[RE]CREATION

OUD ZUID

Selene Lijie Zhuang

COMPLEX PROJECTS

TUTORS:
STEVEN STEENBRUGGEN
HUBERT VAN DER MEEL

SEP 2017 - JUL 2018

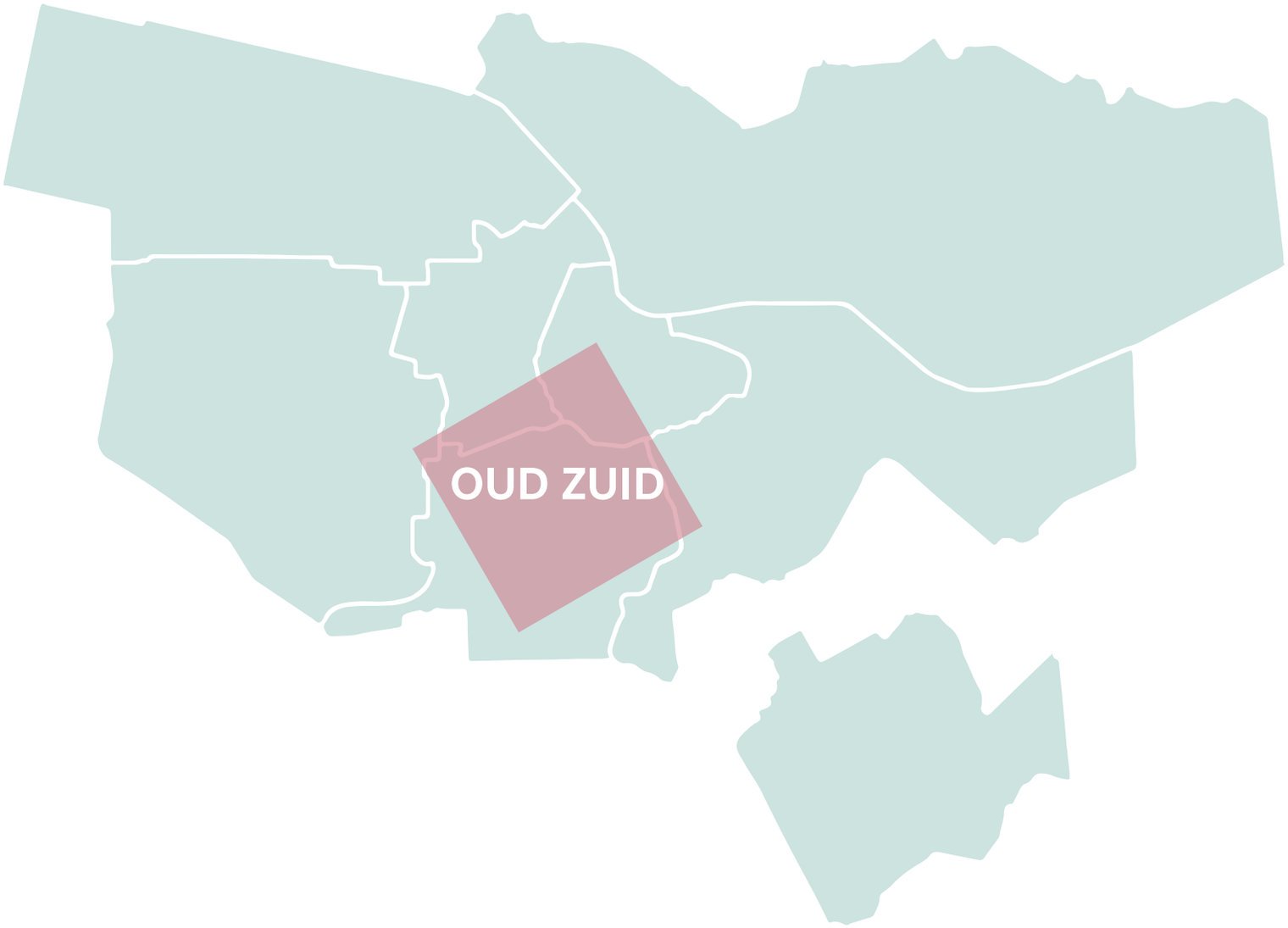
C O N T E N T S

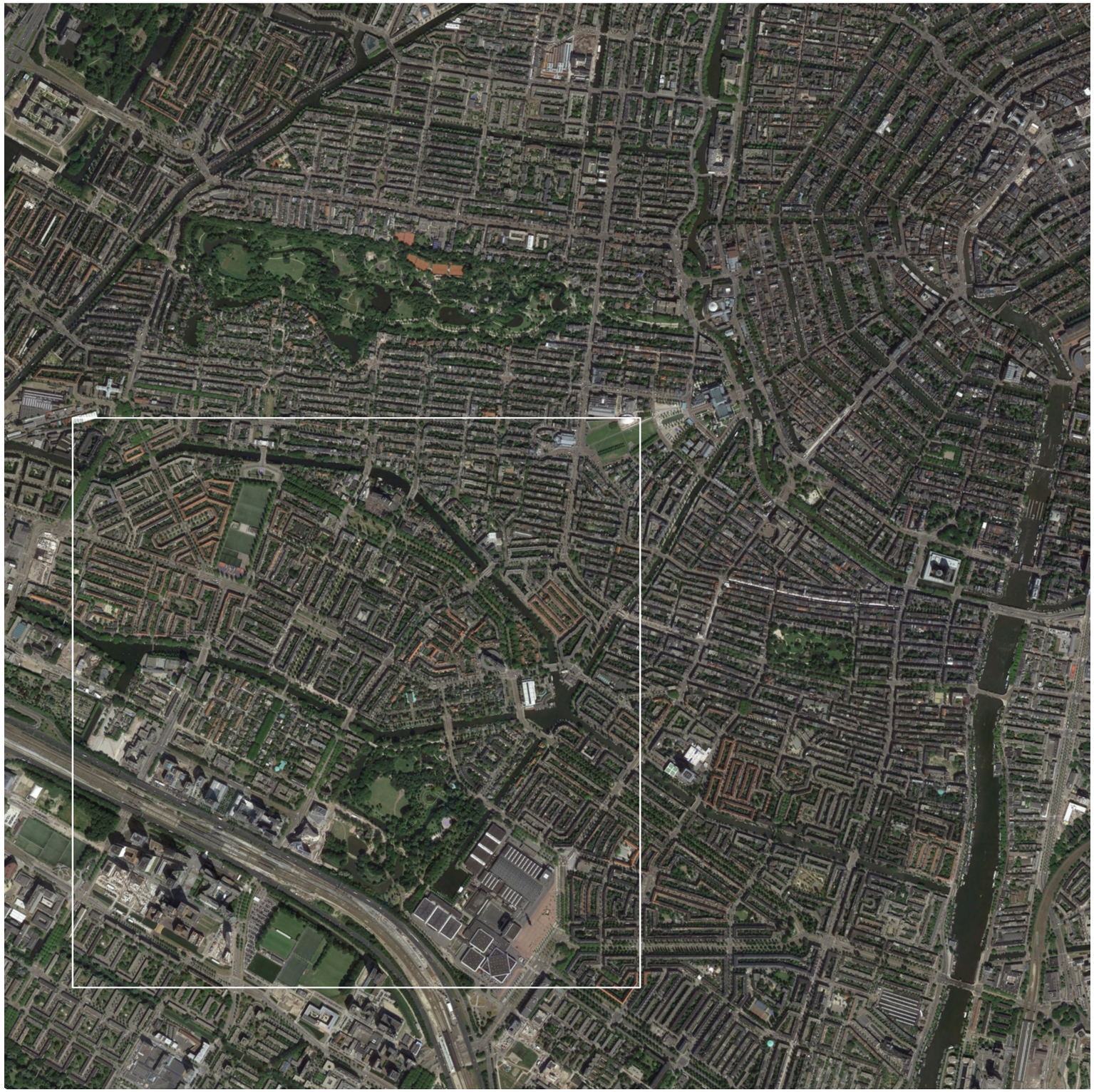
RESEARCH 40%
- site
- personal interest
- my 2050 vision
- research question & solution
- why swimming pool?

DESIGN 60%
- oud zuid strategies
- site location
- programme composition
- site inspiration
- external inspiration
- massing development
- programme visualisation
- plans
- facades and materials
- building technology

RESEARCH

SITE


OUD ZUID





residential



retail & hotel

business

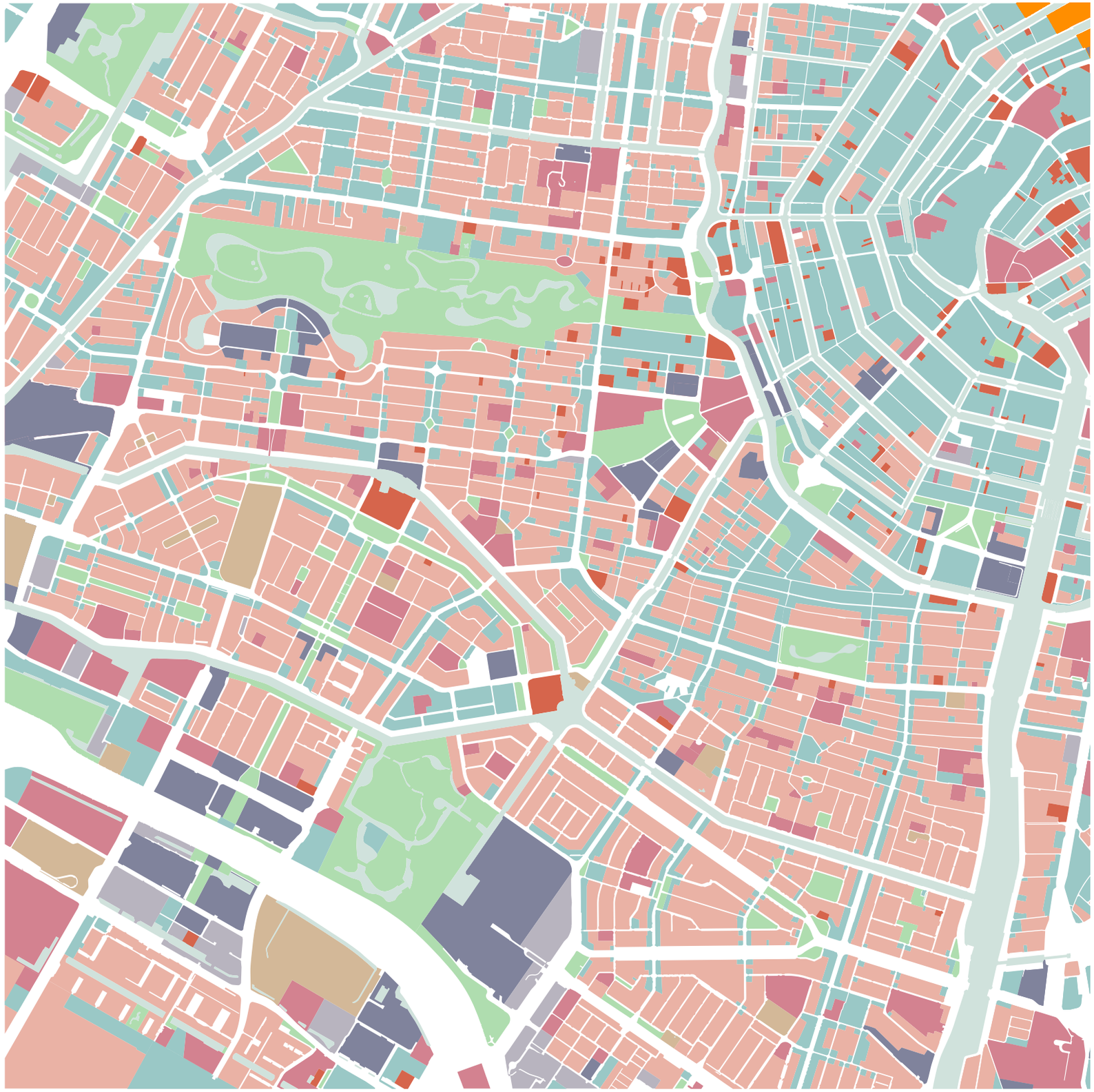


public services



sports field and
public parks

waterway



LANDUSE

residential
retail&leisure
business
public services
hotel
sport
parks
empty/construction
water

