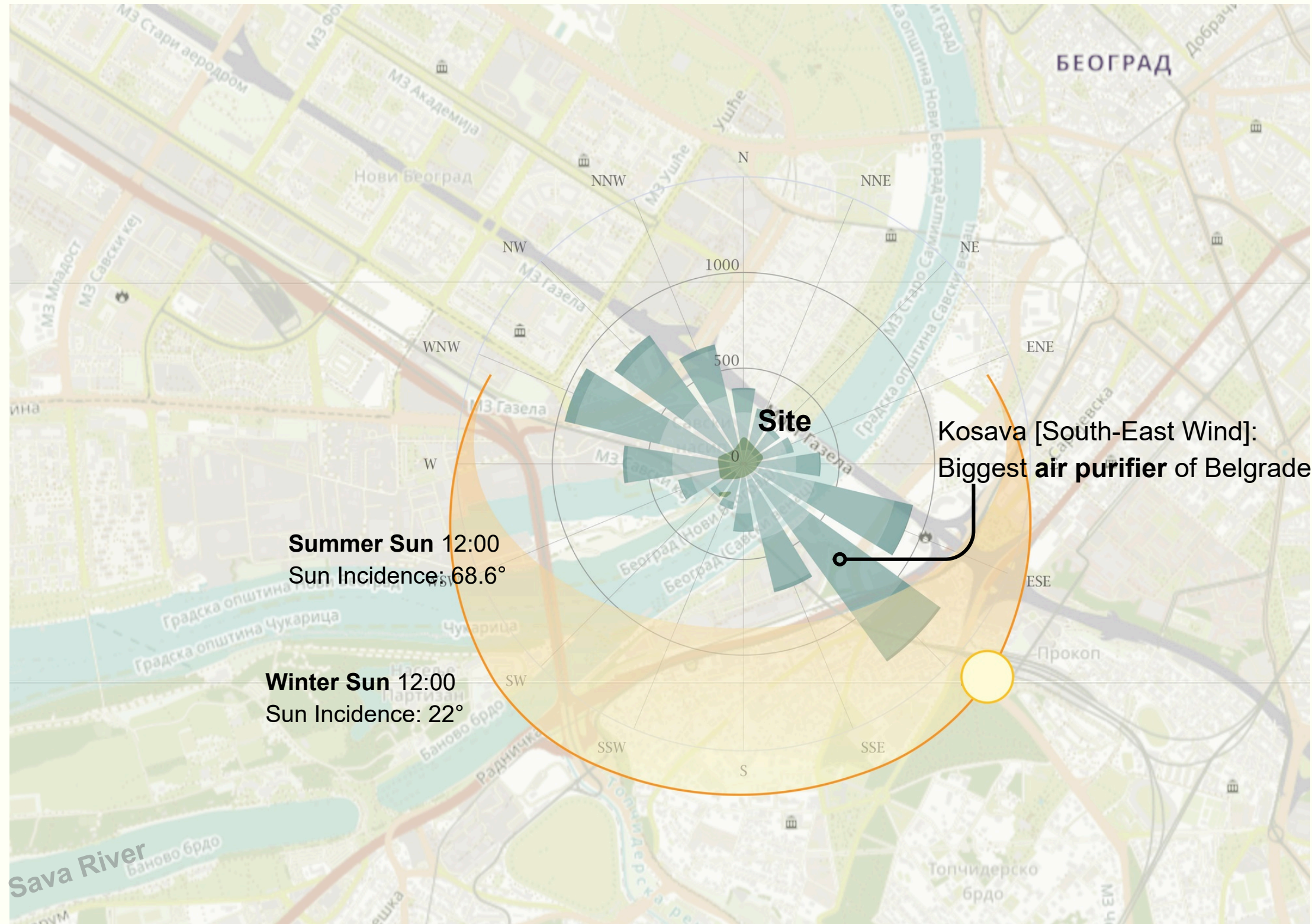


LIAO Ho Ngai
Architecture Year 4



Ho Tsz Wai Jimmy
Professor

Climate



No. of Tropical Days

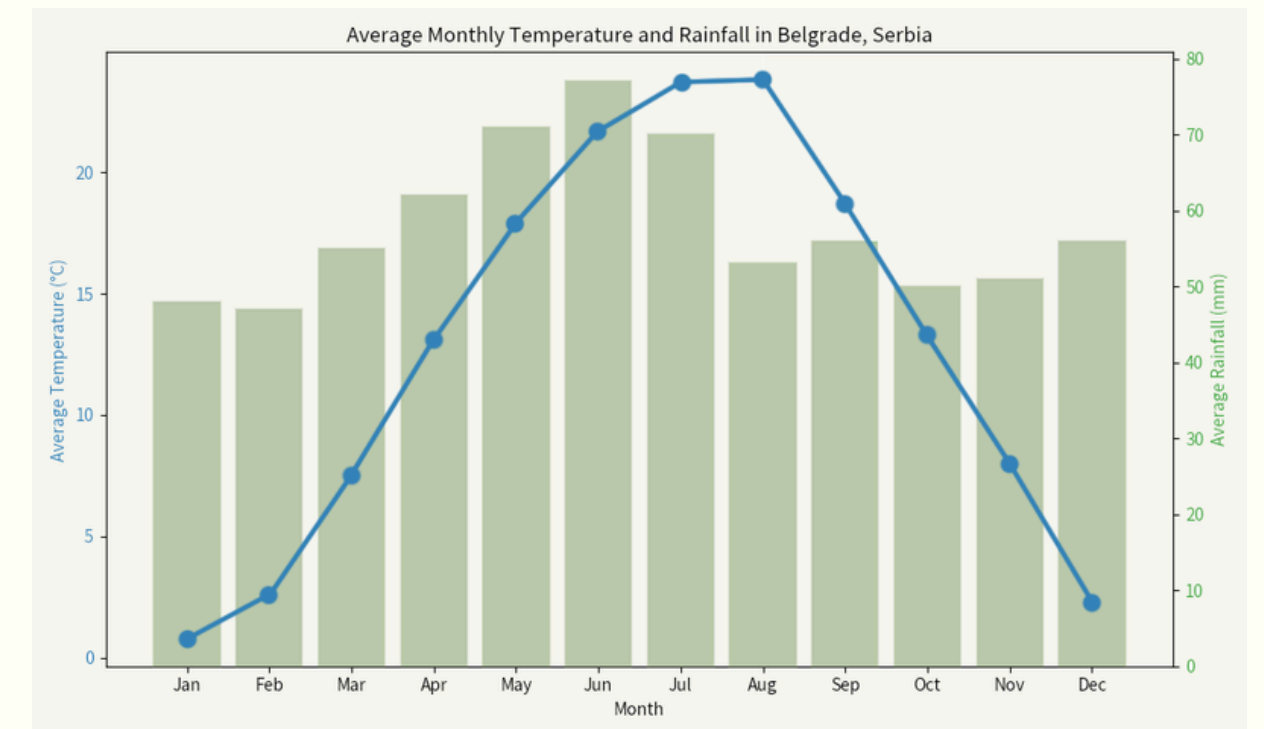


Warm Temperate Climate

Hot Summers

Mild Winters

Year-round even precipitation



Transport & Circulation



1 
Car Access

1 
Bus Line

1 
Cycle Access

NO
Waterfront Access

Limited **public transportation** access from both sides of the site

Water Culture

Belgrade
River Fest

Winter
Fest

Water Sports

River Trips

Sava River

1 2 3 4 5 6 7 8 9 10 11 12





**Athlete
Accommodation**

**Academic
Yachting Club**



Accommodation

Sports

Waterfront



Accommodation

