
# ARCHITECTURE STUDENT CONTEST

## 21st INTERNATIONAL EDITION, BELGRADE 2026

# OUR TEAM nr. 20 / ESTONIA

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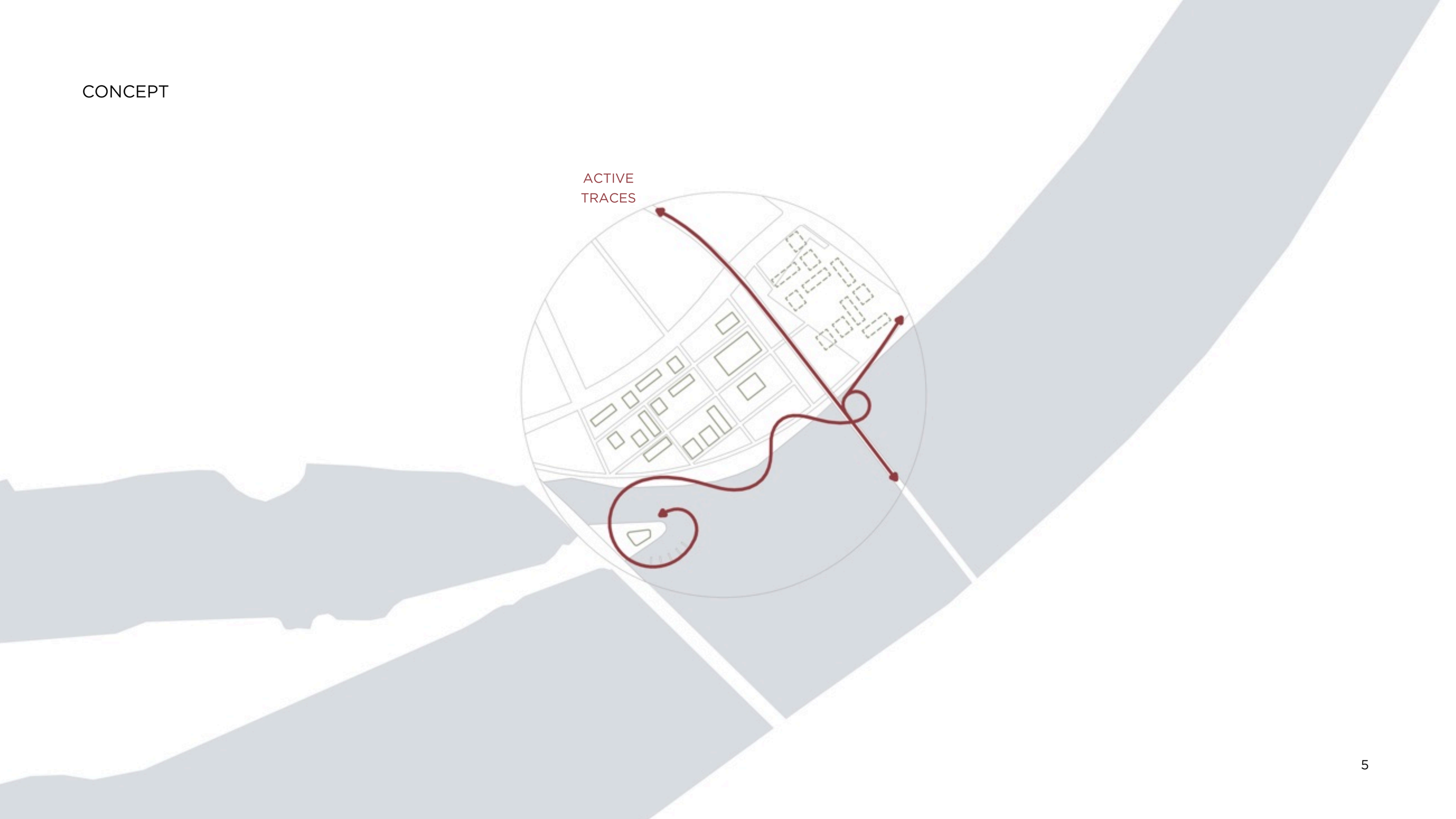
Emma Kirs