RESIDENTIAL



PROPERTY VALUE
IN EURO PER M^2,
2015

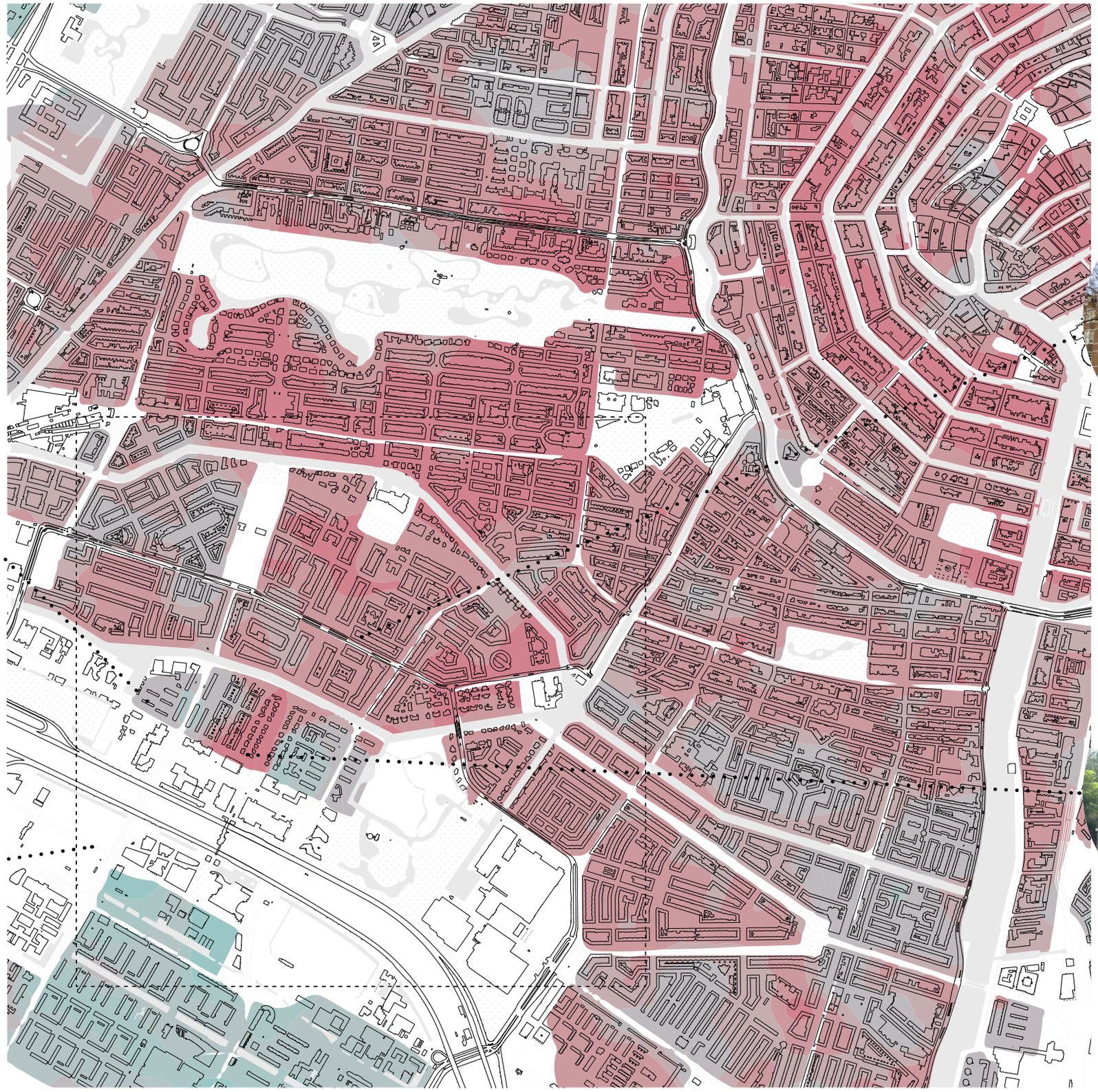
6000+ 1500



SOCIAL HOUSING



NEW HIGH-END FLATS





AMSTERDAM SCHOOL
LOW-RISE FLATS



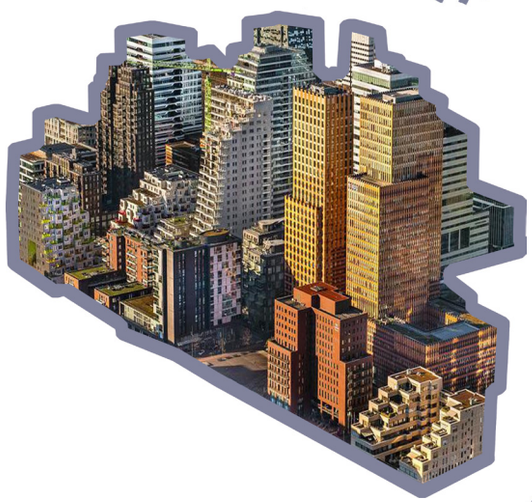
INDIVIDUAL VILLAS
BY THE BOULEVARD



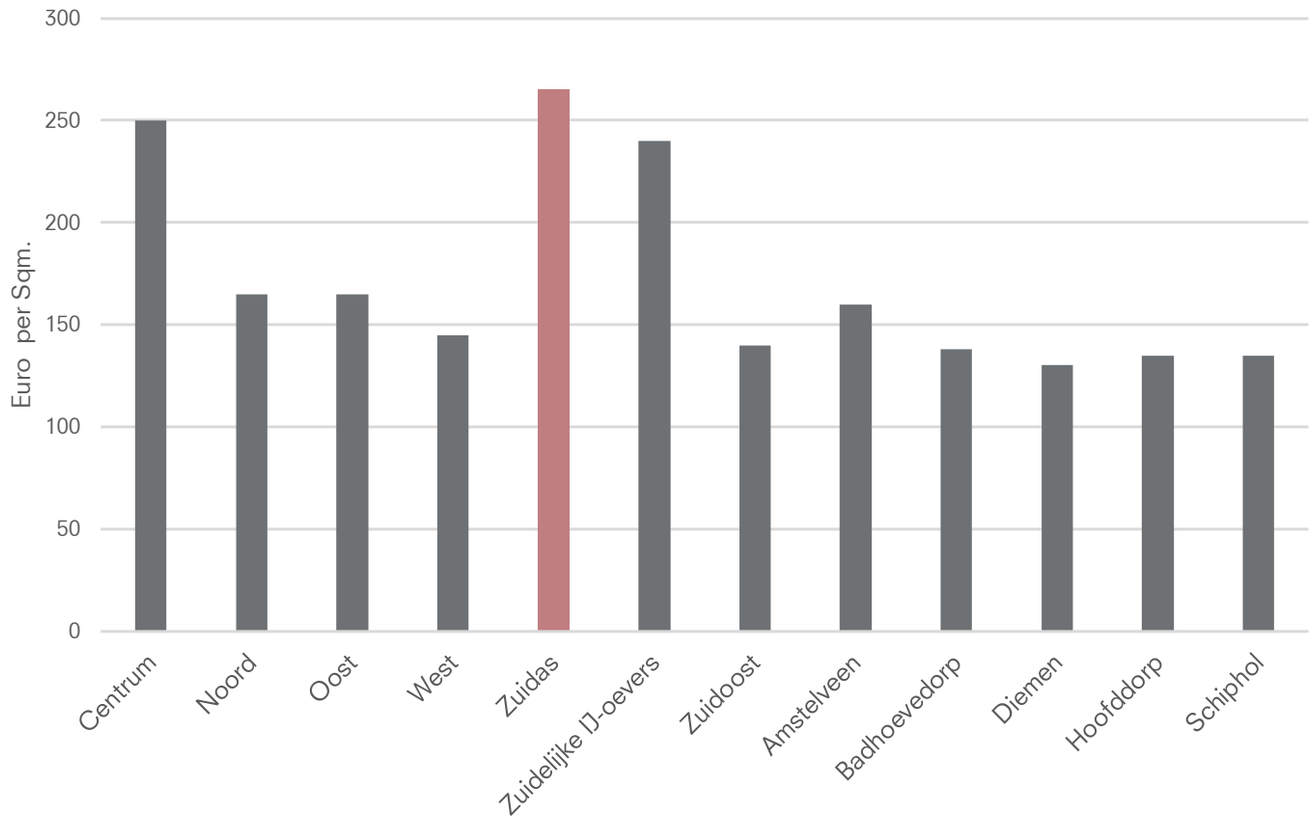
FINAL PLAN ZUID
1915,

HENDRIK PETRUS BERLAGE

BUSINESS-ZUIDAS



MEDIAN ASKING RENT OF OFFICE AREA, JAN 2017




Buikslotermeerplein P+R
Isolatorweg
4
Station Sloterdijk P+R
Amsterdam Centraal
3
Waterlooplein
Station Lelylaan
5
Vijzelgracht
Weesperplein
Science Park
Amstelveenseweg
Station Zuid
Station Amstel
Riekerpolder P+R
VU
RAI
Spaklerweg
1
Van der Madeweg
Station Duivendrecht
Station Bijlmer Arena P+R
Gaasperplas
Schiphol P+R
2
Westwijk
Gein
Uithoorn



VISION ZUIDAS 2030

- Pedestrian area (used intensively)
- Mixed area with accent on residential
- Mixed area with accent on work
- Mixed area
- Green route
- Urban street for all types of traffic
- Indication of recreational area
- Improvement to cycling network
- Zuid-Westboog (projected)
- North/South line
- Extension of North/South line to Schiphol (projected)

This map shows two important developments in Zuidas: a shift in accent away from work and more to residential and to improving accessibility by bicycle and public transport. During the coming 15 years the area is going to change into a mixed urban district with more than 7,000 homes. The residential programme is strongly represented in Gershwin and the adjacent subareas of Knowledge Quarter [Kenniskwartier] and Ravel. Amsterdam Zuid Station is growing into the gateway to Amsterdam. Space is available in the vicinity of the station entrances for bicycles, trams and buses. The public space around the station is intended for pedestrians. Some of the parcelling shown on this map is not yet definitive.