Pocket spaces created by river

Sports

River acts as guidance to sports hall

Central Gathering Area

Encourage water play

Waterfront

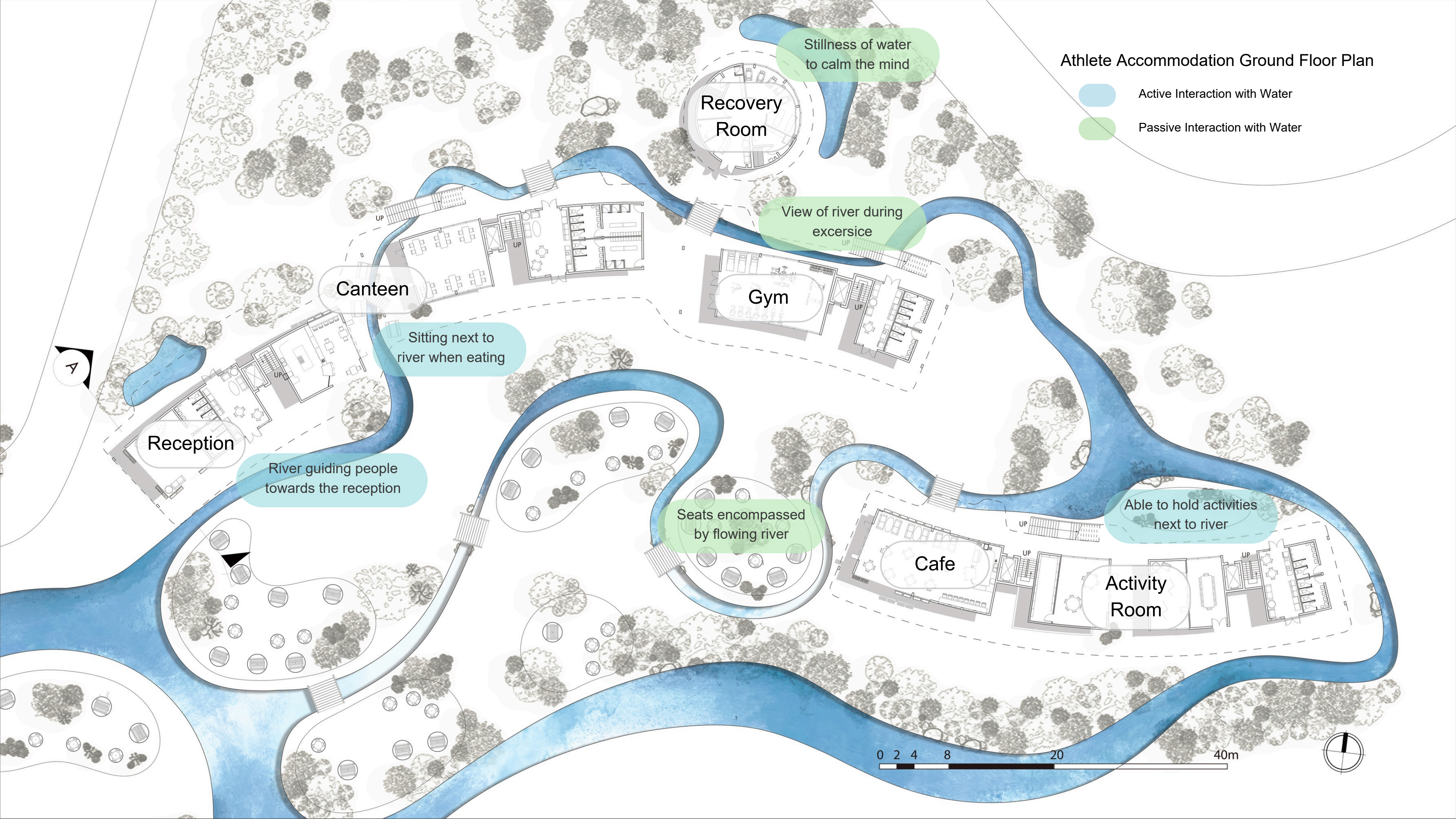


Athlete Accommodation Ground Floor Plan



Athlete Accommodation Ground Floor Plan

- Active Interaction with Water
- Passive Interaction with Water



RECOVERY ROOM

Passive interaction



CANTEEN

Active interaction





Water System

Accommodation Corridor

Athlete Accommodation North Elevation 1st Cluster

1
Rainwater is collected

2
Water is also pumped up

3
Water act as a
white noise barrier

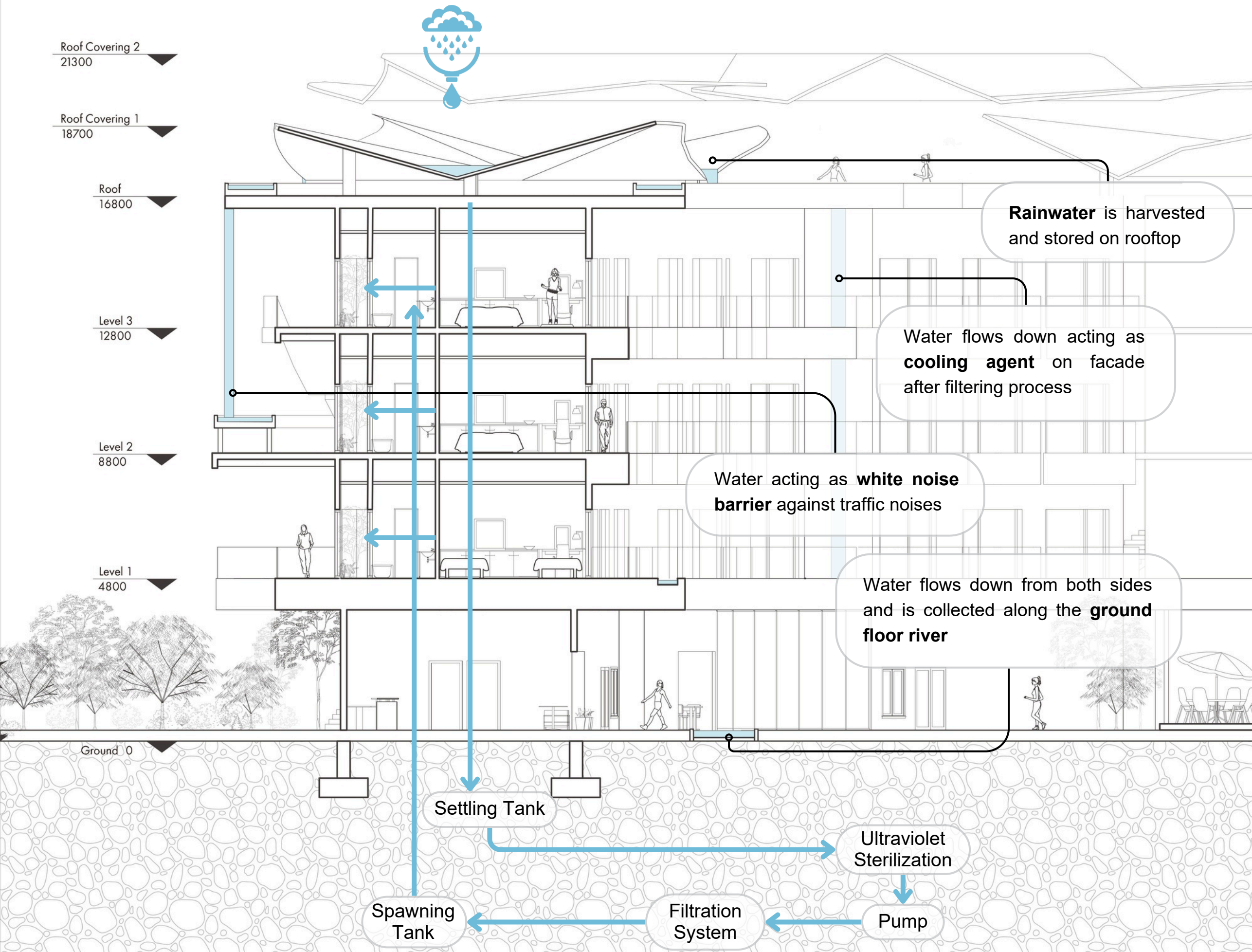
4
Water flows along
the corridor **basin**