# TRACES

Belgrade, Serbia

# CONTEXT

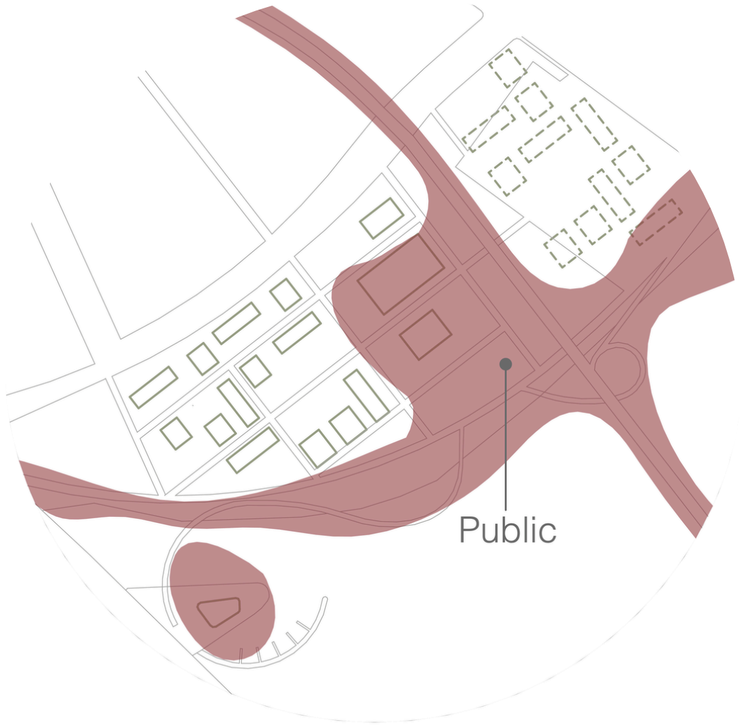
# CONCEPT



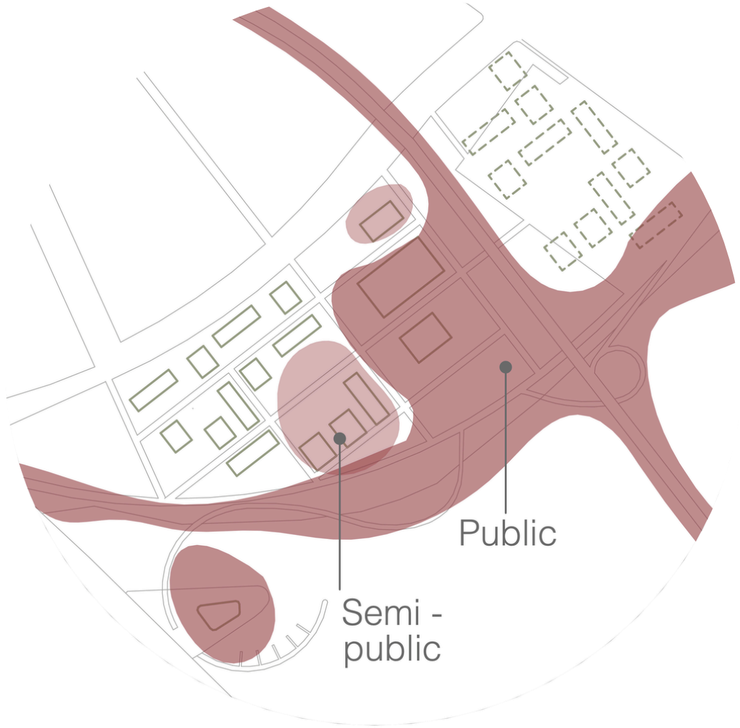
ACTIVE
TRACES

GREEN
TRACES

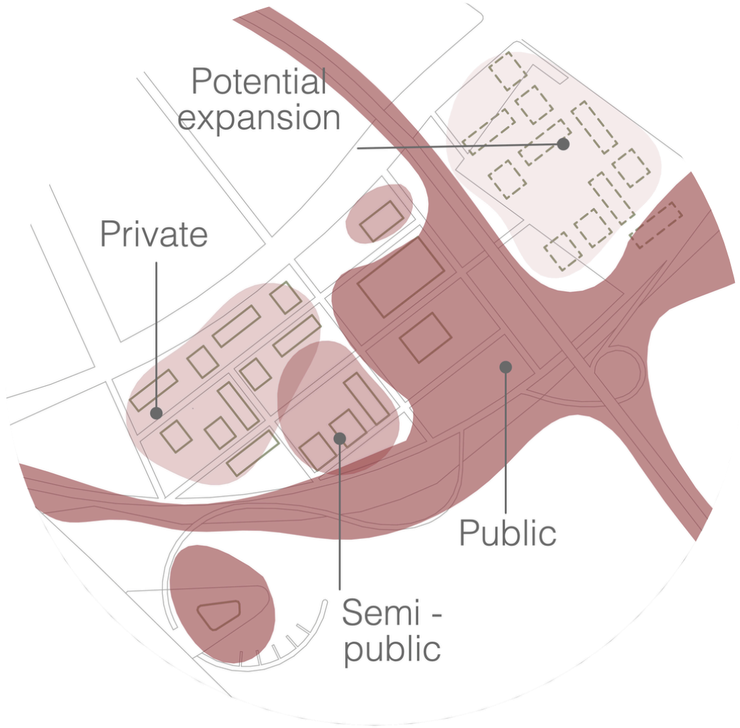
CONNECTING THE MAIN AXIS



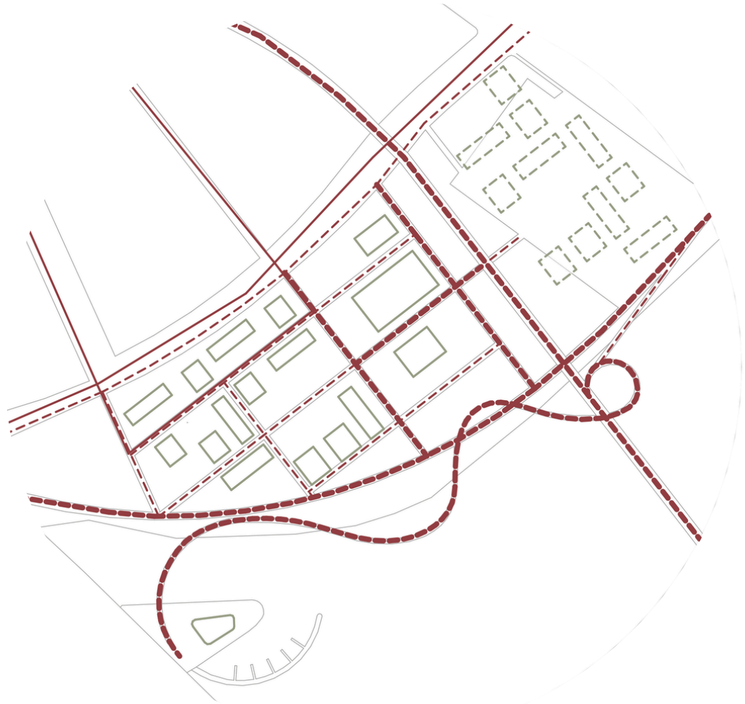

ZONING THE AREA




ZONING THE AREA

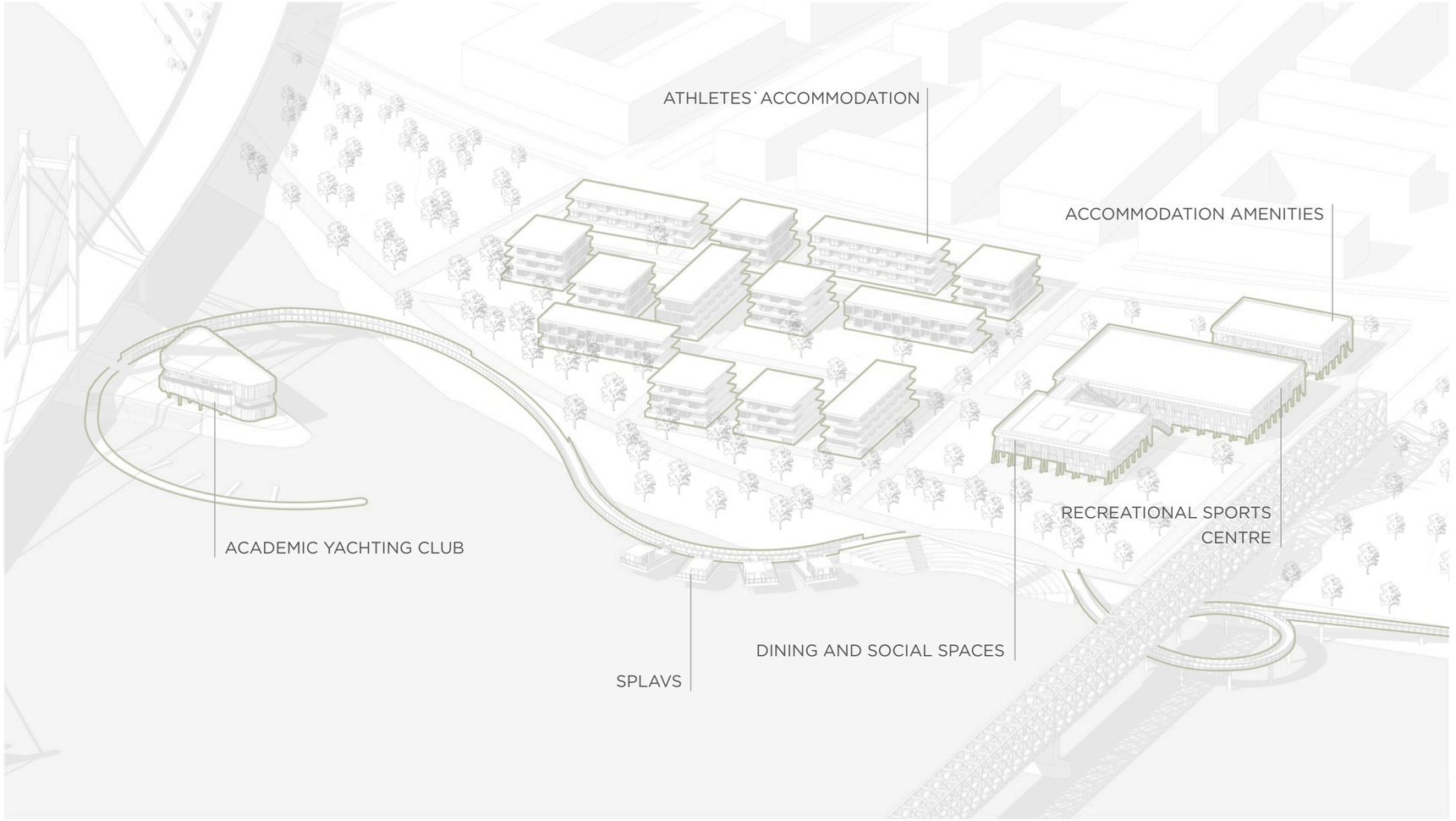


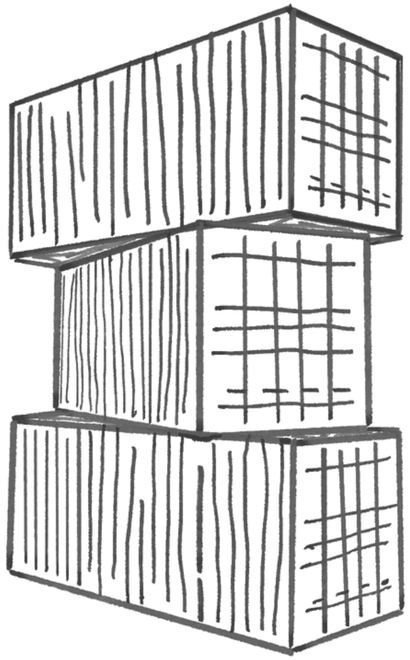

ZONING THE AREA

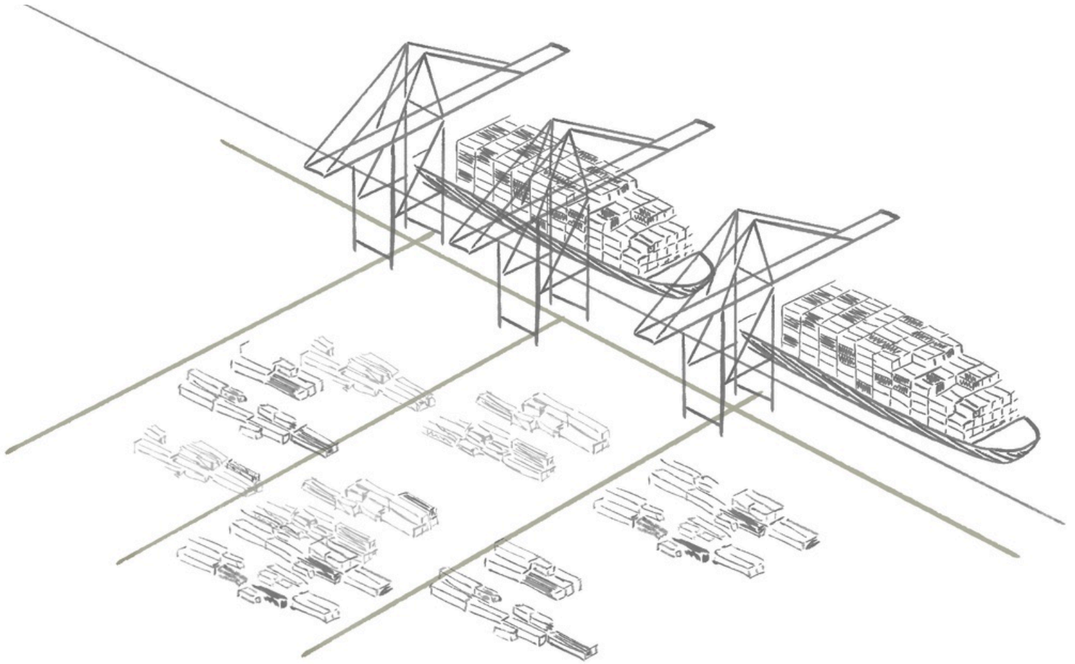


MOVEMENT AND NODES

MOVEMENT AND NODES


ATHLETES`ACCOMMODATION
ACCOMMODATION AMENITIES
RECREATIONAL SPORTS CENTRE
ACADEMIC YACHTING CLUB
DINING AND SOCIAL SPACES
SPLAVS