SOURCE: Zuidas Vision 2016 document summary

PERSONAL INTEREST

retail
restaurant

sports

health

activities
culture

civic

education

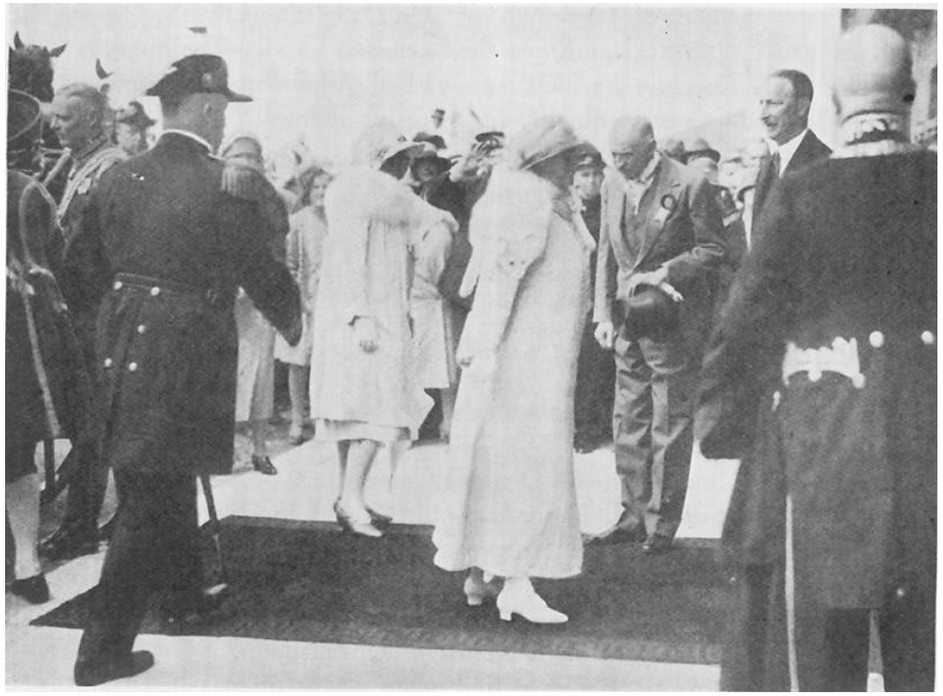
religion



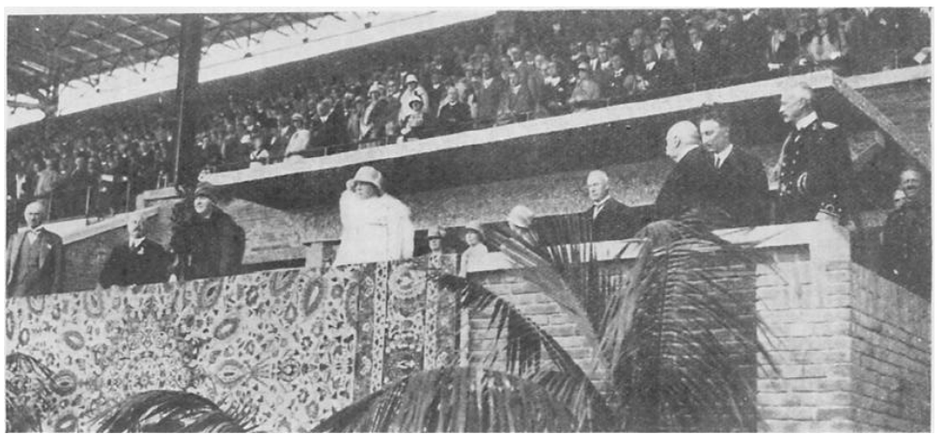


Olympic
Stadium

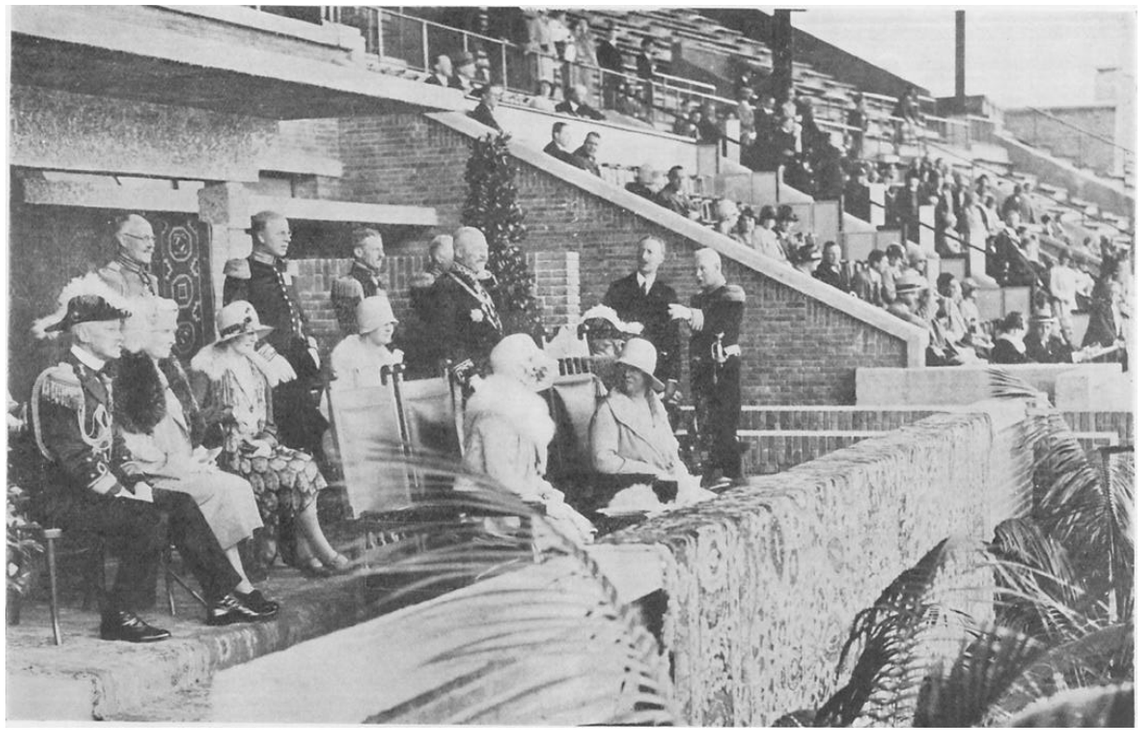

CITIUS–ALTIUS–FORTIUS



"Receiving the Royal Family at the entrance of the Royal Box."



"The Royal Family entering the Royal Box."



"Her Majesty The Queen and Her Royal Highness the Princess with their suites in the Royal Box during the games."

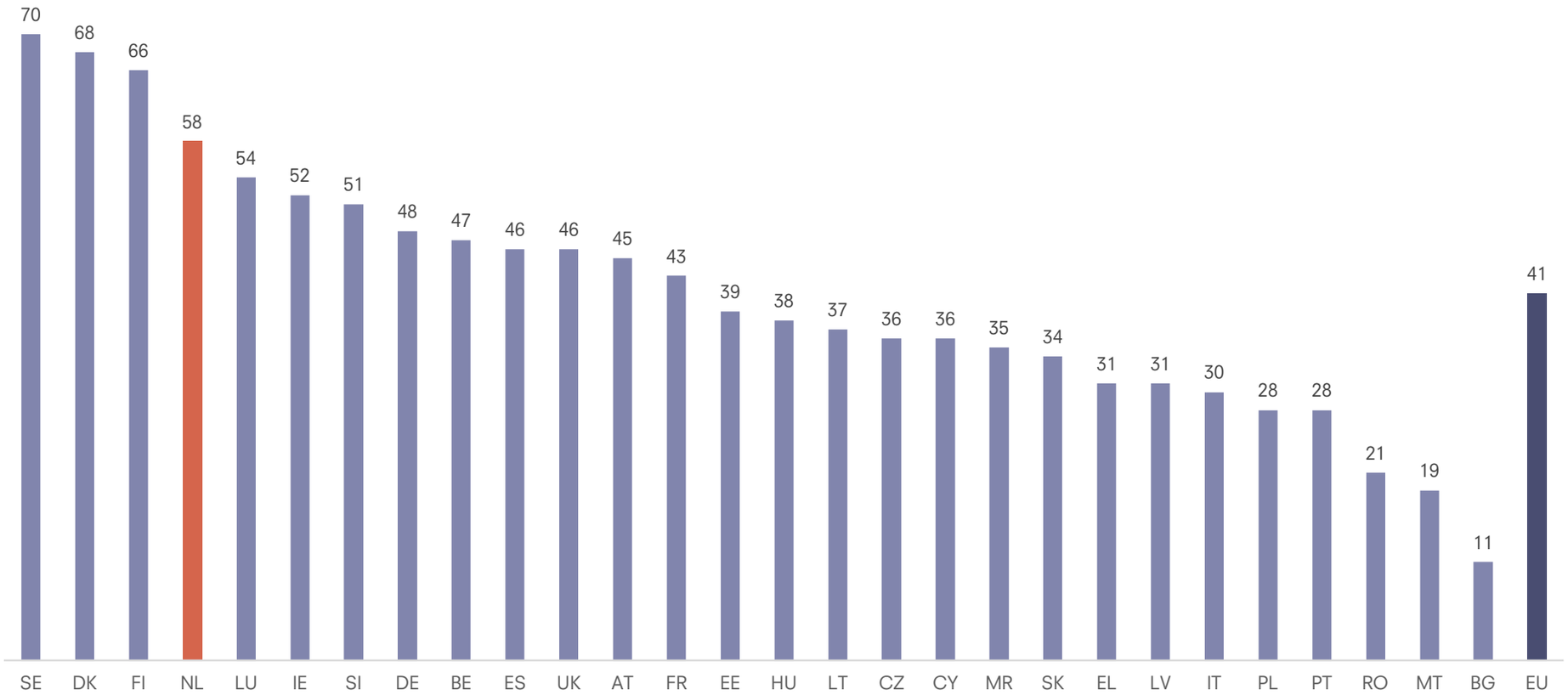
DUTCH SPORTS CULTURE

DUTCH PEOPLE ARE ACTIVE

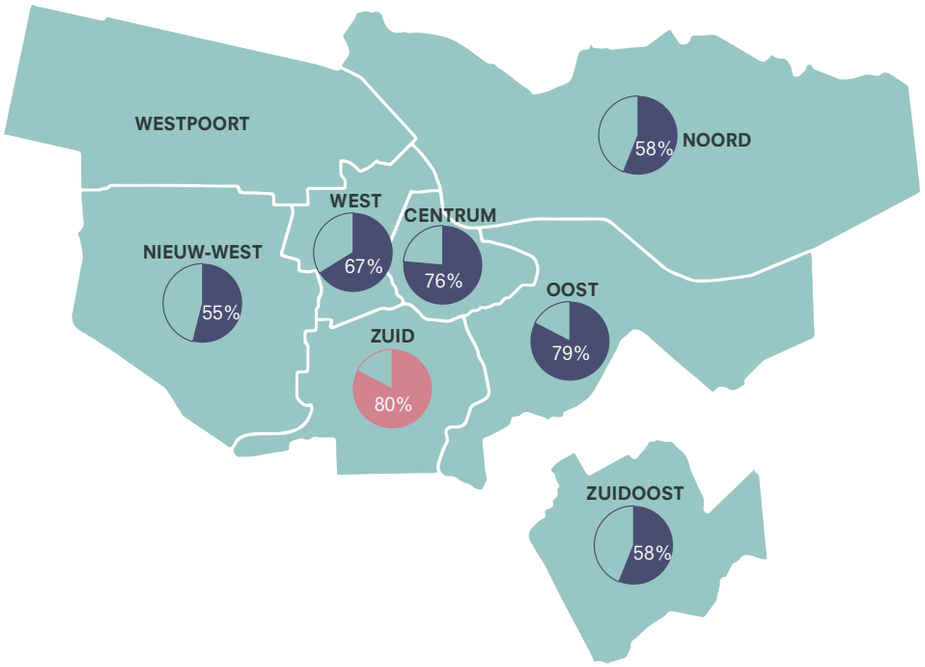


Scheveningen New Year’s Dive

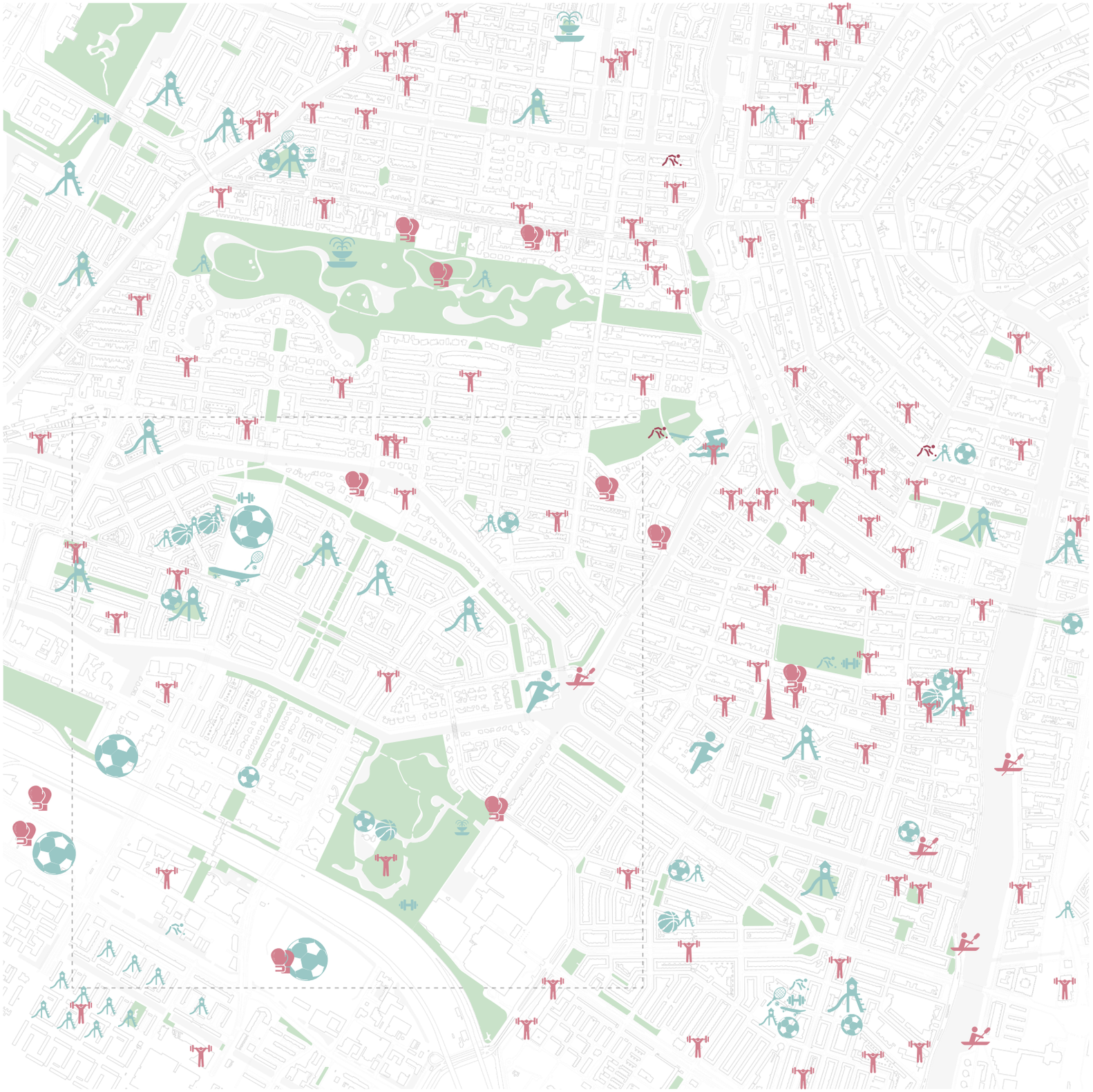
Percentage of population participating in sport at least once a week, European Union, 2013



regular sports participation, by district



PEOPLE IN AMSTERDAM ZUID ARE VERY ACTIVE



PUBLIC

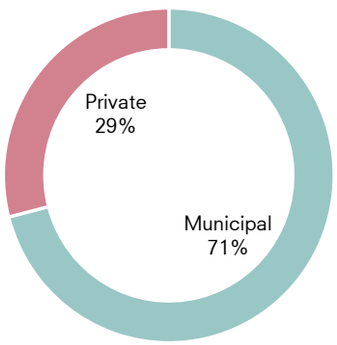
- skatepark
- playground
- swimming pool
- tennis court
- football court
- basketball court
- jeu de boules
- sports centre
- fitness
- paddling pools
- open green area/parks