5
Water flows down to
the **ground floor river**





Athlete Accommodation Section A-A
Water System



Athlete Accommodation Section A-A
Sunlight and Ventilation

Summer Sun 12:00
Sun Incidence: 68.6°

Winter Sun 12:00
Sun Incidence: 22°

Winter Sun 12:00
Sun Incidence: 22°

Roof Covering 2
21300

Roof Covering 1
18700

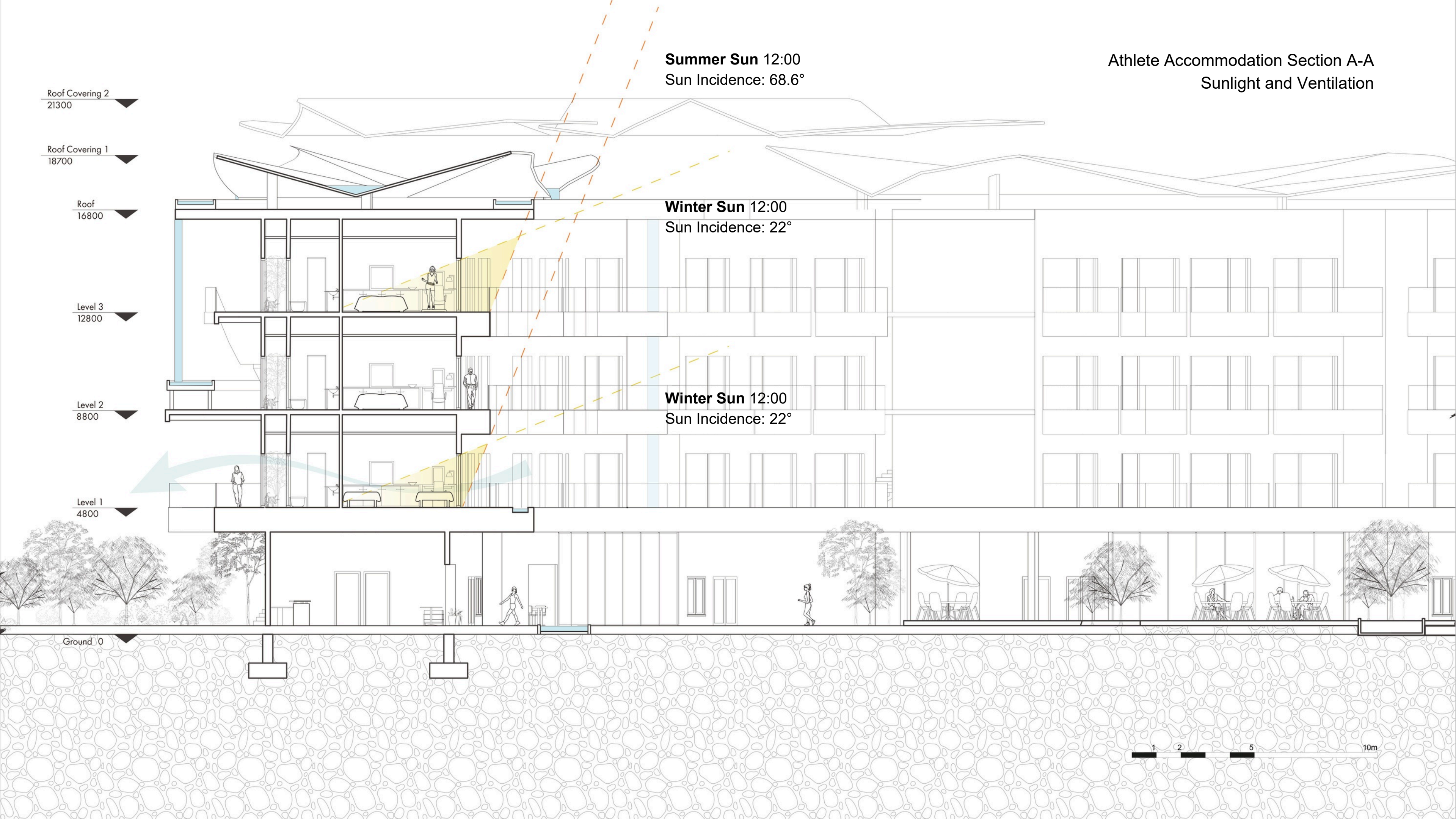
Roof
16800

Level 3
12800