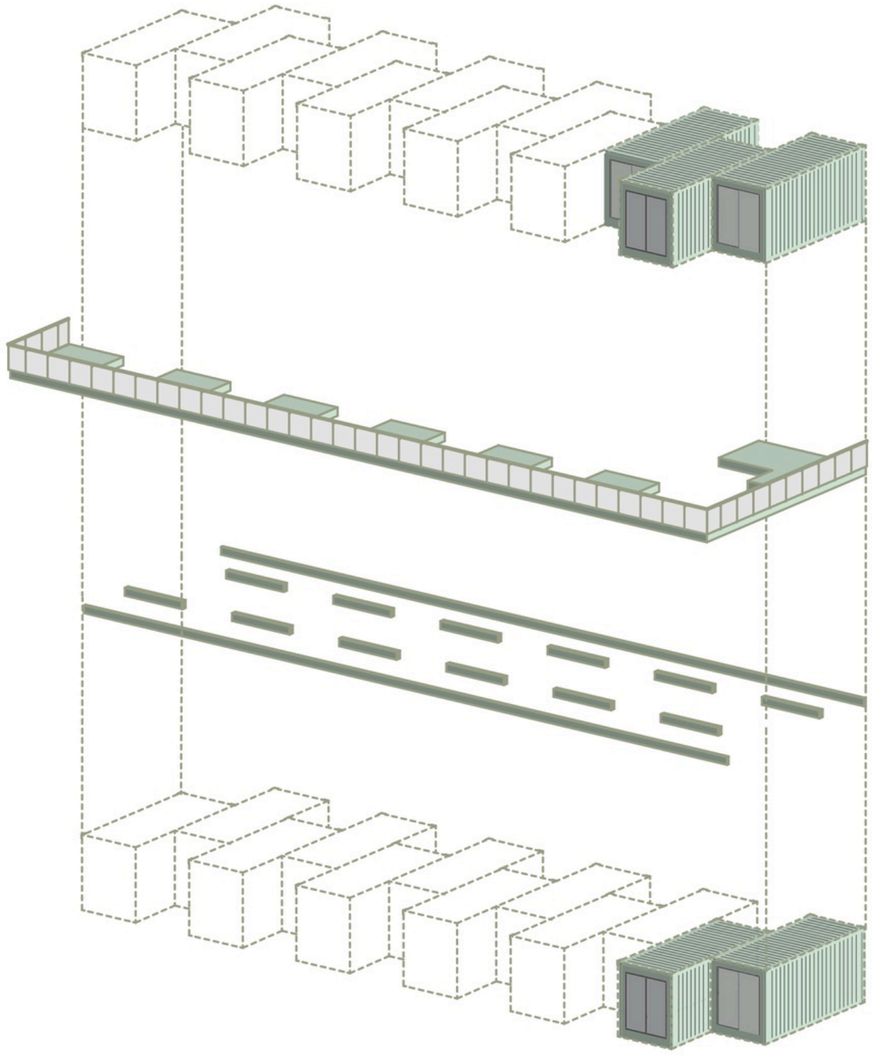




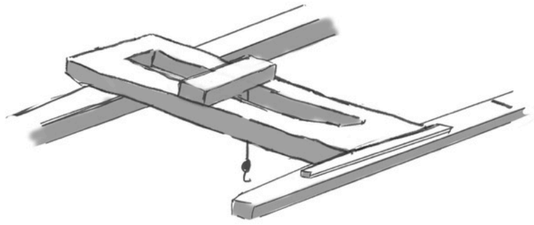
# MASTER PLAN

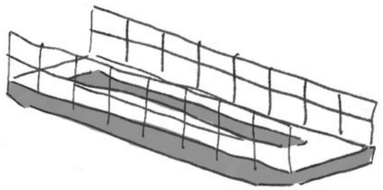

1 Athletes' amenity building
2 Recreational sports center
3 Food and beverage center
4 Team accommodation
5 Private accommodation
6 Sailing club
7 Rest area
8 Active Recreation Area
9 Playground
10 Water retention pond
11 Splavs
S Drop-off / Pick-up Area