PRIVATE

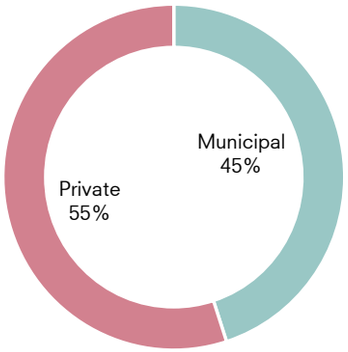
- Gym
- Watersport clubs
- Other sport halls

Sport Facilities in the Netherlands, 2012

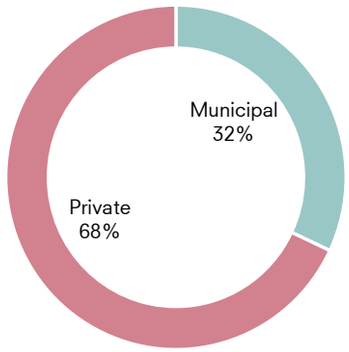
Outdoor

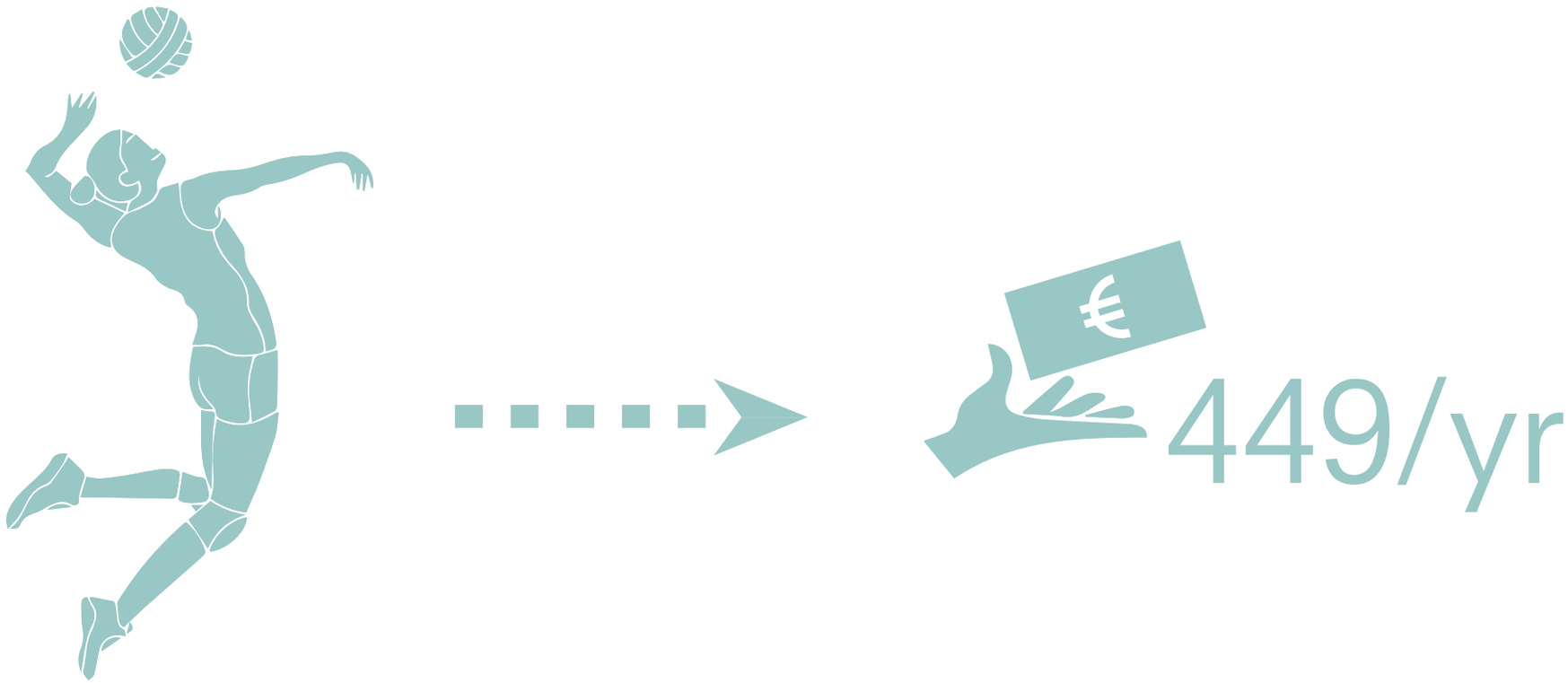


Indoor



Swimming pools




€
449/yr

MY 2050 VISION



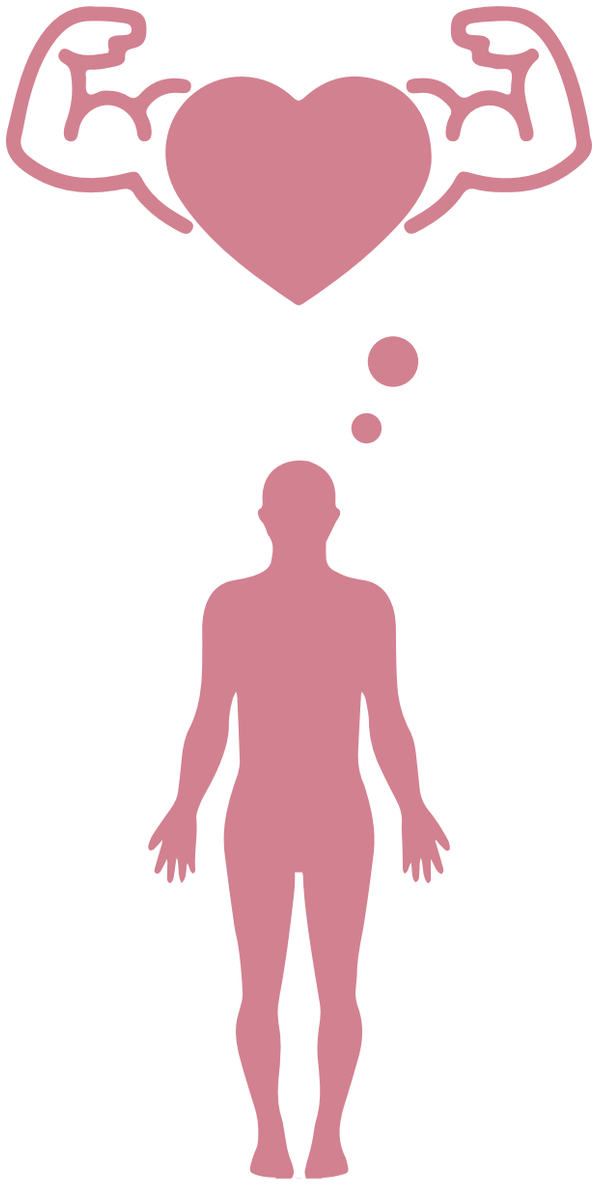
FINANCE



MOBILITY



HOUSING



OURSELVES & HEALTH



PHYSICAL HEALTH



MENTAL HEALTH



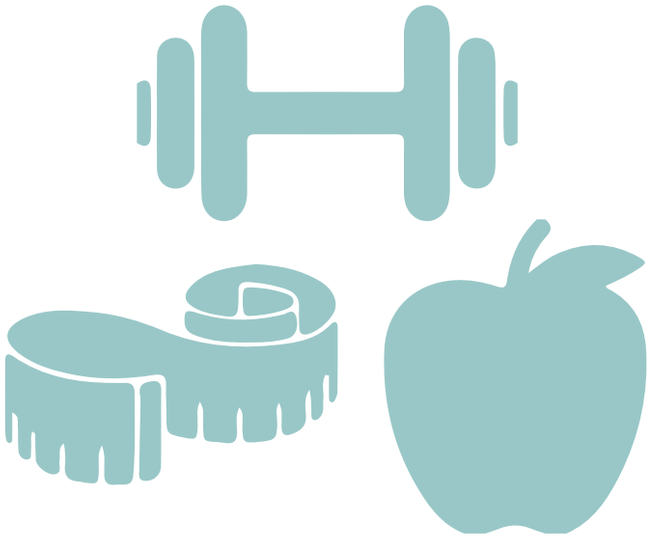
PHYSICAL HEALTH

PAST



MEDICINE & CURE

2050



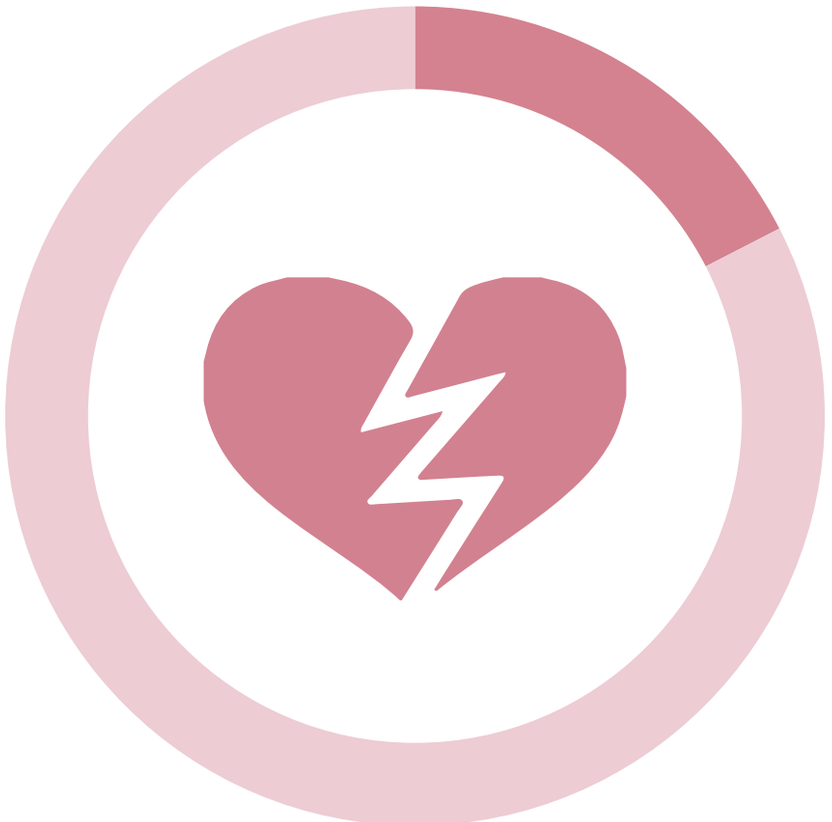
PREVENTION



EXERCISES



MENTAL HEALTH



18% of the Dutch population has
some form of mental disorder

physical obstacles

substance misuse

social isolation

abuse

childhood trauma

stress

loss

injury

changing environment



social interaction have a positive psychological impact


TAPAS
1. Pikalos bravas
2. Pimientos de padrón
3. Tortilla española
4. Gambas


facebook Spaces BETA
Facebook Spaces
VR is better with friends
Spaces on Rift
Spaces on VIVE
Watch Video

RESEARCH QUESTION:

What kind of sport or recreational facilities do we need to ensure that everyone has equal right to enhance our physical and mental health re-gardless social or financial status in 2050?

systemetic change

NOW

SPONSORSHIP

NOC*NSF

458
MUNICIPALITIES

WELFARE
DEPARTMENT

90
SPORTS FEDERATIONS

24,000
SPORT
CLUBS

2050

MINISTRY OF HEALTH,
SPORT, AND WELFARE

SPONSORSHIP

NOC*NSF

CHRONIC CARE

HOSPITALS/CLINICS

SUPPLEMENTARY CARE

SPORTS





site specific solution

RESIDENTIAL

BUSINESS





TIME



PROGRAMME

?