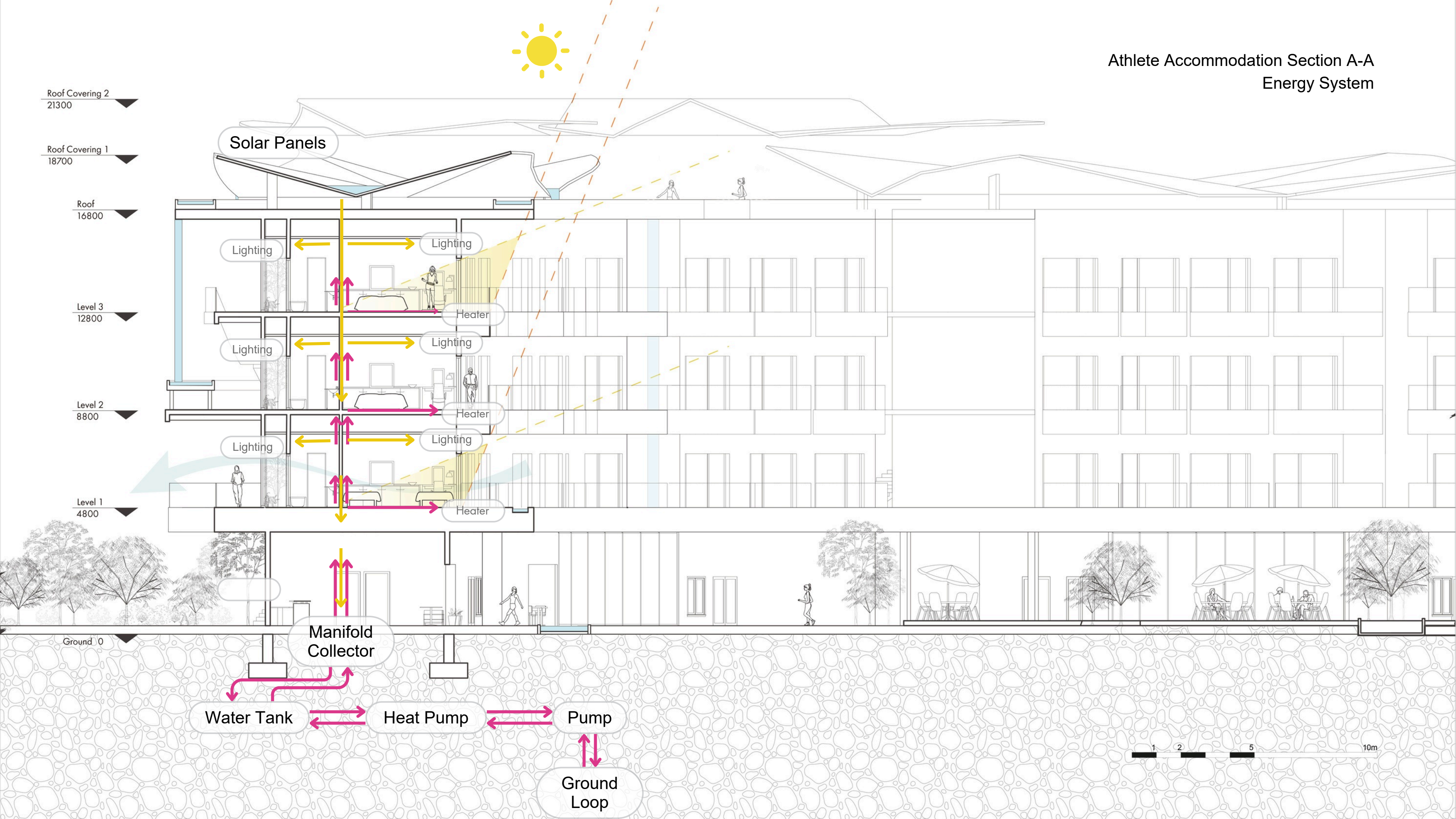
Level 2
8800

Level 1
4800

Ground 0



Athlete Accommodation Section A-A Energy System





Athlete Accommodation Typical Floor Plan




A



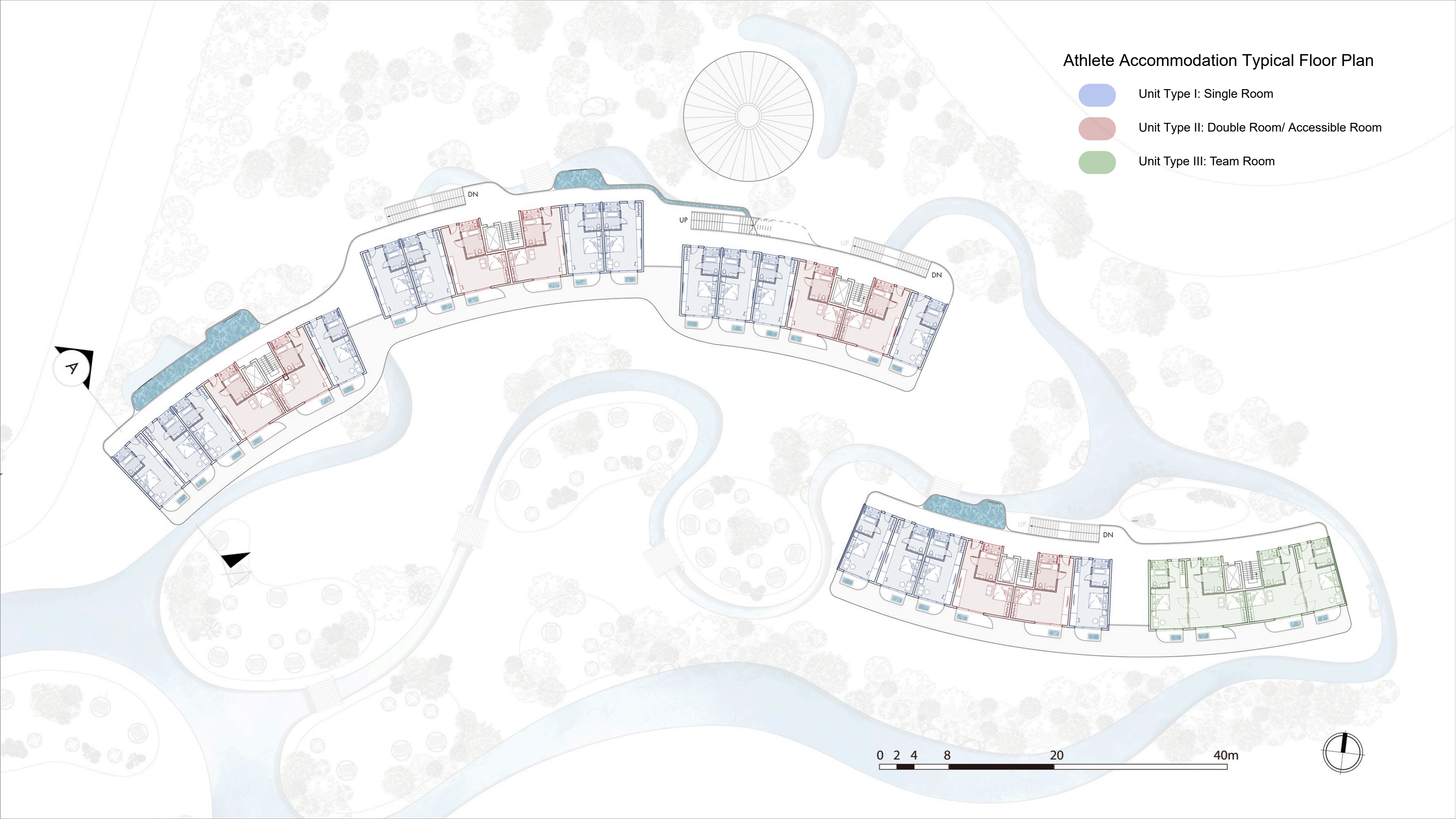
0 2 4 8 20 40m



Athlete Accommodation Typical Floor Plan

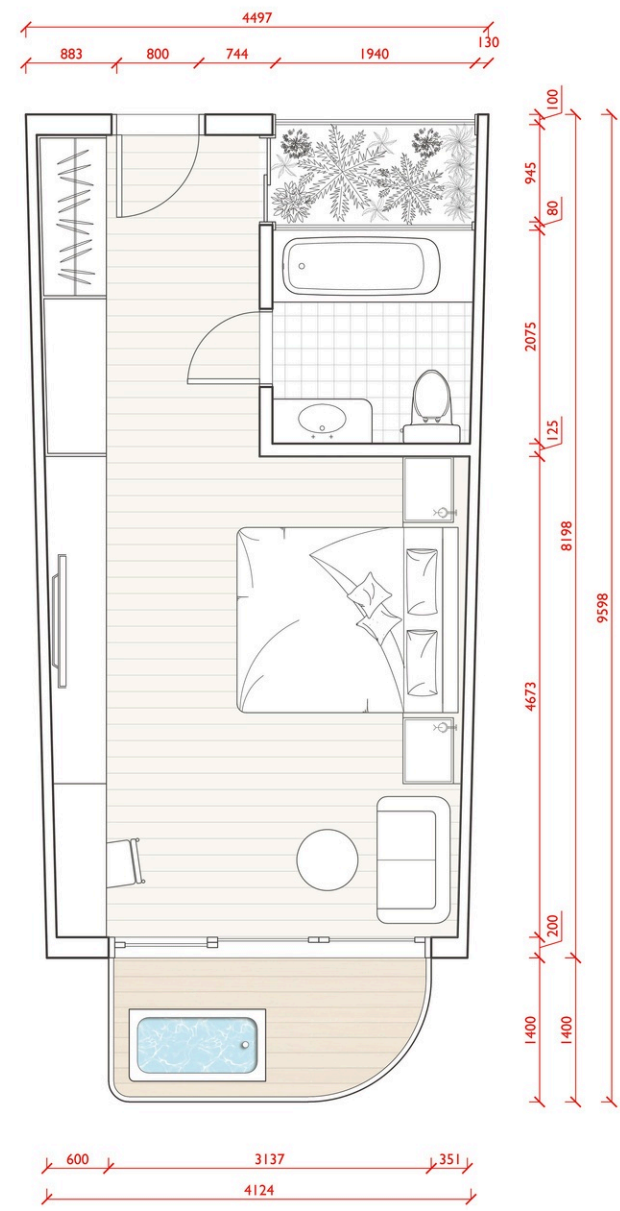
-  Unit Type I: Single Room
-  Unit Type II: Double Room/ Accessible Room
-  Unit Type III: Team Room