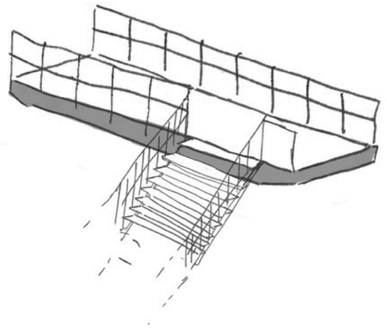
# ADAPTABILITY

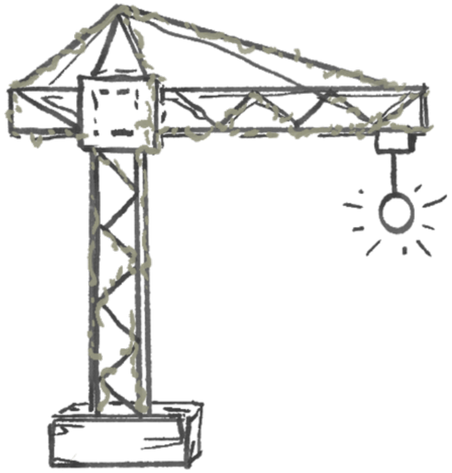


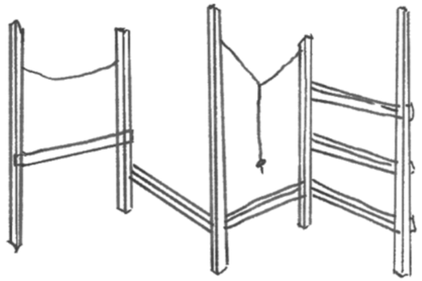
# REUSE OF INDUSTRIAL ELEMENTS

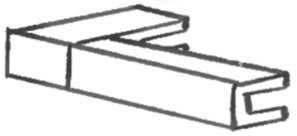


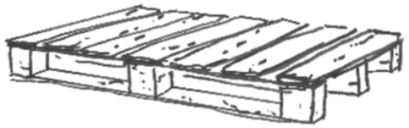




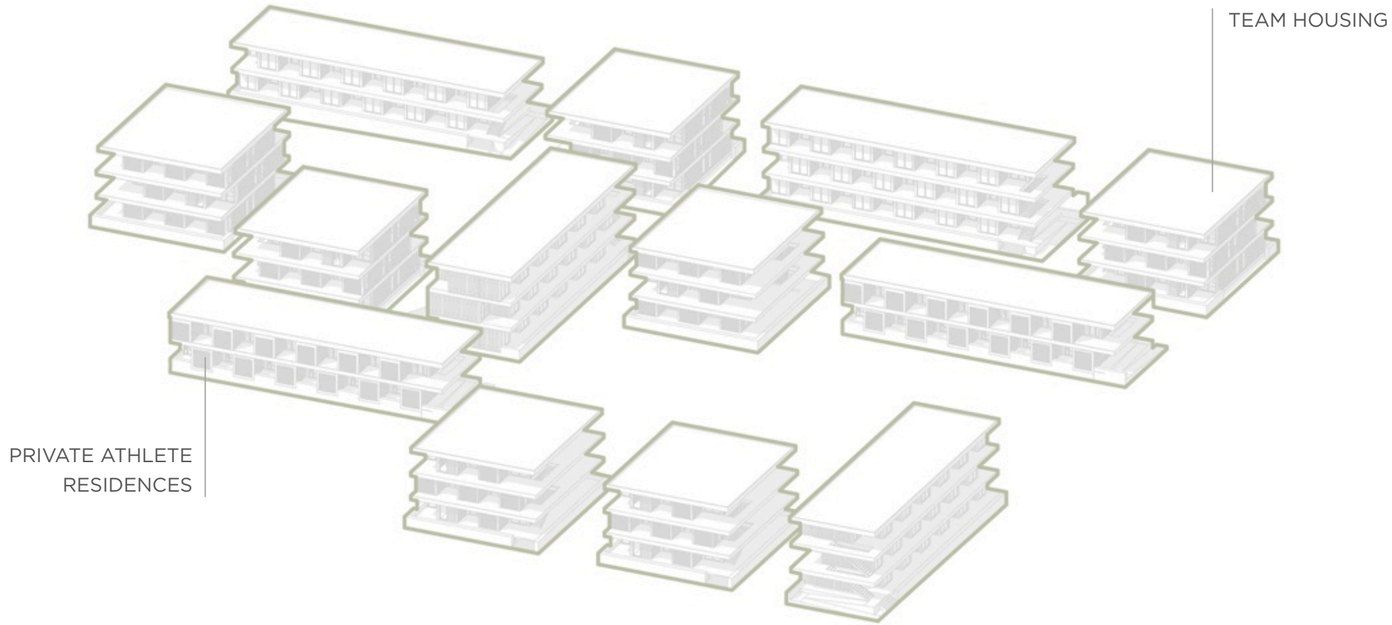




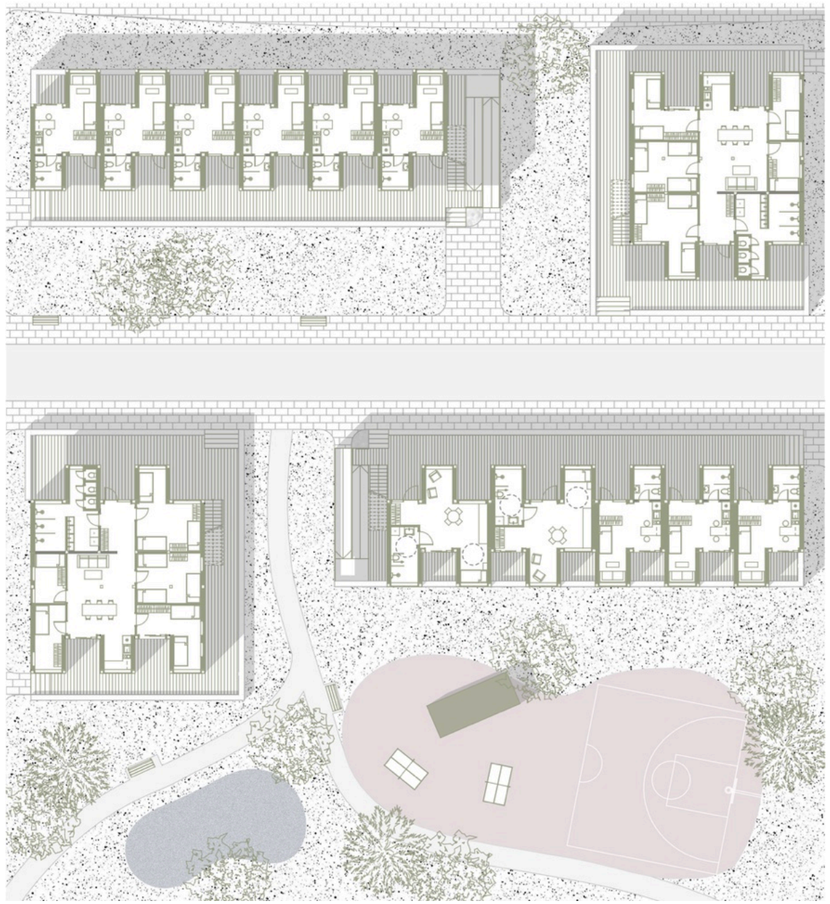




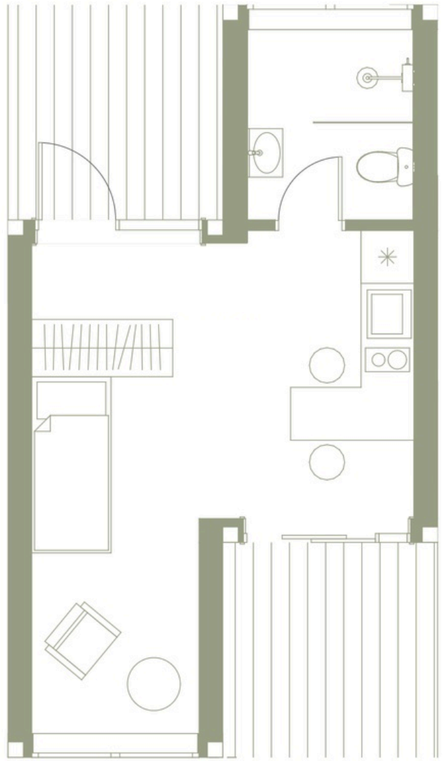
# ATHLETES` ACCOMMODATION



# DETAIL PLAN

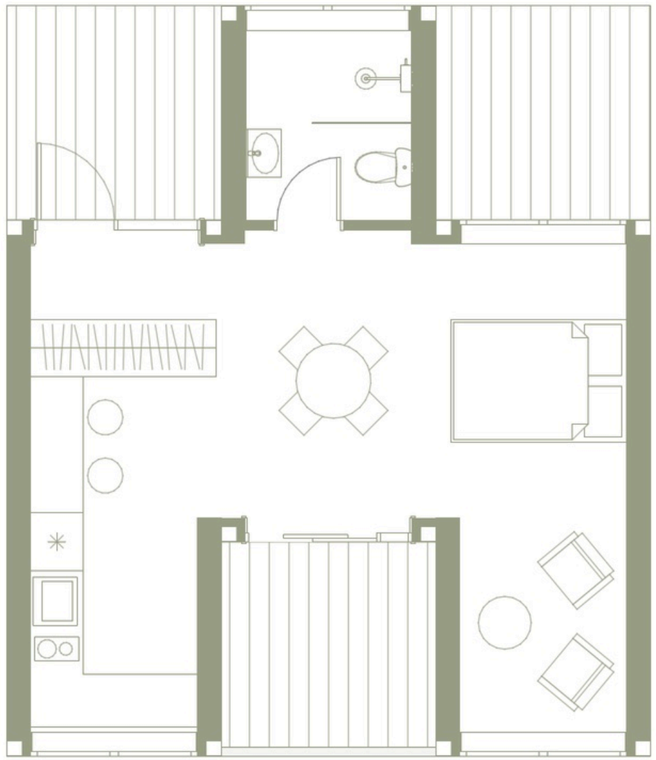


# TYPOLOGIES

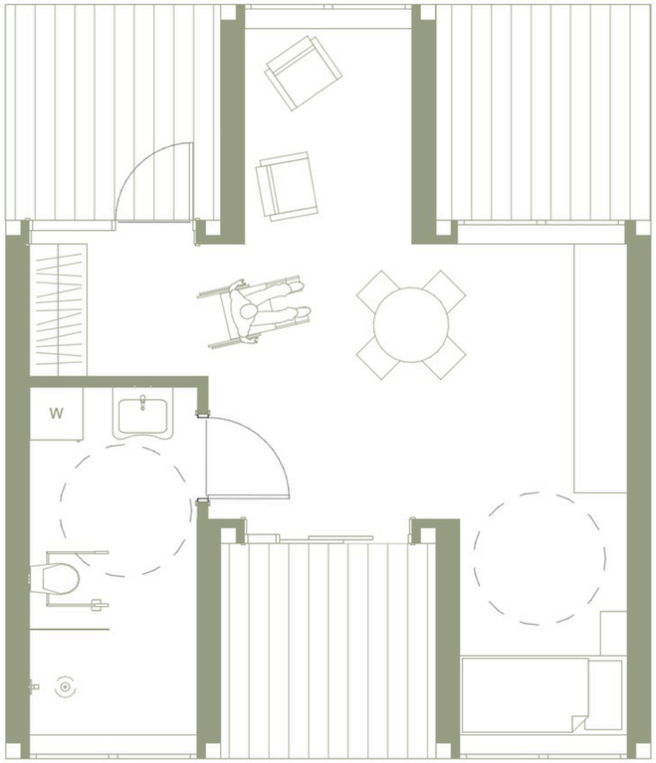


SINGLE ROOM
22,8 m²
64% of the total capacity

# TYPOLOGIES



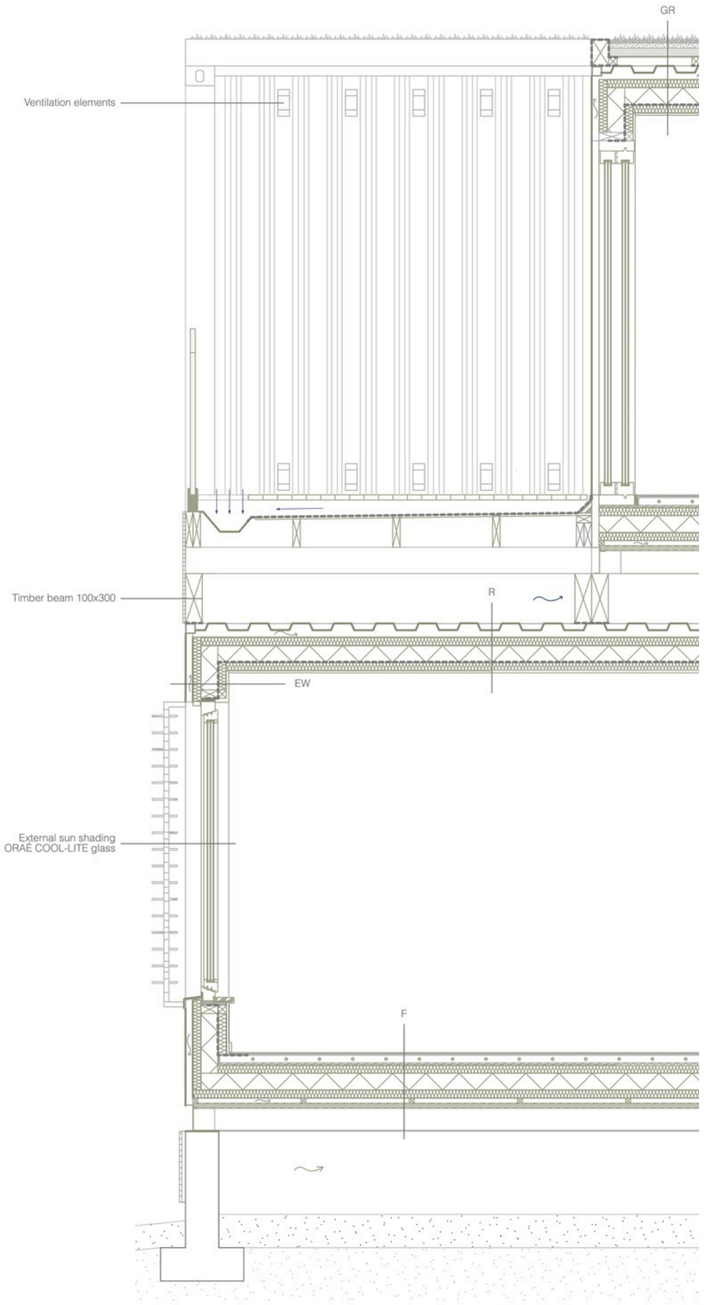
DOUBLE ROOM
35,0 m²
32% of the total capacity




ACCESSIBLE ROOM
35,0 m²
8% of the total capacity

# TYPOLOGIES

TEAM HOUSING
130,6 m²
7 houses, 21 apartments, 10 persons per apt.