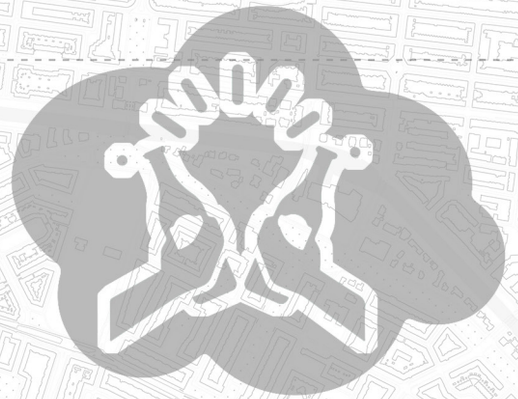


LOCATION











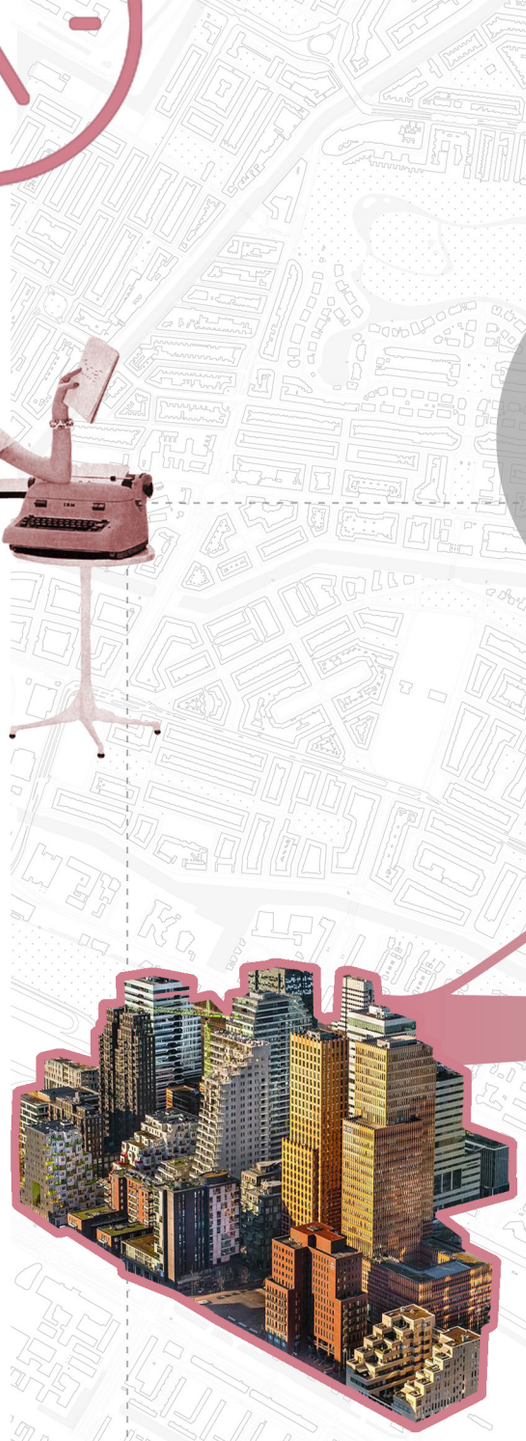














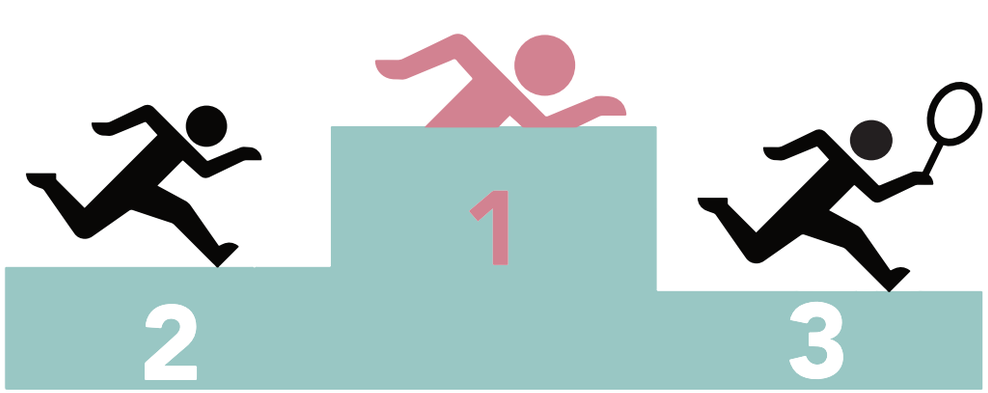




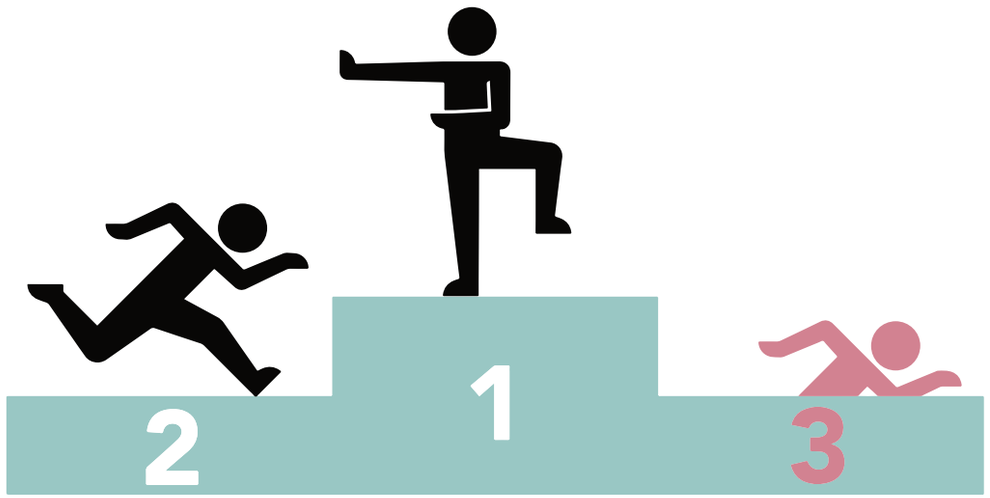
WHY SWIMMING POOL?

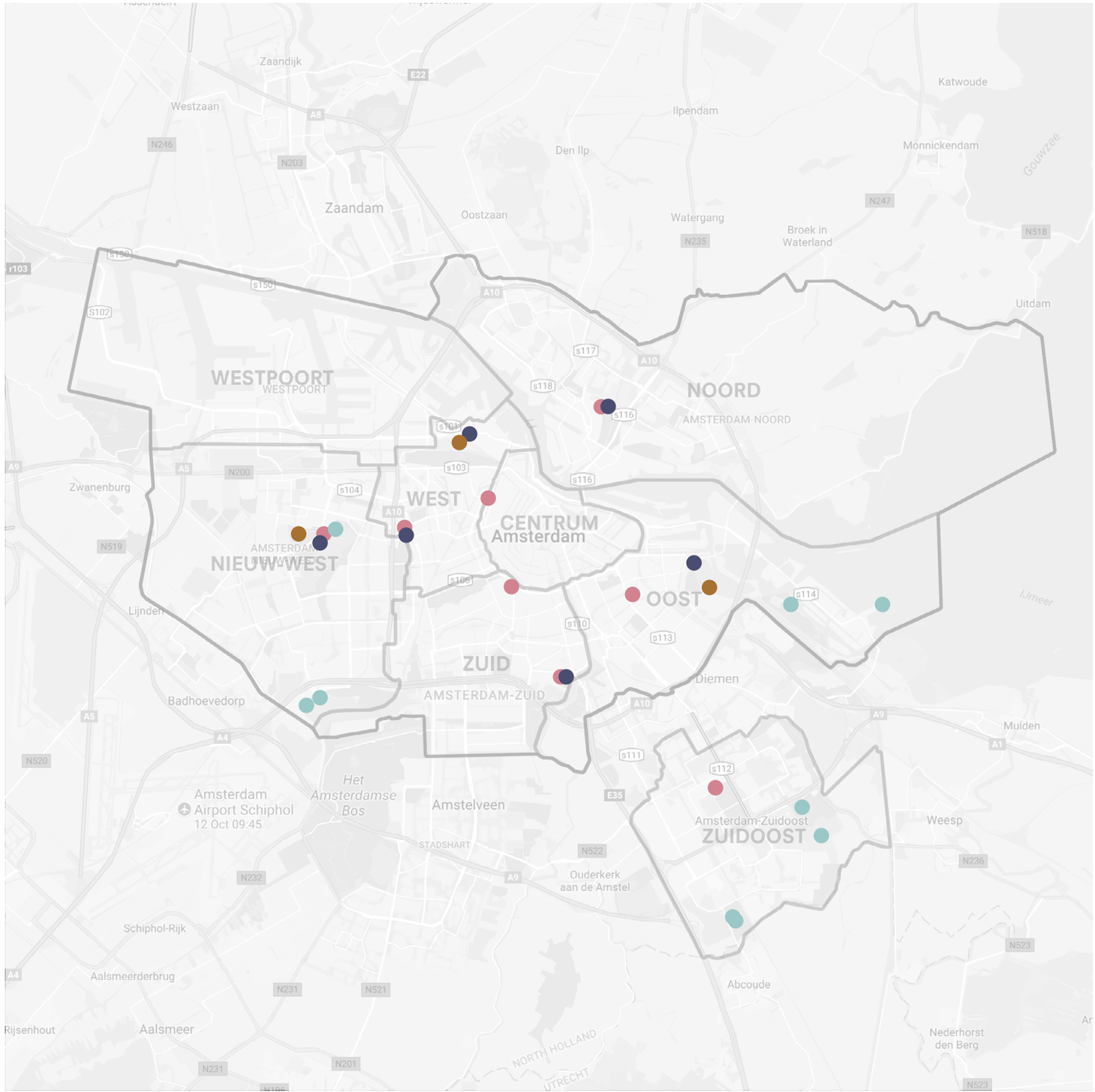


MOST POPULAR SPORTS IN THE NETHERLANDS



MOST POPULAR SPORTS IN AMSTERDAM ZUID





- indoor swimming pools
- outdoor swimming pools
- official outside swimming spots
- water playground