A



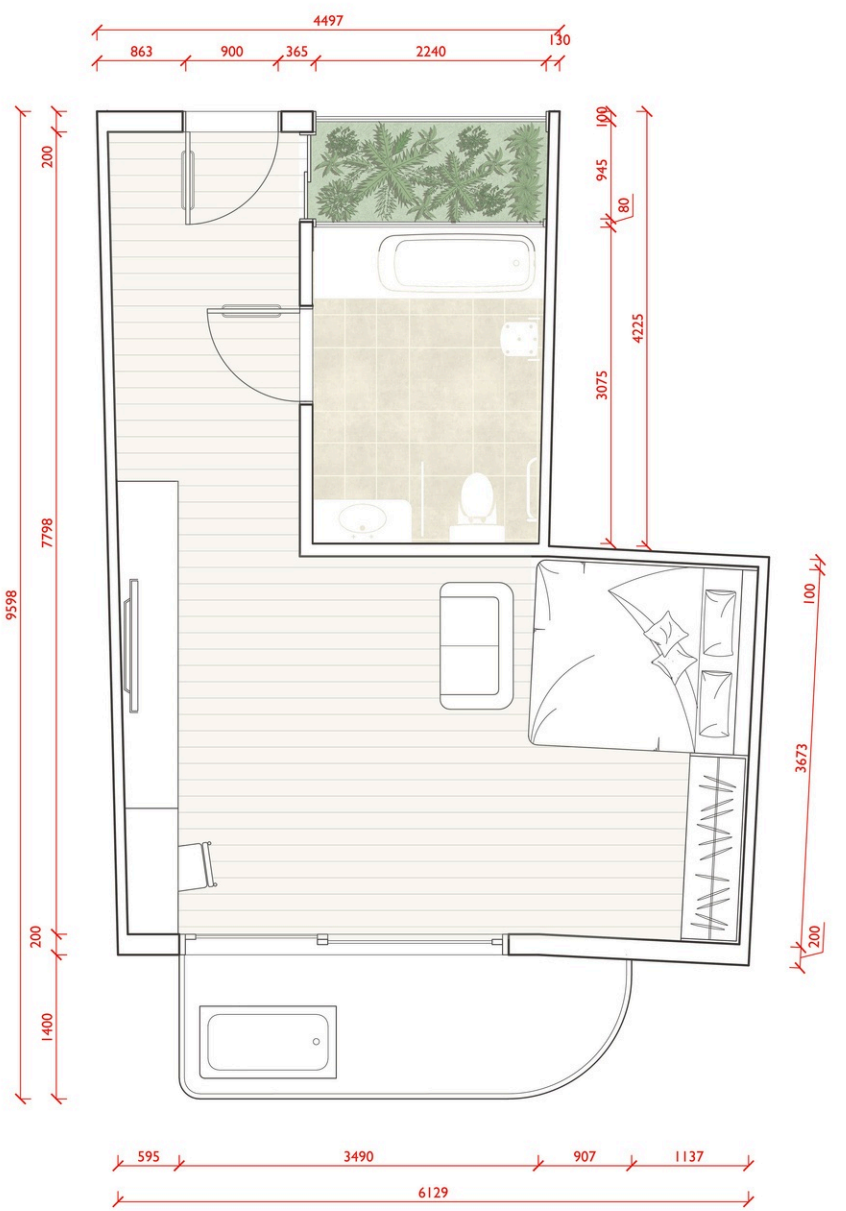
0 2 4 8 20 40m





Unit Type I
Single Room





Unit Type II
Double Room/ Accessible Room

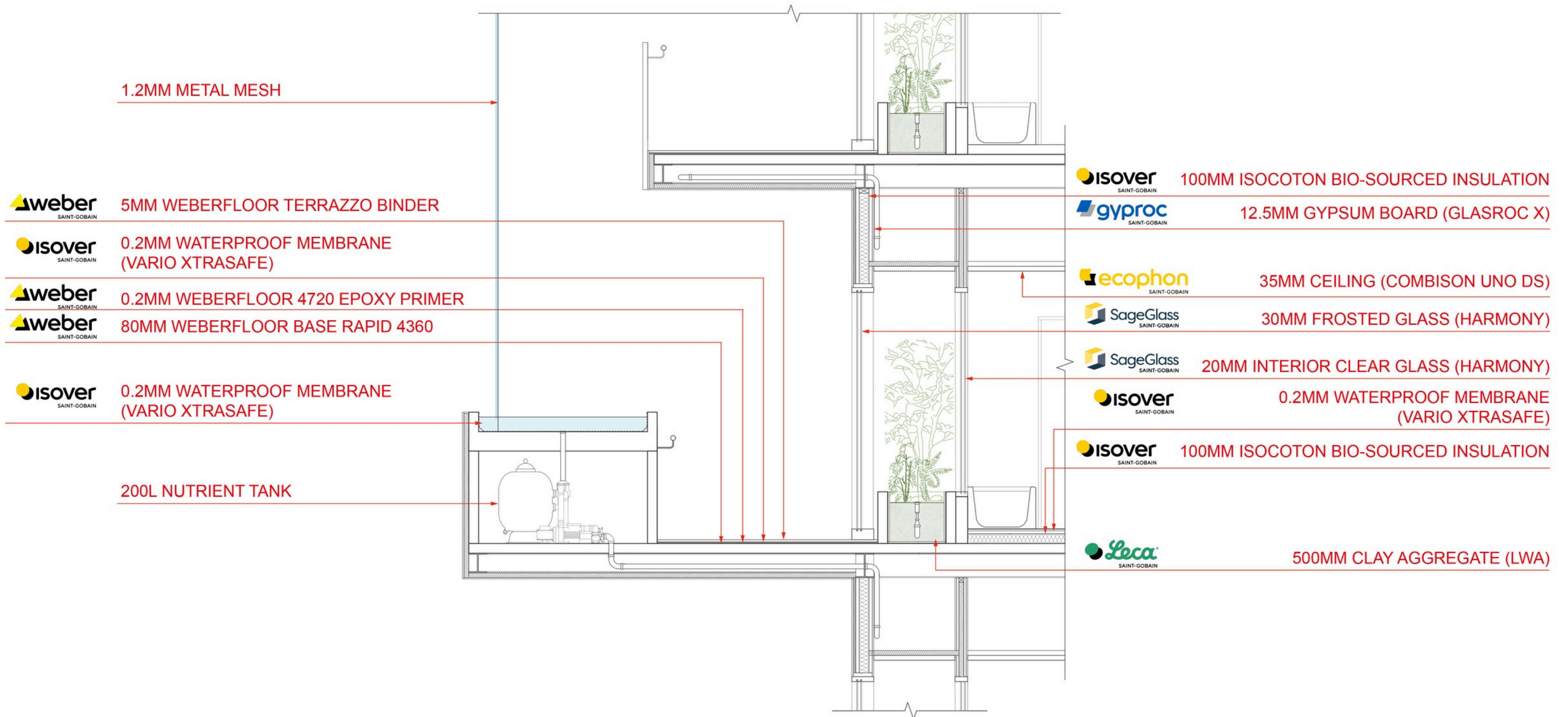




Unit Type III
Team Room



Athlete Accommodation Detail Section



1.2MM METAL MESH

weber SAINT-GOBAIN
5MM WEBERFLOOR TERRAZZO BINDER

isover SAINT-GOBAIN
0.2MM WATERPROOF MEMBRANE (VARIO XTRASAFE)

weber SAINT-GOBAIN
0.2MM WEBERFLOOR 4720 EPOXY PRIMER

weber SAINT-GOBAIN
80MM WEBERFLOOR BASE RAPID 4360

isover SAINT-GOBAIN
0.2MM WATERPROOF MEMBRANE (VARIO XTRASAFE)

200L NUTRIENT TANK

isover SAINT-GOBAIN
100MM ISOCOTON BIO-SOURCED INSULATION

gyproc SAINT-GOBAIN
12.5MM GYPSUM BOARD (GLASROC X)

ecophon SAINT-GOBAIN
35MM CEILING (COMBISON UNO DS)

SageGlass SAINT-GOBAIN
30MM FROSTED GLASS (HARMONY)

SageGlass SAINT-GOBAIN
20MM INTERIOR CLEAR GLASS (HARMONY)

isover SAINT-GOBAIN
0.2MM WATERPROOF MEMBRANE (VARIO XTRASAFE)

isover SAINT-GOBAIN
100MM ISOCOTON BIO-SOURCED INSULATION

Leca SAINT-GOBAIN
500MM CLAY AGGREGATE (LWA)



Life Cycle Analysis

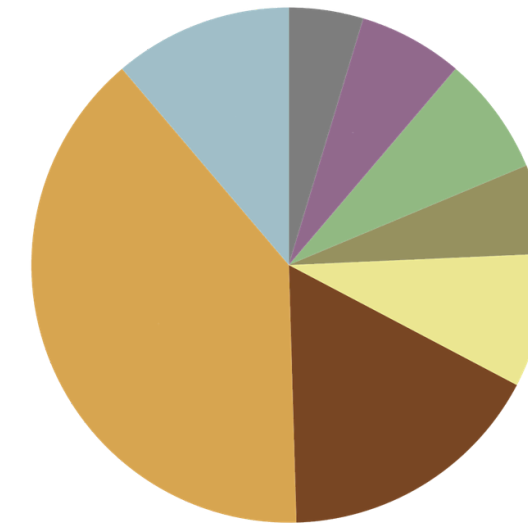
One-Click LCA

Cradle to grave (A1-A4, B4-B5, C1-C4)	kg CO ₂ e/m ²
(< 350) A	210
(350-530) B	
(530-710) C	
(710-890) D	
(890-1070) E	
(1070-1250) F	
(> 1250) G	



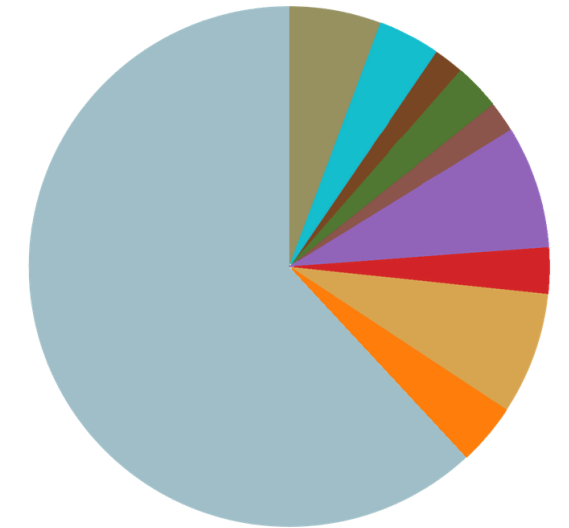
Global Warming kg CO₂e - Classification

- Foundations - 11.2%
- Load bearing Structural Frame - 39.3%
- External Walls - 16.8%
- Ground Floor Slabs - 8.4%
- Facade Openings - 5.6%
- Floor Coverings & Finishes - 7.5%
- Construction Site (A5) - 6.5%
- Demolition Scenarios (C1+) - 4.7%



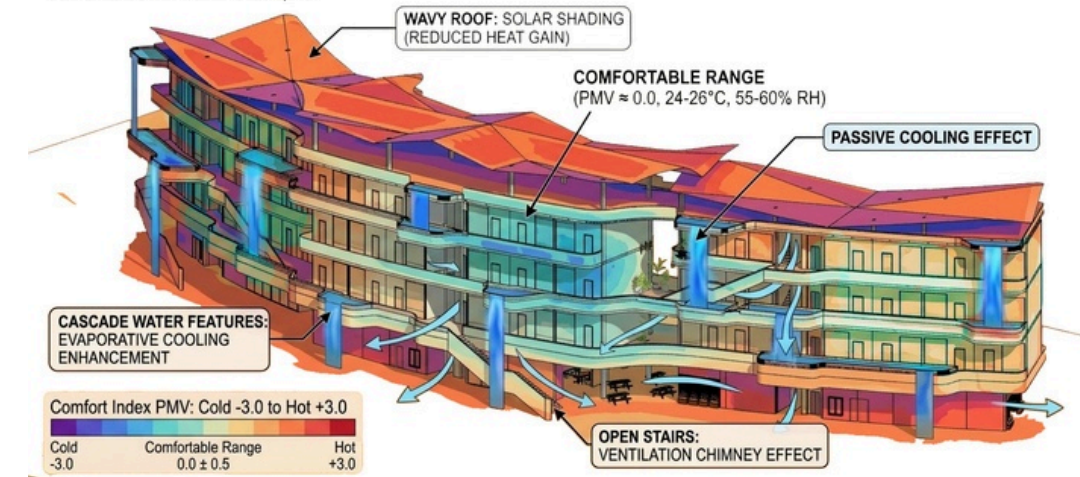
Global Warming kg CO₂e - Life-cycle stages