# DETAIL SECTION

**GR**

| | |
|---|---|
| Vegetation | |
| Green roof substrate | 30 mm |
| ISOVER Flora hydrophilic panels | 50 mm |
| Root barrier filter cloth | |
| Reused metal sheet | |
| WEBERTEC butyl tape 120 | |
| Timber blocks 50x50, slope 1:80 | |
| Reused sea container | 44 mm |
| Air gap | 20 mm |
| ISOVER Forte Insulation / timber studs (45x50, s600) | 50 mm |
| λ = 0,034 (W/m*K) | |
| ISOVER Supervent / timber studs (45x100, s600) | 100 mm |
| λ = 0,032 (W/m*K) | |
| ISOVER Vario Duplex vapour barrier | |
| ISOVER Forte Insulation / timber studs (45x50, s600) | 50 mm |
| λ = 0,034 (W/m*K) | |
| 2x RIGIPS RF(DF) | 15 mm |

U=0,15 W/(m²*K)
EI 90

**EW / R**

| | |
|---|---|
| Reused sea container | 44 mm |
| Air gap | 20 mm |
| ISOVER Forte Insulation / timber studs (45x50, s600) | 50 mm |
| λ = 0,034 (W/m*K) | |
| ISOVER Supervent / timber studs (45x100, s600) | 100 mm |
| λ = 0,032 (W/m*K) | |
| ISOVER Vario Duplex vapour barrier | |
| ISOVER Forte Insulation / timber studs (45x50, s600) | 50 mm |
| λ = 0,034 (W/m*K) | |
| 2x RIGIPS RF(DF) | 15 mm |

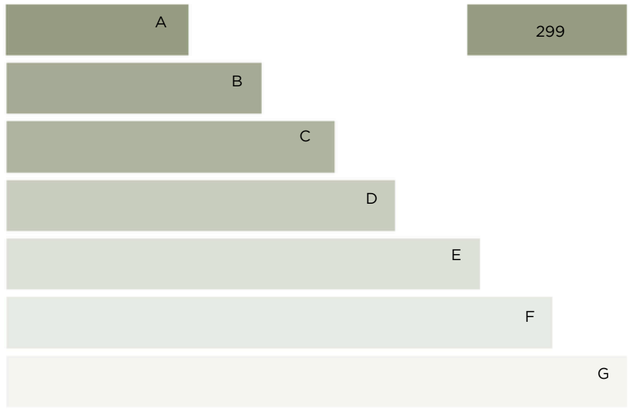
U= 0,15 W/(m²*K)
EI 90

**F**

| | |
|---|---|
| Wood flooring | |
| Flooring underlay | |
| WEBER dB plano / heating pipes, | 45 mm |
| OSB board | 13 mm |
| ISOVER Forte Insulation / timber studs (45x50, s600) | 50 mm |
| λ = 0,034 (W/m*K) | |
| ISOVER Supervent Insulation / timber studs (45x150, s600) | 150 mm |
| λ = 0,032 (W/m*K) | |
| ISOVER Forte Insulation / timber studs (45x50, s600) | 50 mm |
| λ = 0,034 (W/m*K) | |
| Air gap, | 20 mm |
| Plywood base of reused shipping container | 30 mm |