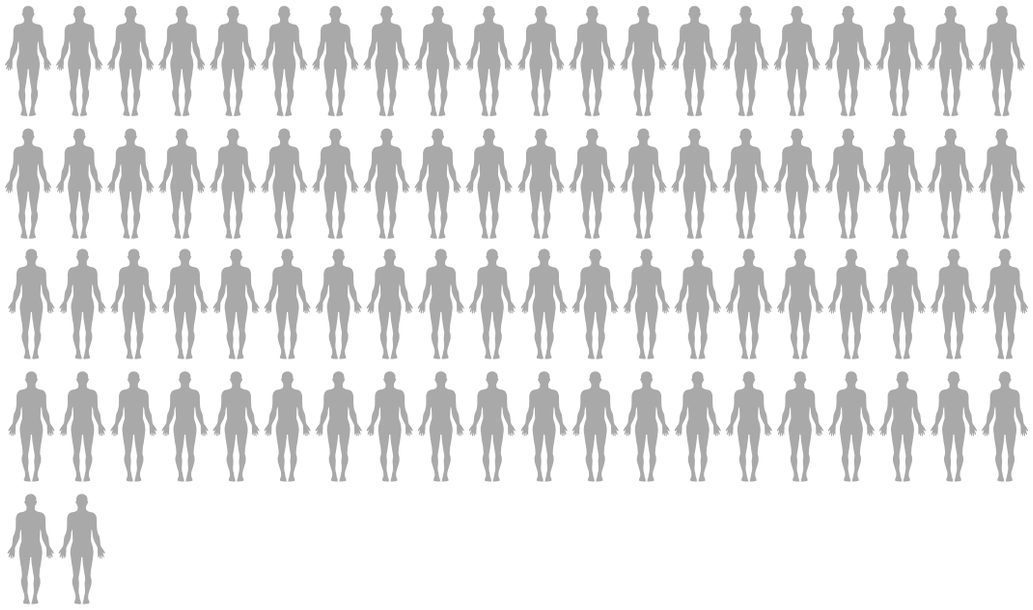
city beach

indoor heated swimming pool

paddling pool

canal

2015



820,000

2025 +



+ 125,000

2025 +



x10

Sports halls



x35

Gymnasiums



x22

Football Fields



x50

Tennis Courts



x8

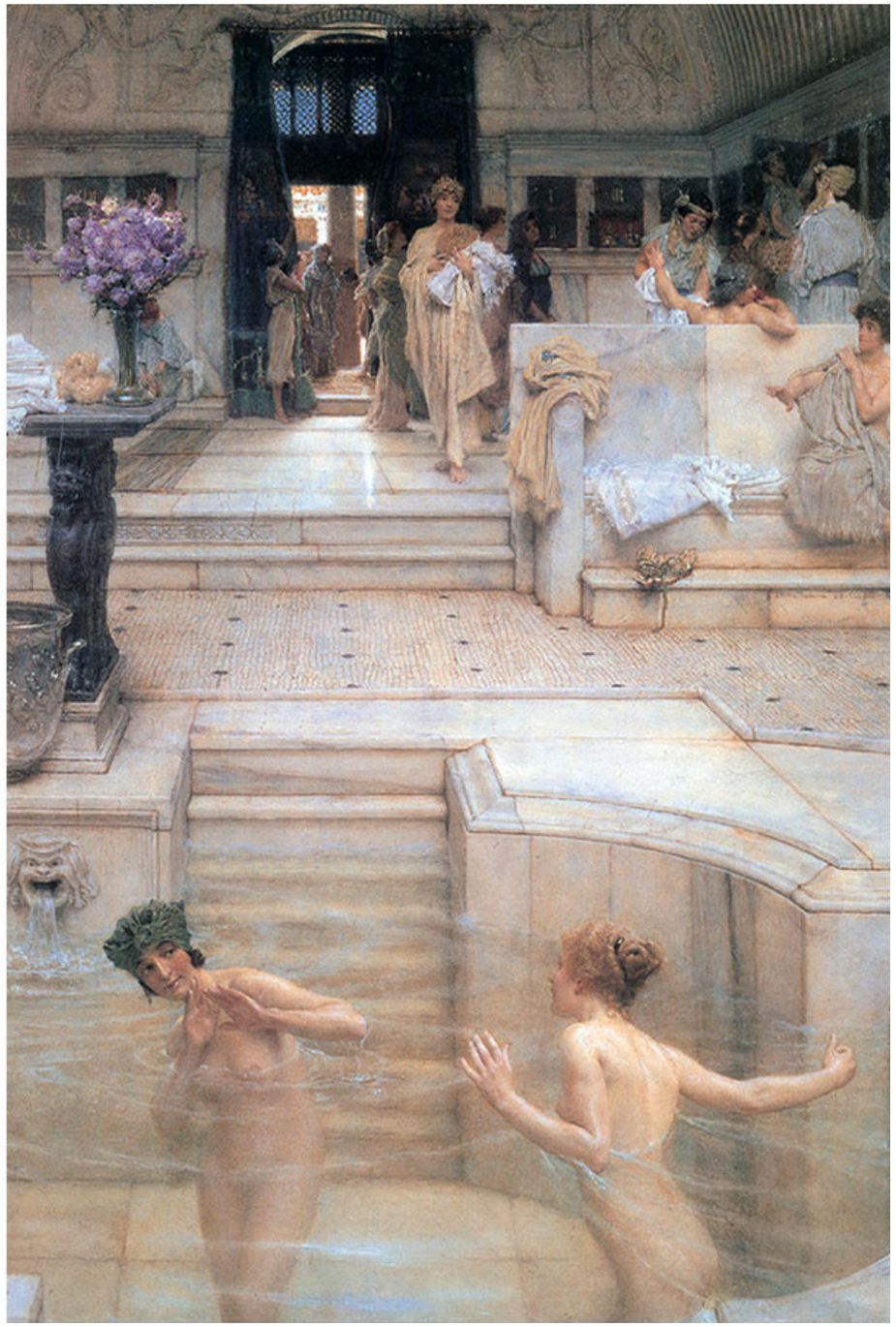
Hockey Fields



x1.5

Swimming Pools





The Baths of Caracalla, Lawrence Alma-Tadema

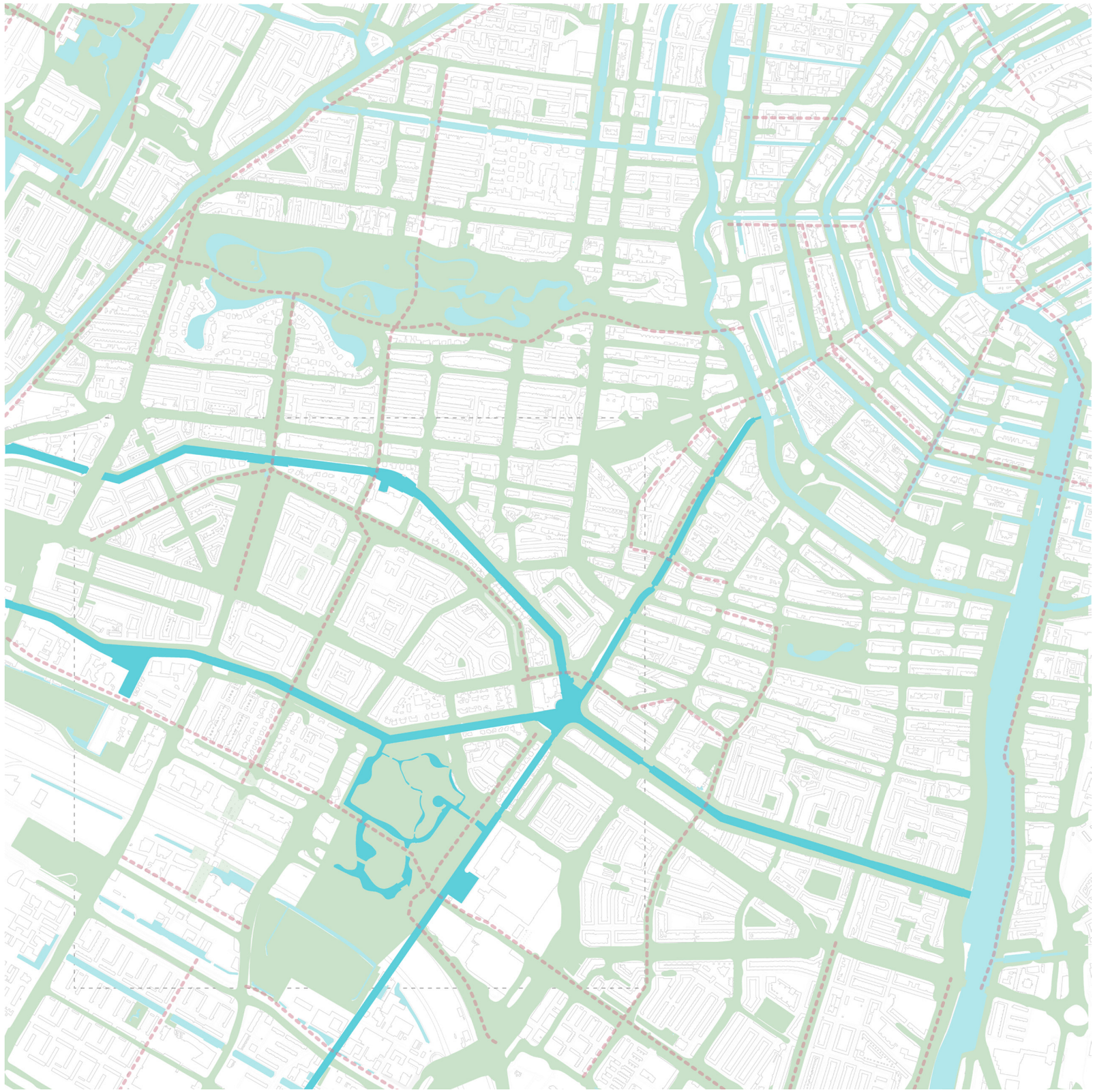


Medellin Aquatic Centre, Paisajes Emergentes

D E S I G N

OUD ZUID STRATEGIES

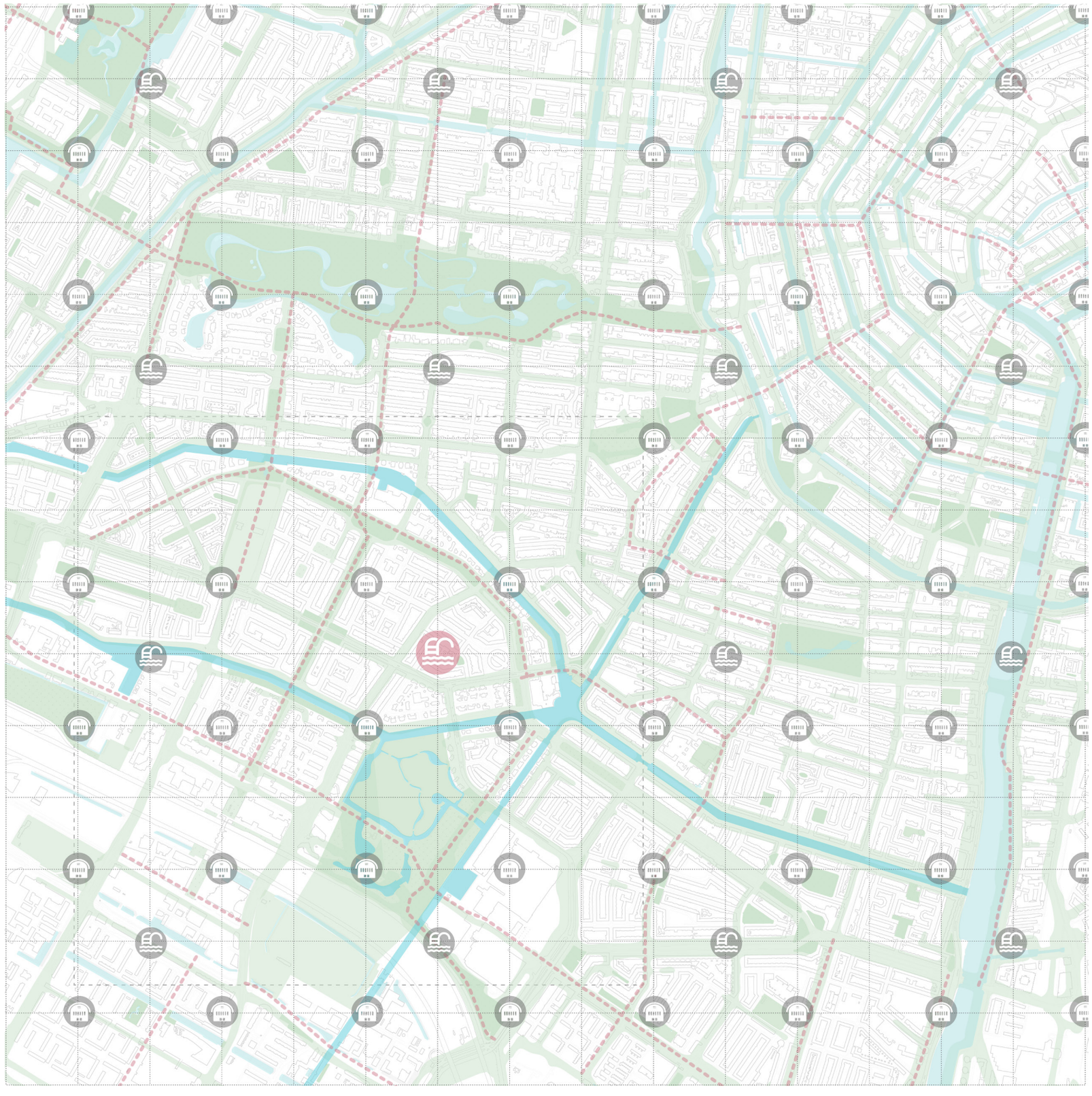

TRAIN
METRO
BUS/TRAM



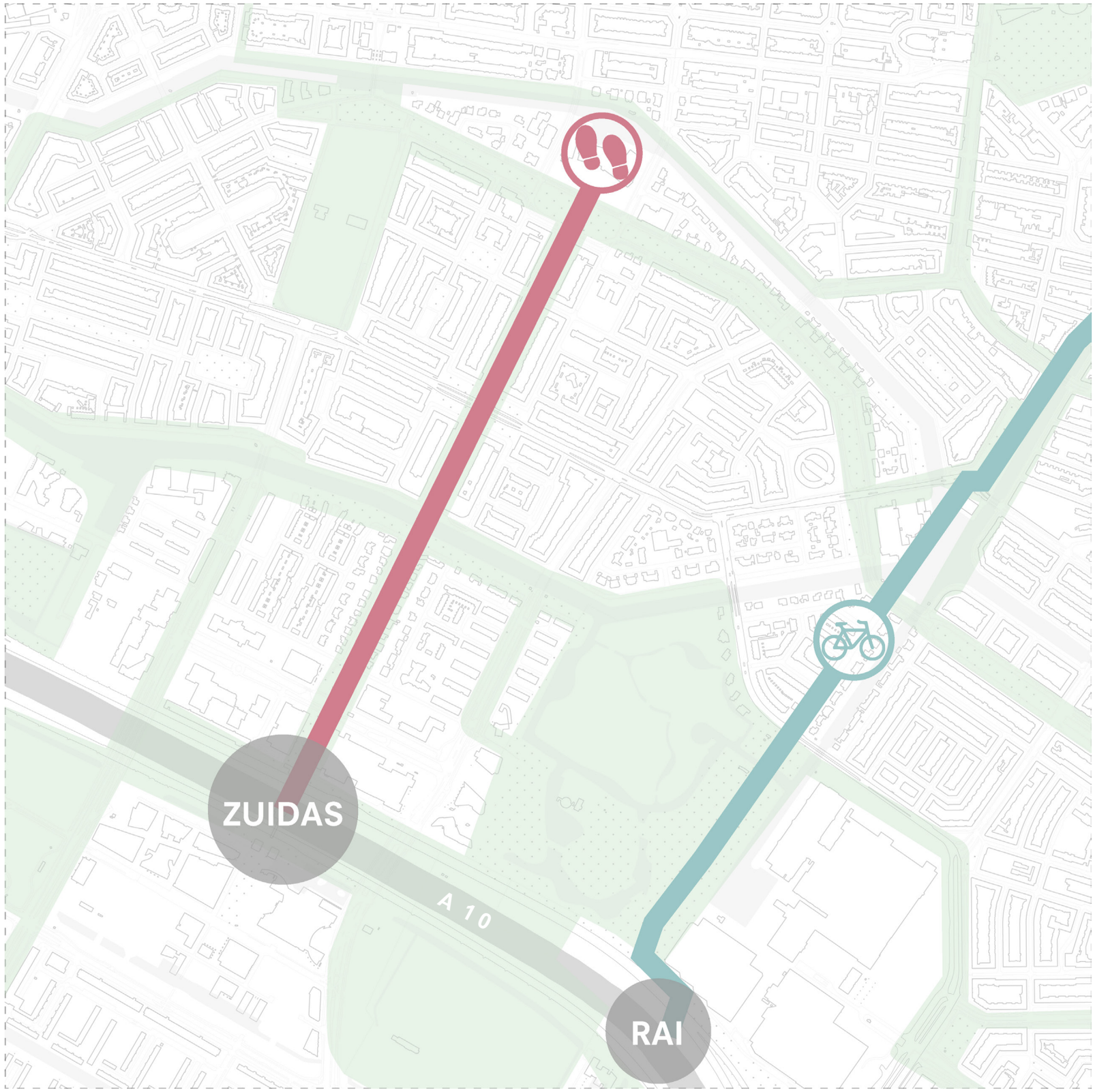
EXISTING
OPEN GREEN AREA
CONNECTED BY
WALKING/RUNNING
TRAILS

WATERSPORTS
PRESERVED

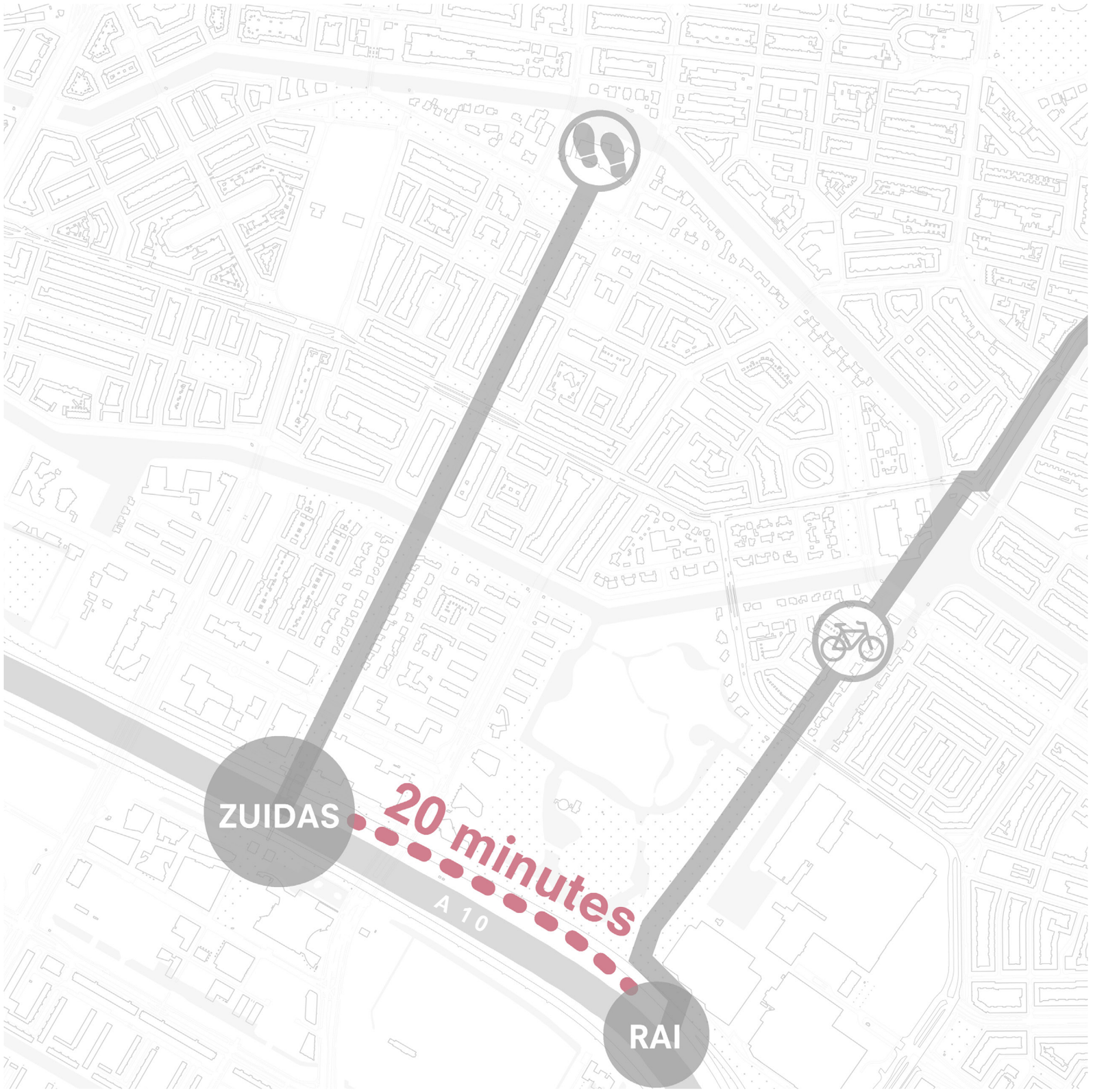
MAIN BIKE LANE

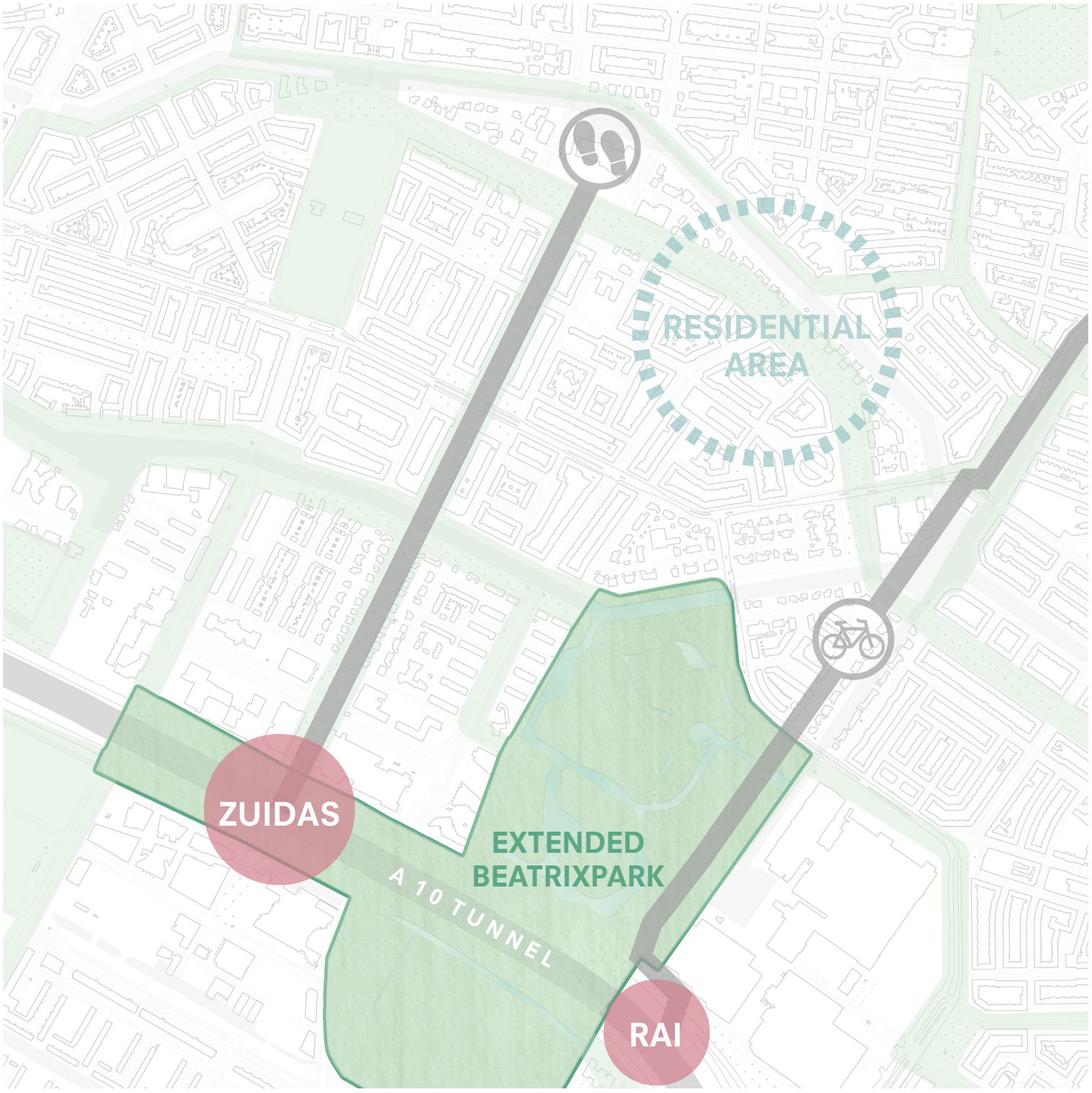



ZUIDAS
RAI
M


ZUIDAS
A 10
RAI

SITE LOCATION