- A1-A3 Materials - 65%
- A4 Transport - 4%
- A5 Construction - 8%
- B1-B5 Use (excl. energy/water) - 3%
- B6 Operational Energy - 8%
- B7 Operational Water - 2%
- C1 Demolition - 3%
- C2 Waste Transport - 2%
- C3 Waste Processing - 4%
- C4 Disposal - 6%



THERMAL COMFORT SIMULATION - BELGRADE, SERBIA

SIMULATION PARAMETERS: Summer Day, 31°C Ambient, 65% RH
CLIMATE ZONE: Humid Subtropical



**Athlete
Accommodation**

**Academic
Yachting Club**



Yachting Club Ground Floor Plan

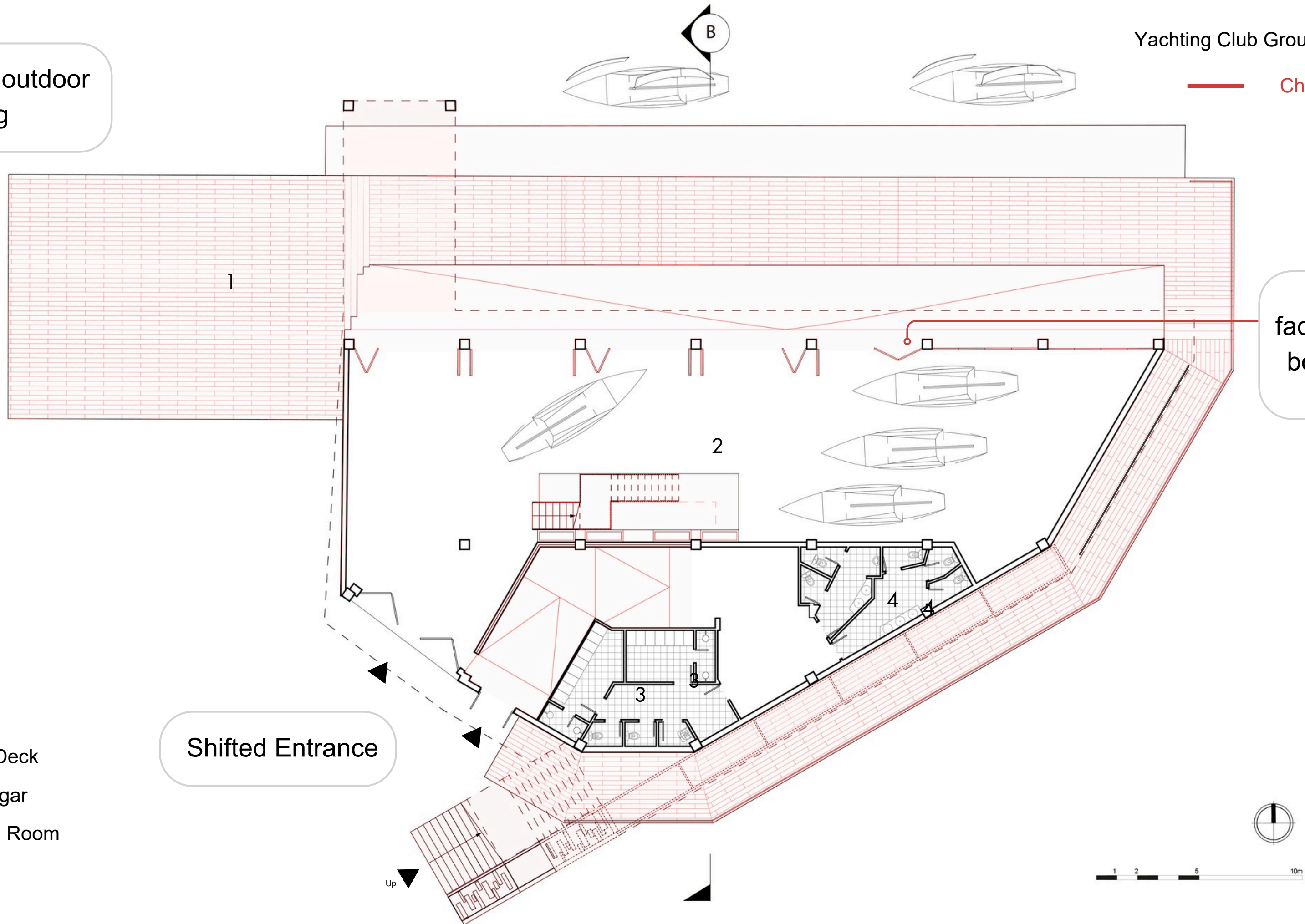
Added outdoor decking

Changed Layout

Opened up facade for easier boat loading to river

Shifted Entrance

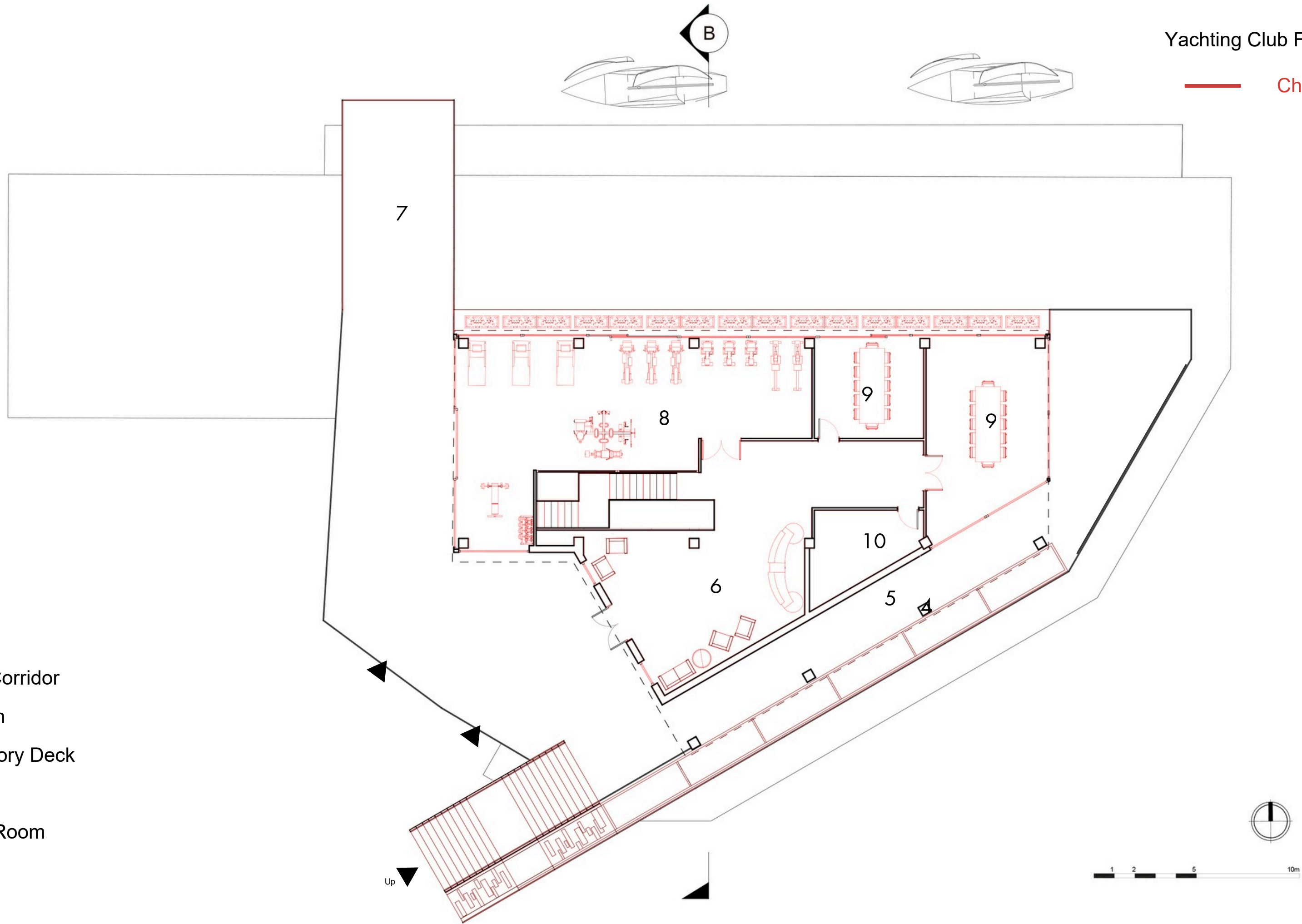
- 1 Outdoor Deck
- 2 Boat Hangar
- 3 Changing Room
- 4 Toilet