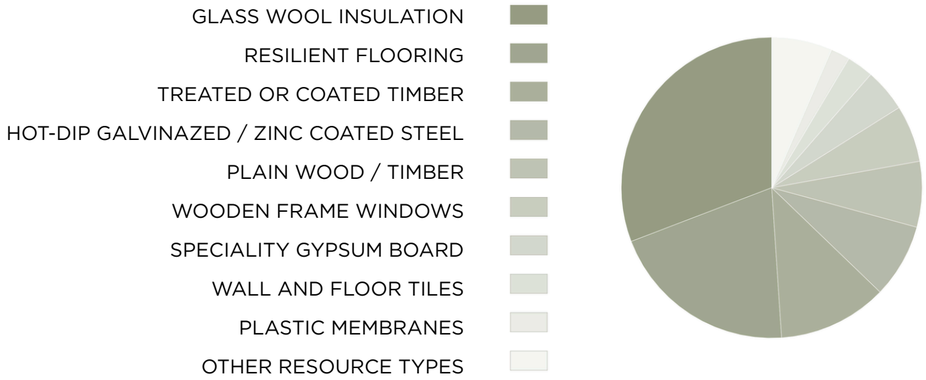
U= 0,14 W/(m²*K)
EI 90

# ENERGY EFFICIENCY AND SUSTAINABILITY

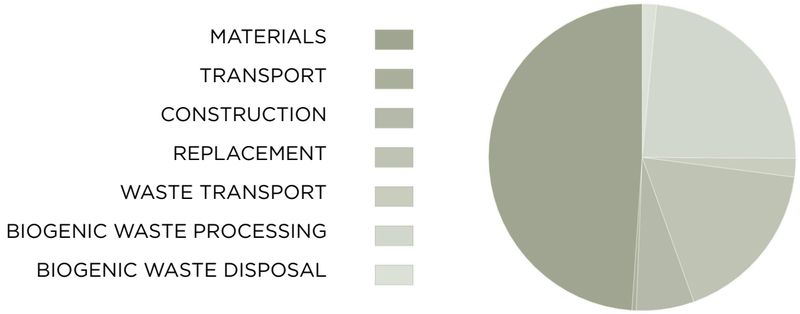



CRADLE TO GRAVE: EMBODIED CARBON BENCHMARK

One Click LCA

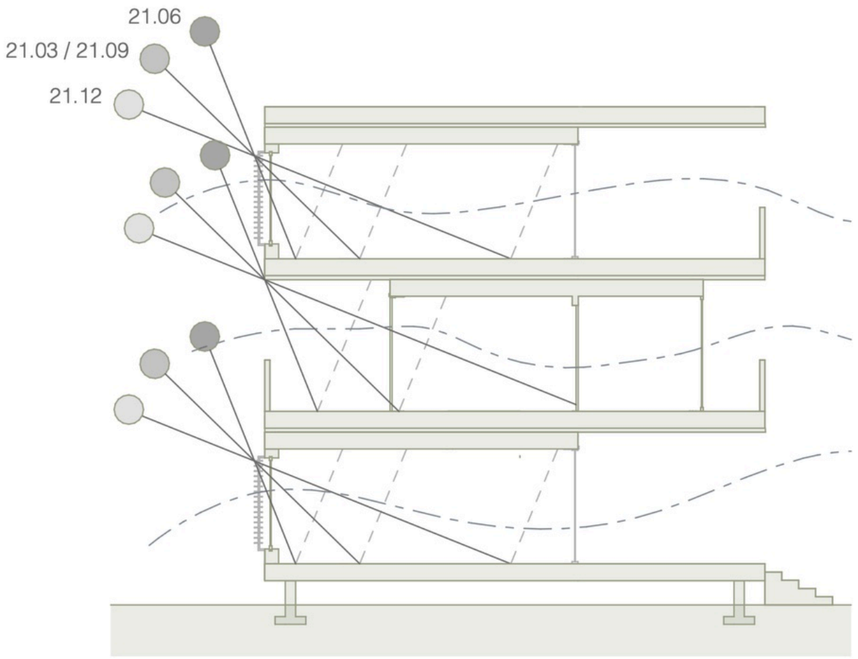



GLOBAL WARMING POTENTIAL TOTAL KG CO2E - RESOURCE TYPE

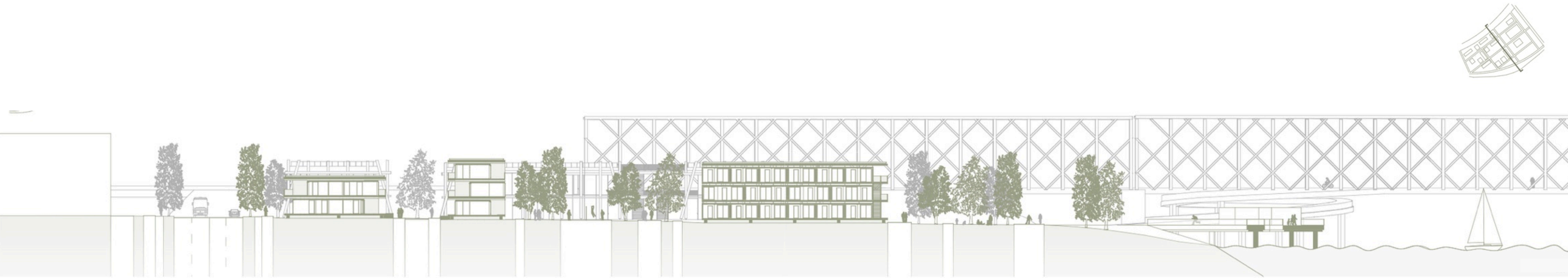



GLOBAL WARMING POTENTIAL TOTAL KG CO2E - LIFE CYCLE STAGES

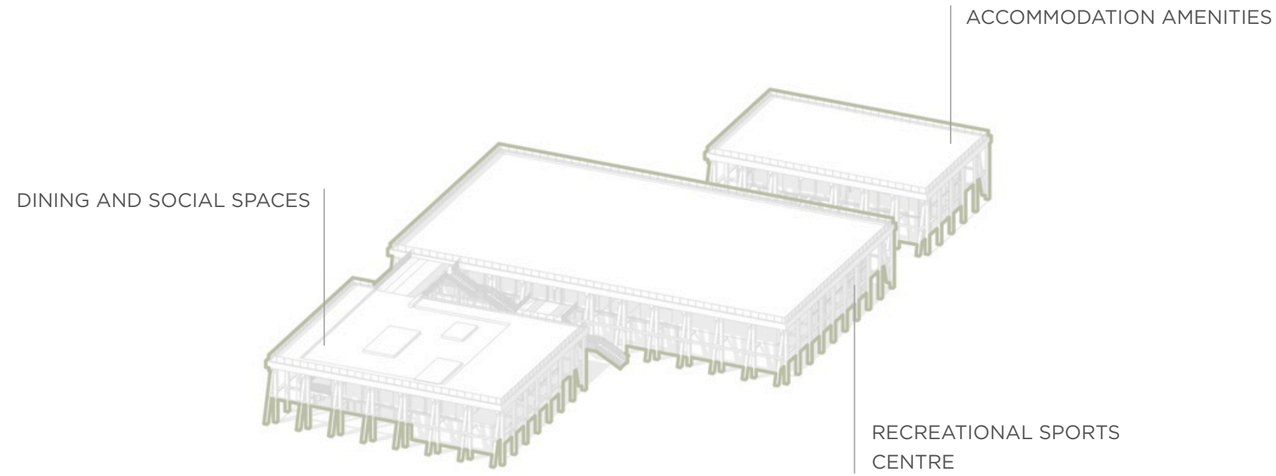
# INDOOR CLIMATE REGULATION



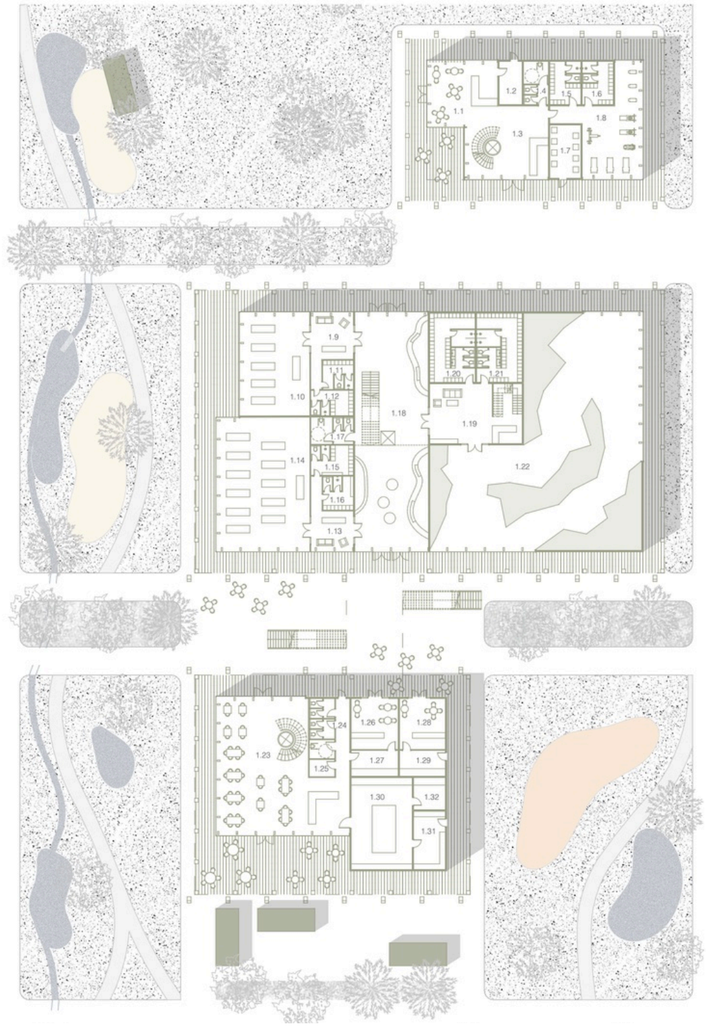

SECTION A



# PUBLIC BUILDINGS



# FLOOR PLANS




GROUND FLOOR

AMENITIES BUILDING

| | | |
|---|---|---|
| 1.1 | cafe | 38,6 |
| 1.2 | storage | 11,2 |
| 1.3 | reception | 62,9 |
| 1.4 | toilets | 12,2 |
| 1.5 | dressing room | 11,3 |
| 1.6 | dressing room | 11,3 |
| 1.7 | laundry room | 18,8 |
| 1.8 | gym | 66,7 |
| | | **233 m²** |

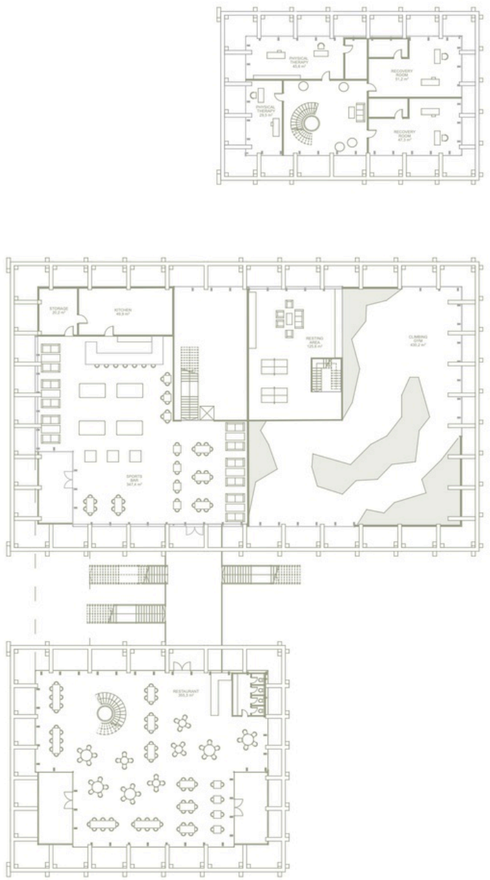
RECREATIONAL SPORTS CENTRE

| | | |
|---|---|---|
| 1.9 | reception | 27,2 |
| 1.10 | studio | 78,6 |
| 1.11 | dressing room | 6,6 |
| 1.12 | dressing room | 8,8 |
| 1.13 | reception | 22,2 |
| 1.14 | studio | 136,9 |
| 1.15 | dressing room | 11,0 |
| 1.16 | dressing room | 8,2 |
| 1.17 | toilets | 13,1 |
| 1.18 | multifunctional hall | 202,4 |
| 1.19 | reception | 62,8 |
| 1.20 | dressing room | 24,5 |
| 1.21 | dressing room | 24,5 |
| 1.22 | climbing gym | 430,2 |
| | | **1057 m²** |

DINING AND SOCIAL SPACES

| | | |
|---|---|---|
| 1.23 | restaurant | 158,5 |
| 1.24 | toilets | 27,5 |
| 1.25 | cleaning room | 7,7 |
| 1.26 | cafe | 27,1 |
| 1.27 | storage / kitchen | 13,7 |
| 1.28 | cafe | 26,4 |
| 1.29 | storage / kitchen | 13,4 |
| 1.30 | kitchen | 63,6 |
| 1.31 | storage | 26,4 |
| 1.32 | storage | 21,0 |
| | | **385,3 m²** |

# FLOOR PLANS



AMENITIES BUILDING

| | |
|---|---|
| 2.1 | physical therapy |
| 2.2 | storage |
| 2.3 | physical therapy |
| 2.4 | recovery room |
| 2.5 | storage |
| 2.6 | recovery room |
| 2.7 | storage |
| 2.8 | lobby |

RECREATIONAL SPORTS CENTRE

| | |
|---|---|
| 2.9 | sports bar |
| 2.10 | kitchen |
| 2.11 | storage |
| 2.12 | resting area |