ZUIDAS
20 minutes
A 10
RAI


RESIDENTIAL
AREA
ZUIDAS
EXTENDED
BEATRIXPARK
A 10 TUNNEL
RAI


ZUIDAS
RAI
HIGHWAY A10
CYCLE SNACK
6
9









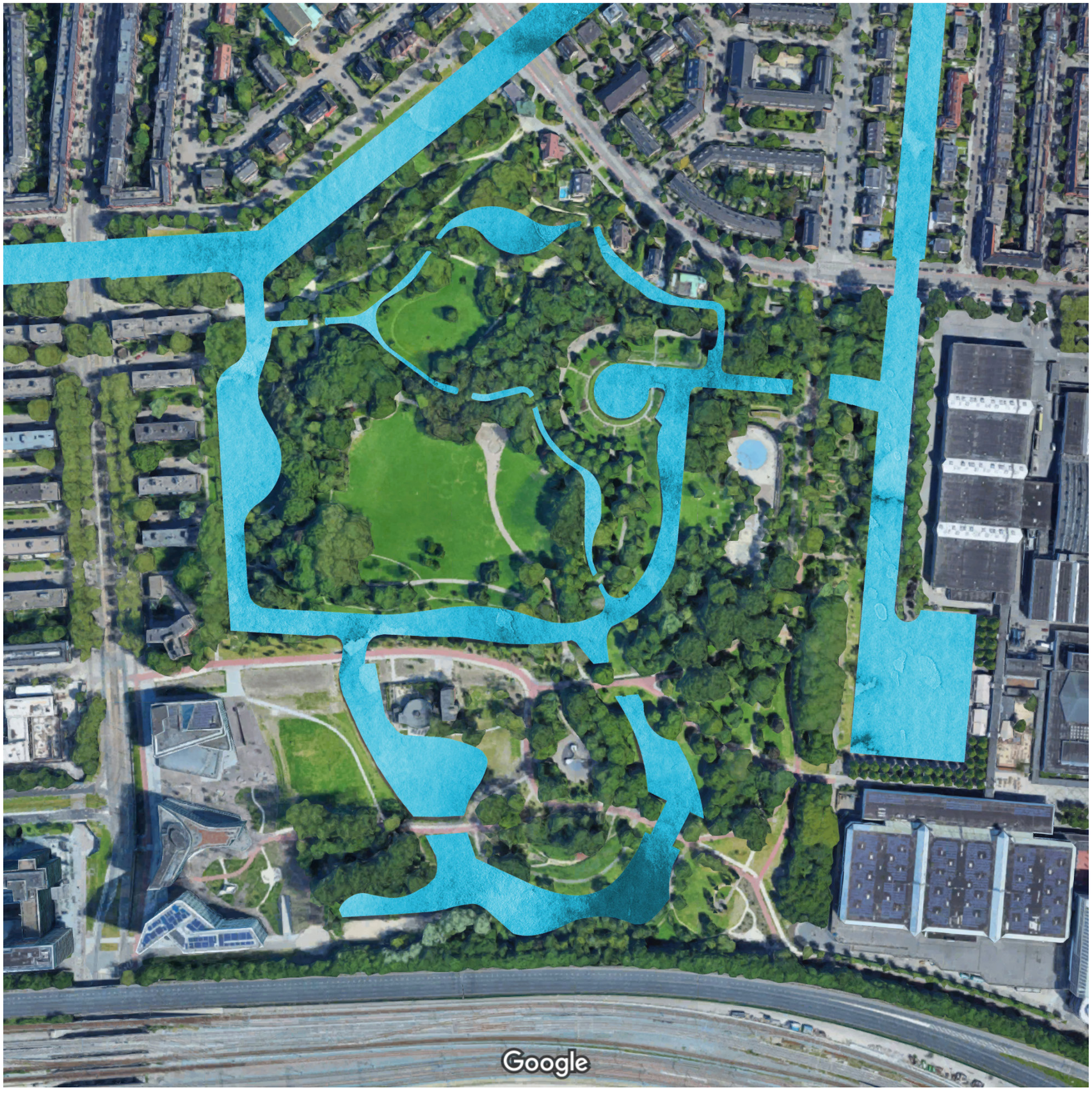


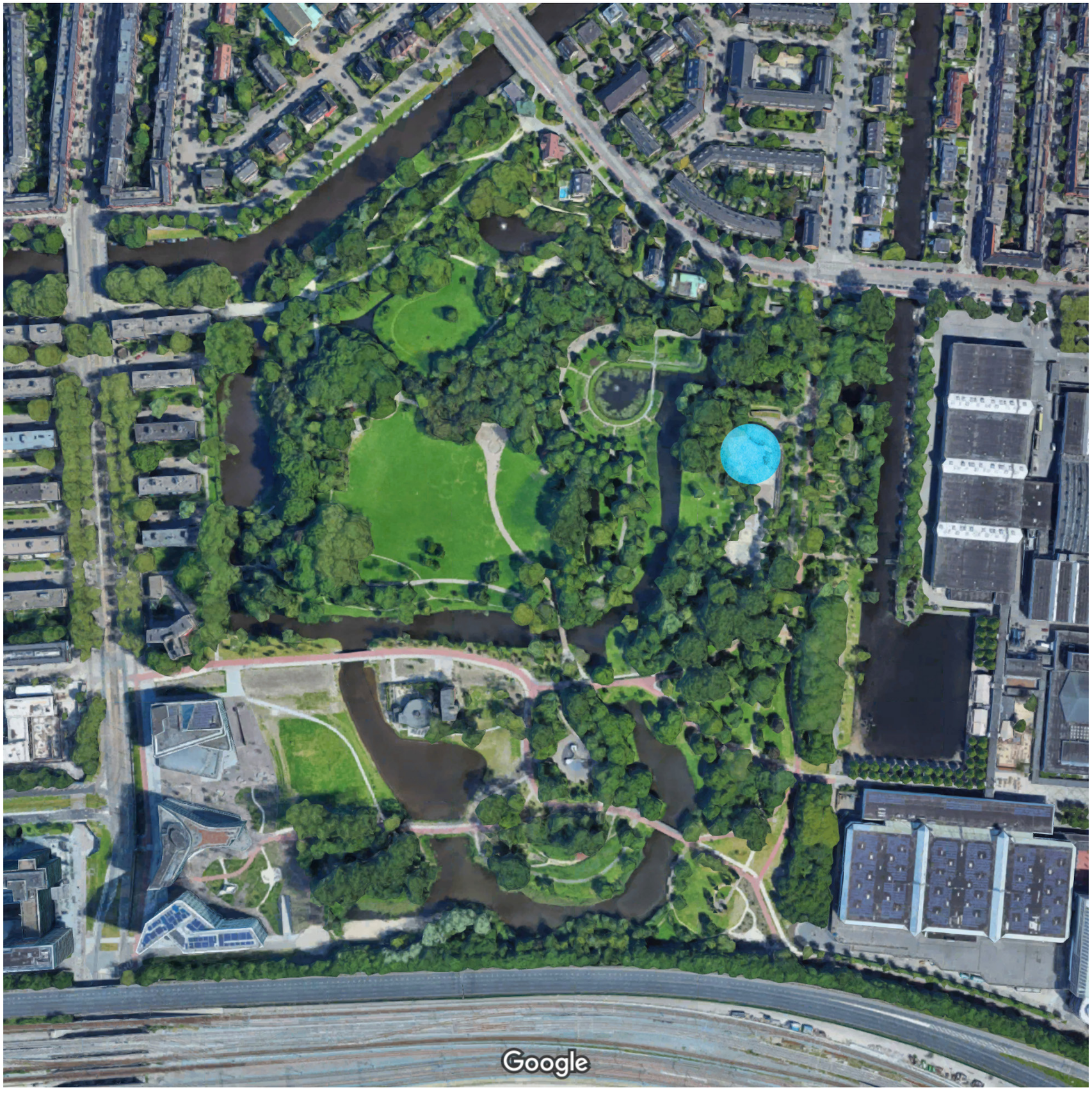
BEATRIXPARK

landscape architect: Jakoba (Ko) Mulder

year finished: 1938


670 M
510 M
Google


Google


Google



PLAN ZUID

RAI

1 min

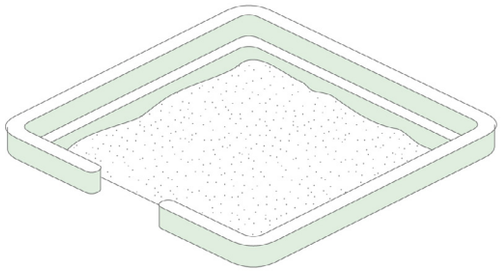
ZUIDAS

10 min

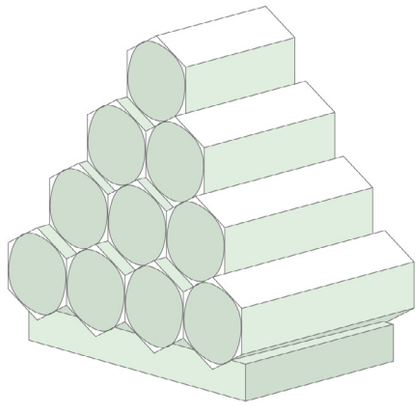
PADDLING POOL:
KEPT

PLAYGROUND:
REBUILT

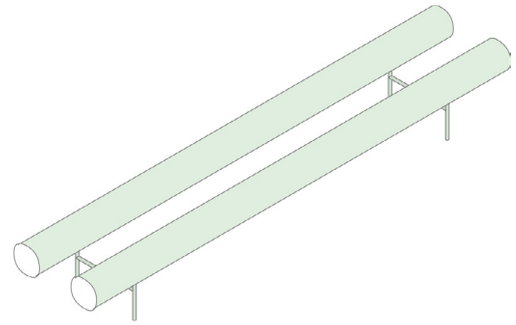
ARTSENIJHOF:
DEMOLISHED



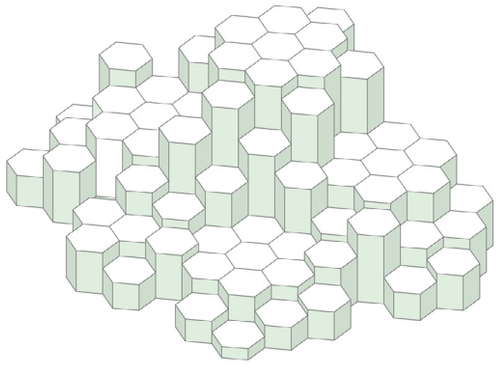
sandpit



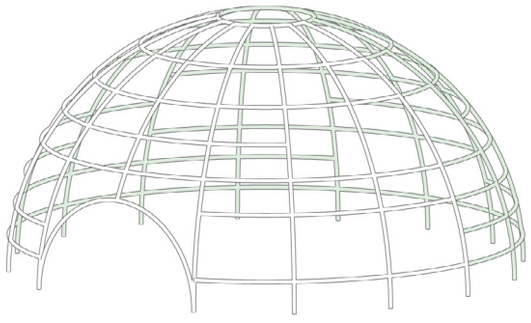
honeycomb



balancing beams

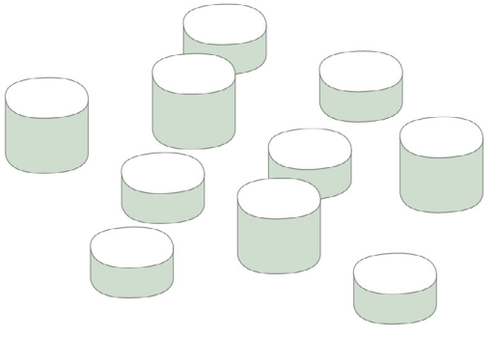


climbing mountain

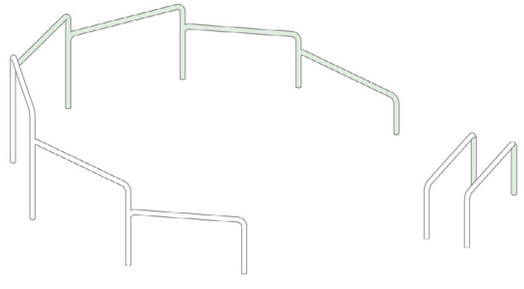


climbing frame 1