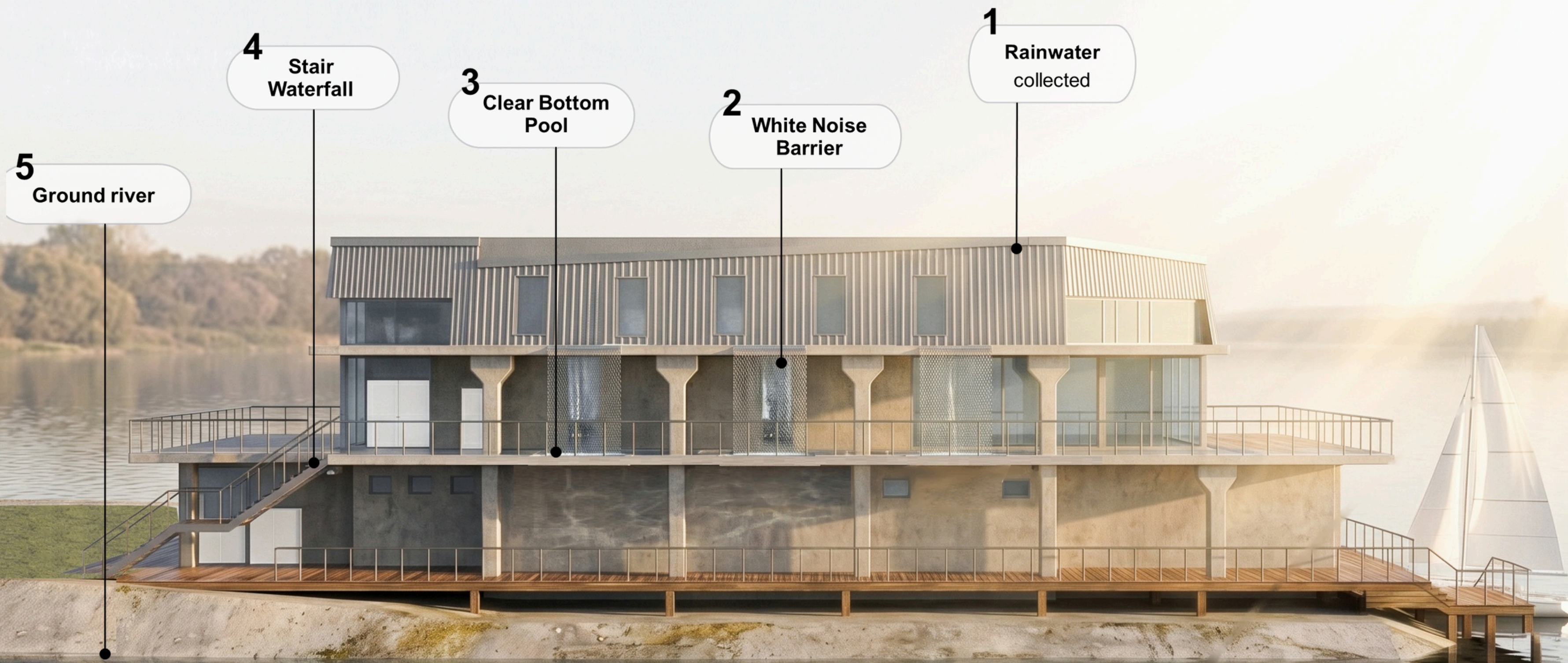


Yachting Club FirstFloor Plan

— Changed Layout

- 5 Outdoor Corridor
- 6 Reception
- 7 Observatory Deck
- 8 Gym
- 9 Meeting Room
- 10 Storage





5
Ground river

4
Stair
Waterfall

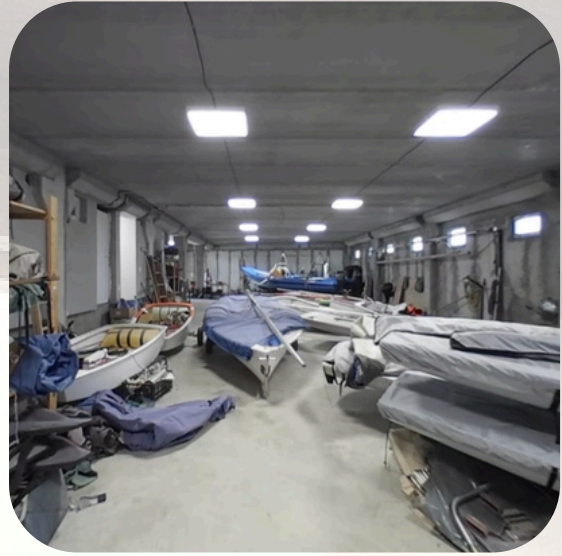
3
Clear Bottom
Pool

2
White Noise
Barrier

1
Rainwater
collected

z
y x

G/F Boat Hangar



Original

- Unfolding barriers
- Increased visual connection



1/F Observatory Deck



Original

- Access to watching water sports events
- Increase waterfront visual connection



G/F Observatory Deck



Original

- Increase transparency between floors
- Inspire curiosity from visitors



1/F Gym



Original

- Opened up view towards waterfront
- Porosity for natural daylight

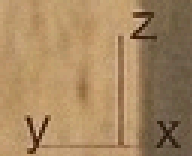


1/F Outdoor Corridor



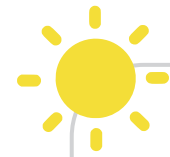
Original

- Increase transparency between floors
- Add movement of life



Renovation Strategy

Energy Saving Methods



Solar Energy is harvested on roofs



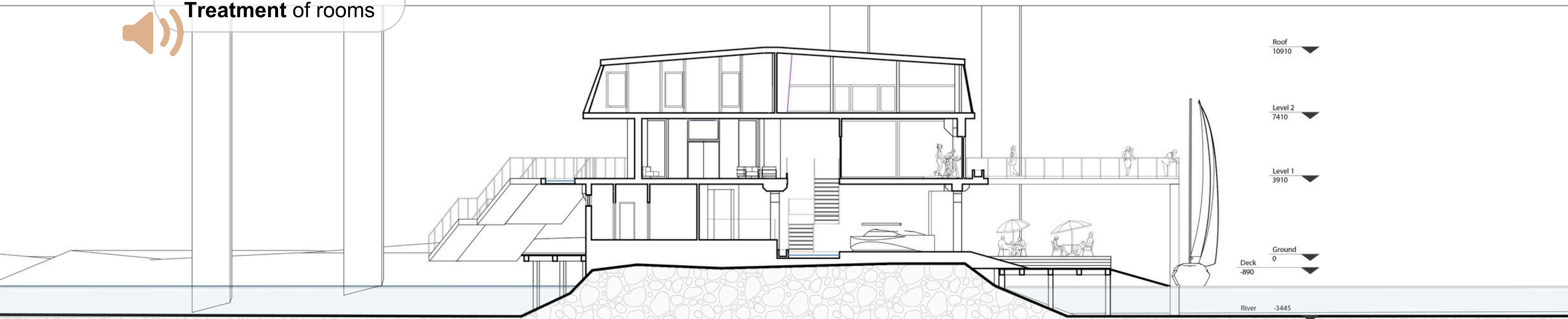
Rainwater is collected and harvested on roofs