DINING AND SOCIAL SPACES

| | |
|---|---|
| 2.13 | restaurant |
| 2.14 | toilets |

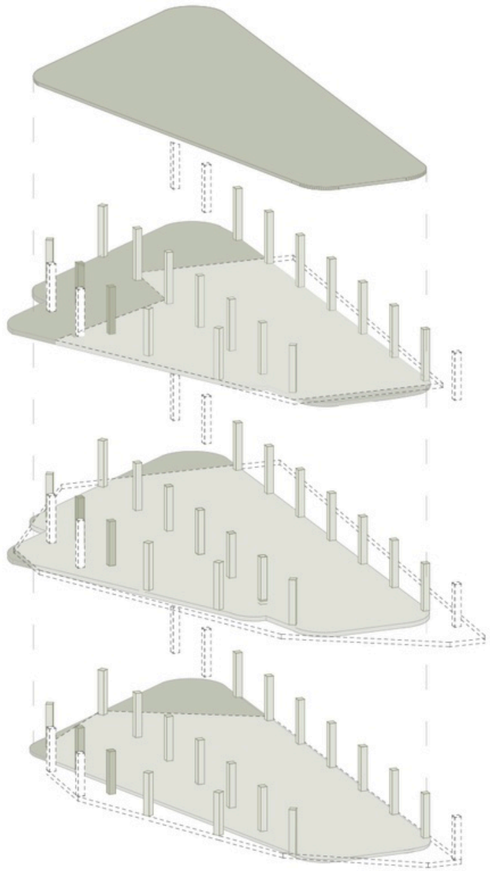
FIRST FLOOR

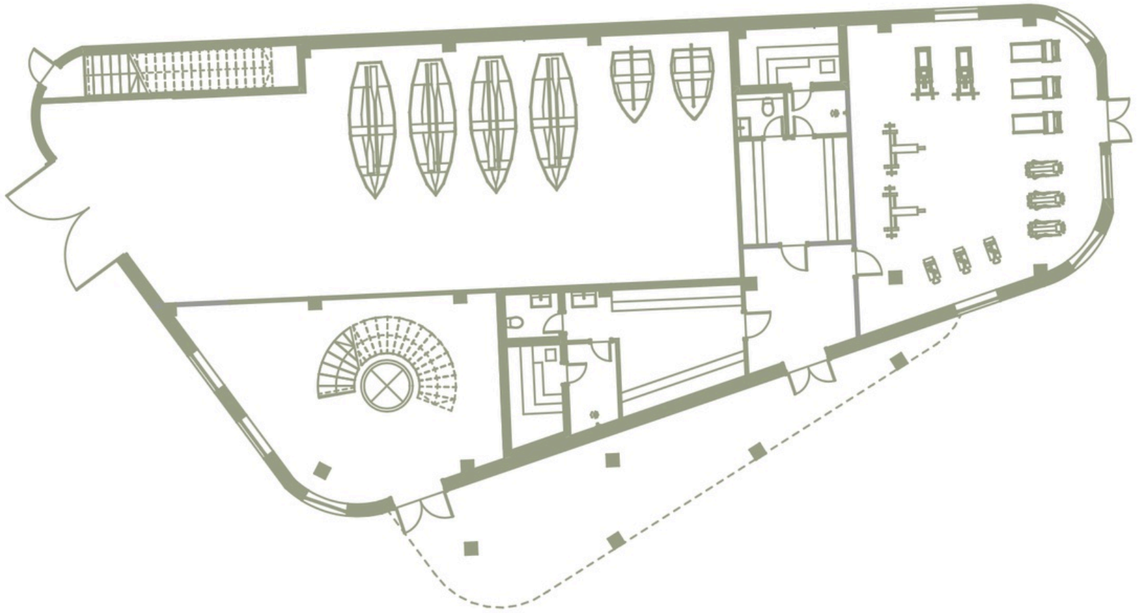
SECTION B

# ACADEMIC YACHTING CLUB

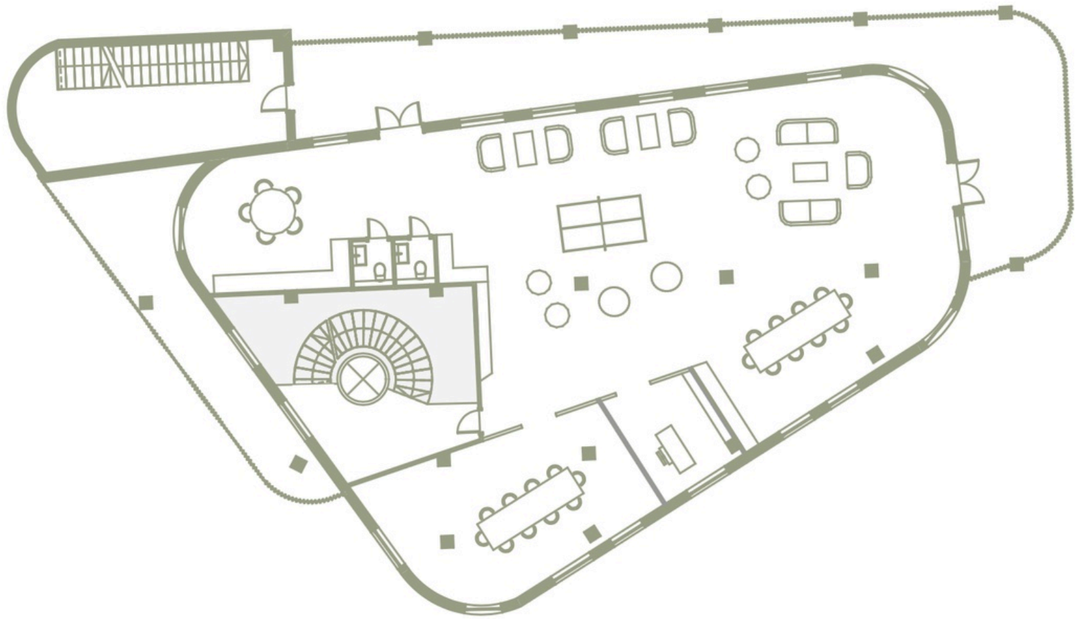
# DETAIL PLAN

# RECONSTRUCTION AND REUSE OF THE LOAD-BEARING ELEMENTS

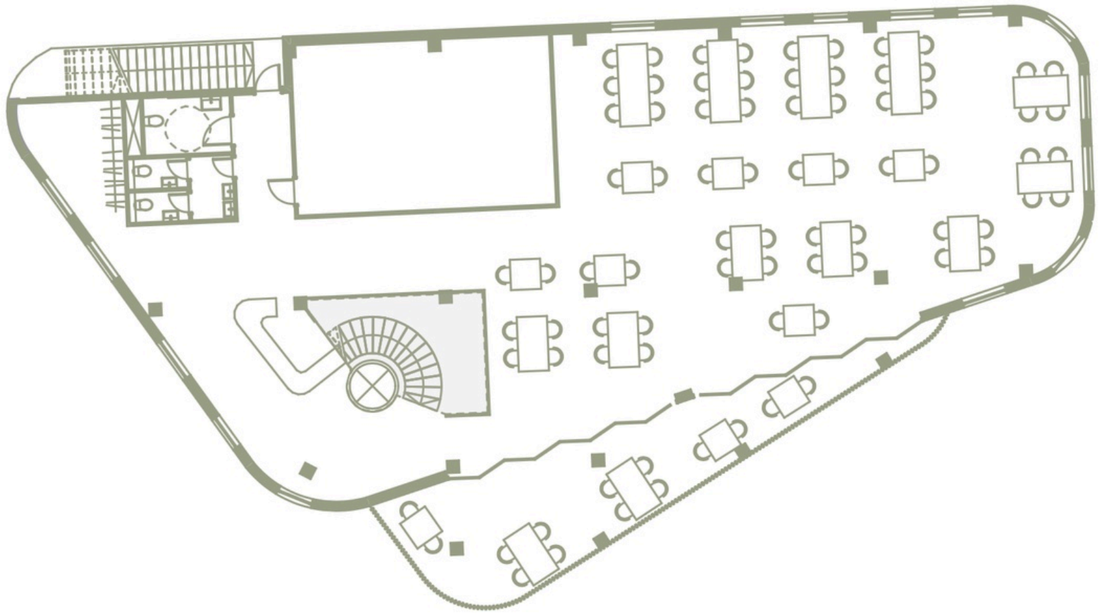




GROUND FLOOR

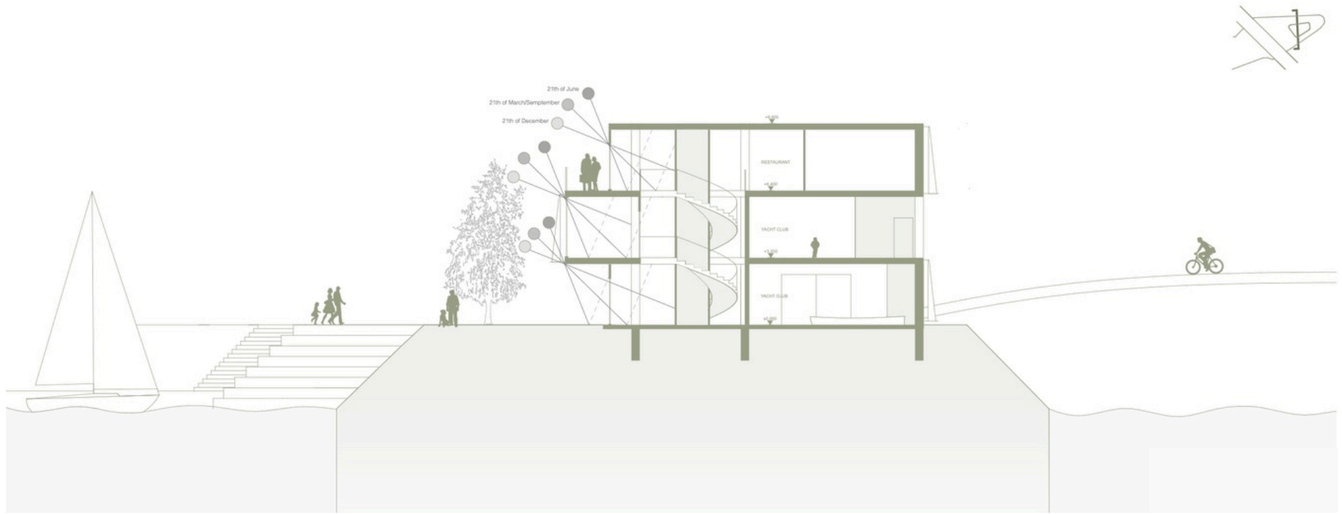


FIRST FLOOR

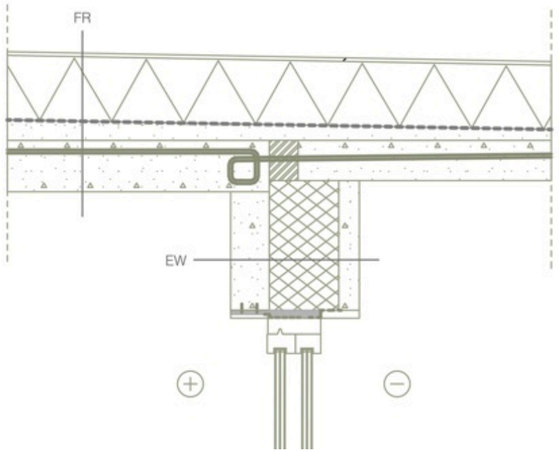


SECOND FLOOR

SECTION C


21th of June
21th of March/Semptember
21th of December
RESTAURANT
YACHT CLUB
YACHT CLUB

# DETAIL SECTIONS




**FR**

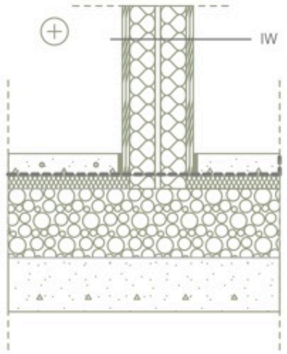
| | |
|---|---|
| PVC | 12 mm |
| Insulation Isover Profi Terrasse S, λ = 0,039 (W/m*K) | 250 mm |
| ISOVER Vario VapoBlock | |
| 1:80 slope with low carbon concrete | |
| Low carbon concrete | 200 mm |

U=0,15 W/(m*K)
EI 90

**EW**

| | |
|---|---|
| Low carbon concrete | 200 mm |
| ISOVER OL-E 32 insulation, λ = 0,032 (W/m*K) | 270 mm |
| Low carbon concrete | 80 mm |

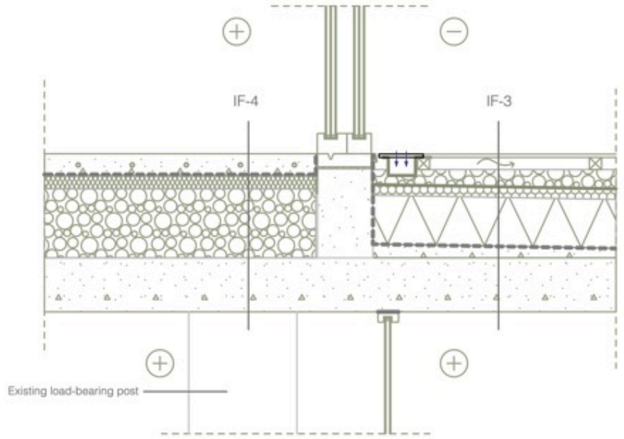
U=0,12 W/(m*K)
EI 90




**IW**

| | |
|---|---|
| 2x RIGIPS RF | 26 mm |
| Framing/ISOVER Acusto | 95 mm |
| Air space | 20 mm |
| Framing/ISOVER Acousto | 95 mm |
| 2x RIGIPS RF | 26 mm |

$D_{nT,w} \geq 60$ dB




**IF-3**

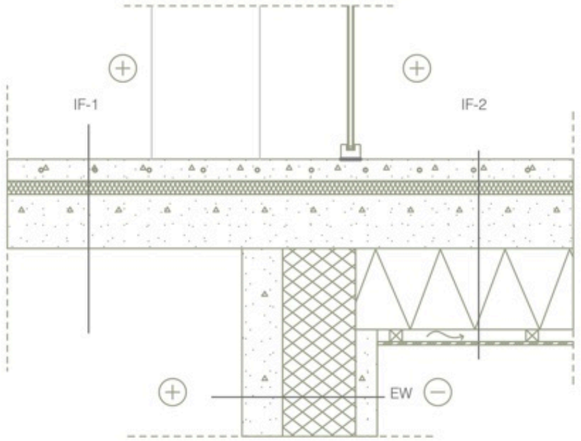
| | |
|---|---|
| Timber decking | 12 mm |
| Timber studs | 45 mm |
| Expanded clay | 60 mm |
| Drainagemat | 40 mm |