Use **Environmentally Friendly** materials



Improve **Acoustic Treatment** of rooms



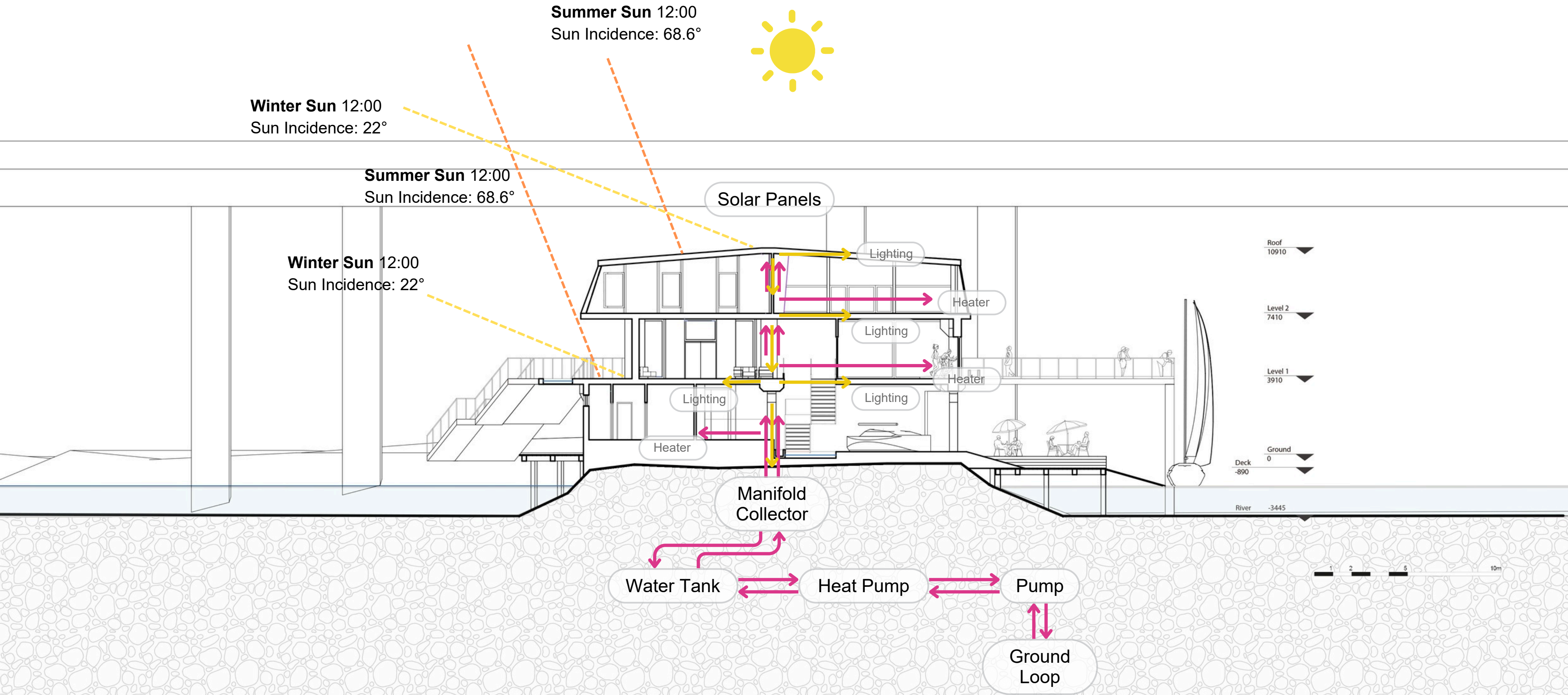
- Roof 10910
- Level 2 7410
- Level 1 3910
- Ground 0
- Deck -890
- River -3445



Energy Saving Strategy

Solar Tracking System

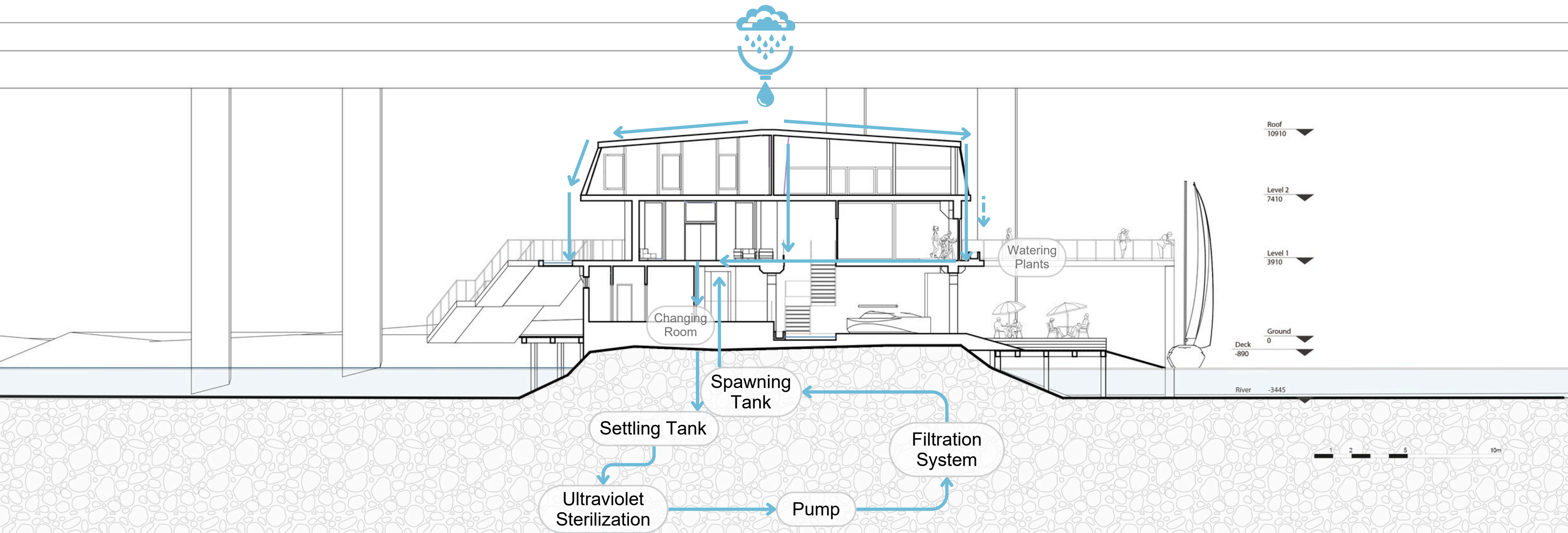
Yachting Club Section B-B

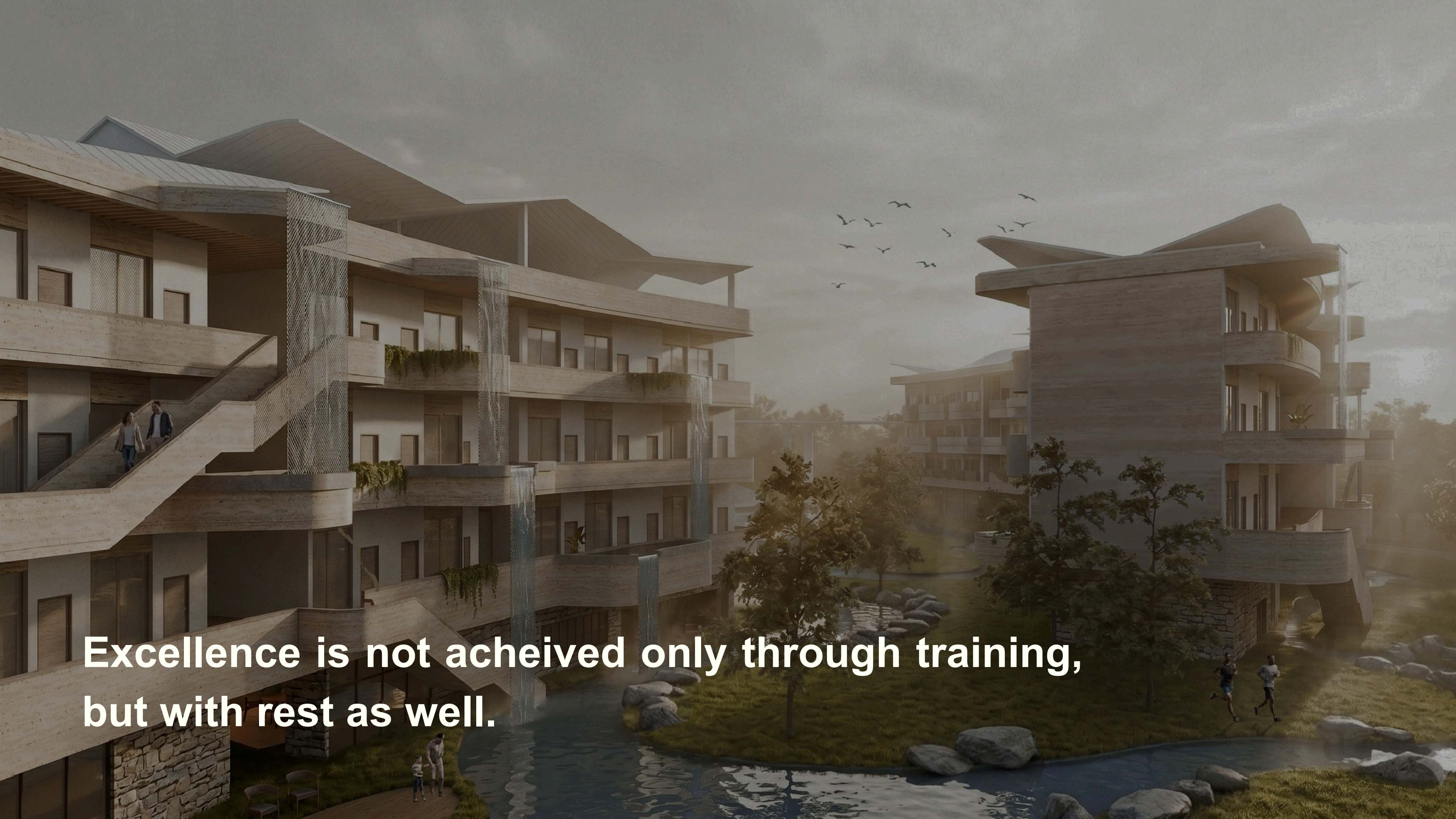


Energy Saving Strategy

Rainwater Harvesting System

Yachting Club Section B-B





**Excellence is not achieved only through training,
but with rest as well.**