| Geotextile | |
| ISOVER Jackodur Plus, λ = 0,027 (W/m*K) | 190 mm |
| Hydroisolation Chryso Bituthene 4000/8000 | |
| 1:80 slope with low carbon concrete | |
| Low carbon concrete | 200 mm |

U=0,14 W/(m²K)
$L'_{nT,w} \leq 58$ dB
E1 90

**IF-4**

| | |
|---|---|
| Low carbon concrete + heating pipes | 80 mm |
| ISOVER Vario VapoBlock | |
| Acoustic Insulation ISOVER TDPT | 50 mm |
| Expanded clay + communications | 180 mm |
| Low carbon concrete | 200 mm |

$D_{nT,w} \geq 53$ dB
$L'_{nT,w} \leq 58$ dB
EI 90




**IF-1**

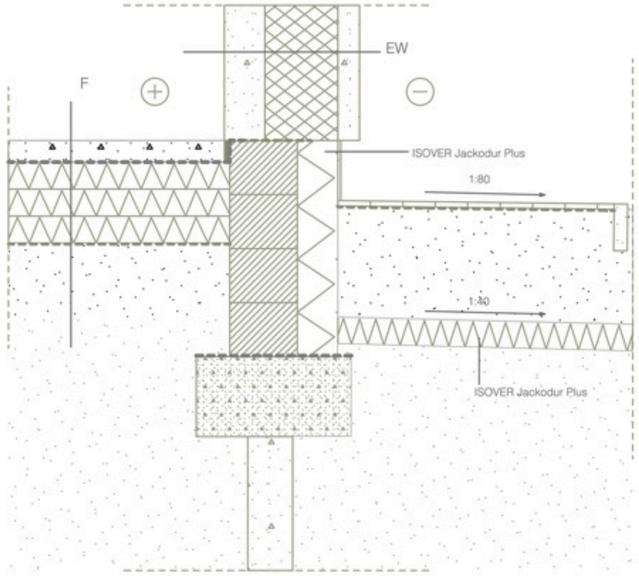
| | |
|---|---|
| Low carbon concrete + heating pipes | 80 mm |
| Acoustic Insulation ISOVER TDPT | 50 mm |
| Low carbon concrete | 200 mm |

$D_{nT,w} \geq 53$ dB
$L'_{nT,w} \leq 58$ dB
EI 90

**IF-2**

| | |
|---|---|
| Low carbon concrete + heating pipes | 80 mm |
| Acoustic Insulation ISOVER TDPT | 50 mm |
| Low carbon concrete | 200 mm |
| Insulation ISOVER Supervent, λ = 0,032 (W/m*K) | 300 mm |
| Air gap | 50 mm |
| RIGIPS Aquaroc cement boards | 12,5 mm |

U=0,10 W/(m*K)




**F**

| | |
|---|---|
| Reinforced low carbon concrete | 80 mm |
| Hydroisolation Chryso Bituthene 4000/8000 | 0,2 mm |
| ISOVER Jackodur Plus, λ = 0,027 (W/m*K) | 3 x 100 mm |
| Non vowen geotextile | |
| Sand | |
| Backfill gravel | |

U=0,09 W/(m*K)

**EW**

| | |
|---|---|
| Low carbon concrete | 200 mm |
| ISOVER OL-E 32 insulation, λ = 0,032 (W/m*K) | 270 mm |
| Low carbon concrete | 80 mm |

U=0,12 W/(m*K)
EI 90