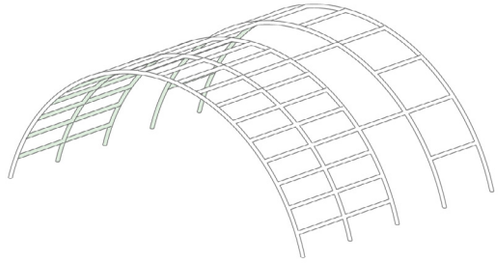
ALDO VAN EYCK'S PLAYGROUND



jumping stones



Somersaulting frames



climbing frame 2




Grote
Kattenstaart

PROGRAMME COMPOSITION



WORKOUT



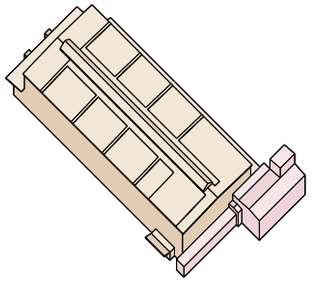
SOCIAL



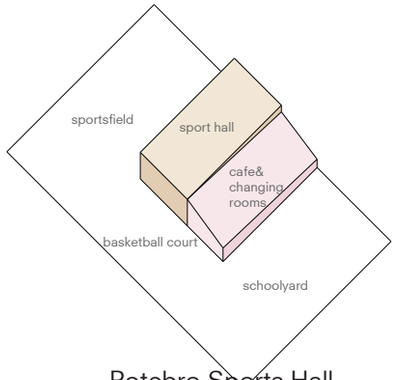
LEISURE



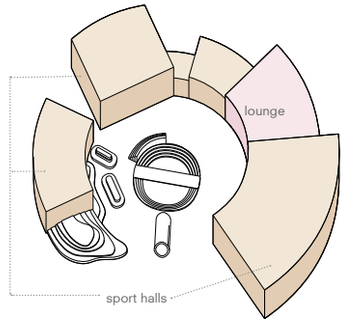
CATERING



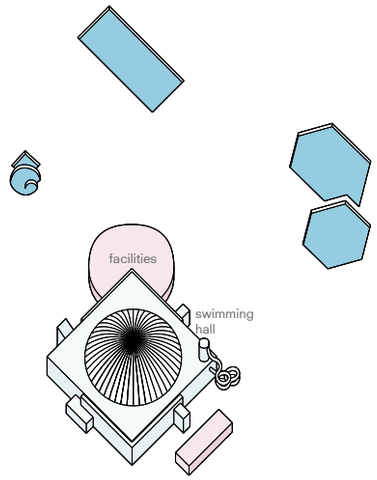
Apollohal



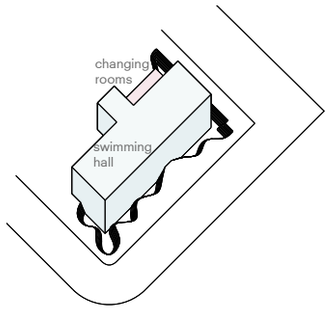
Rotebro Sports Hall



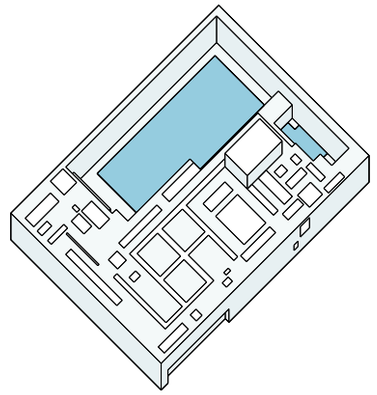
Esberjg Streetmekka



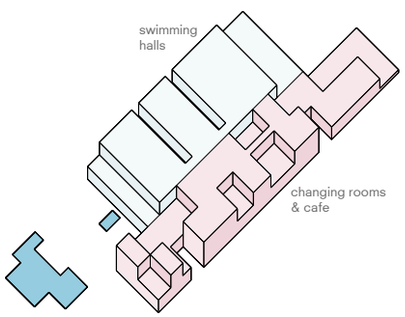
Mirandabad



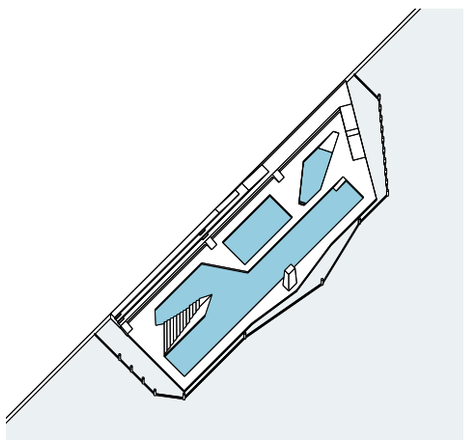
Guildford Aquatic Centre



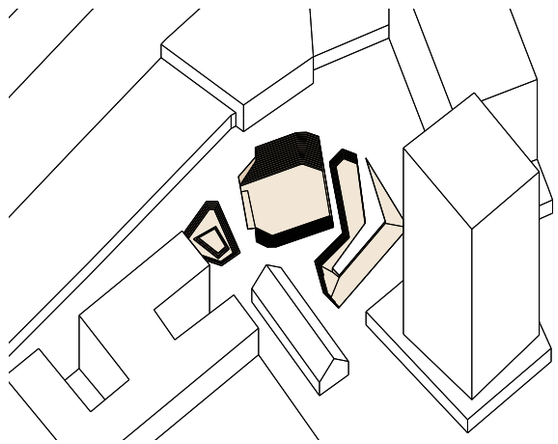
Les Bains des Docks



Swimming Complex De Geusselt



Copenhagen Harbour Bath



Water Square Benthemplein

FUNCTIONS

sports hall

swimming hall

swimming pool

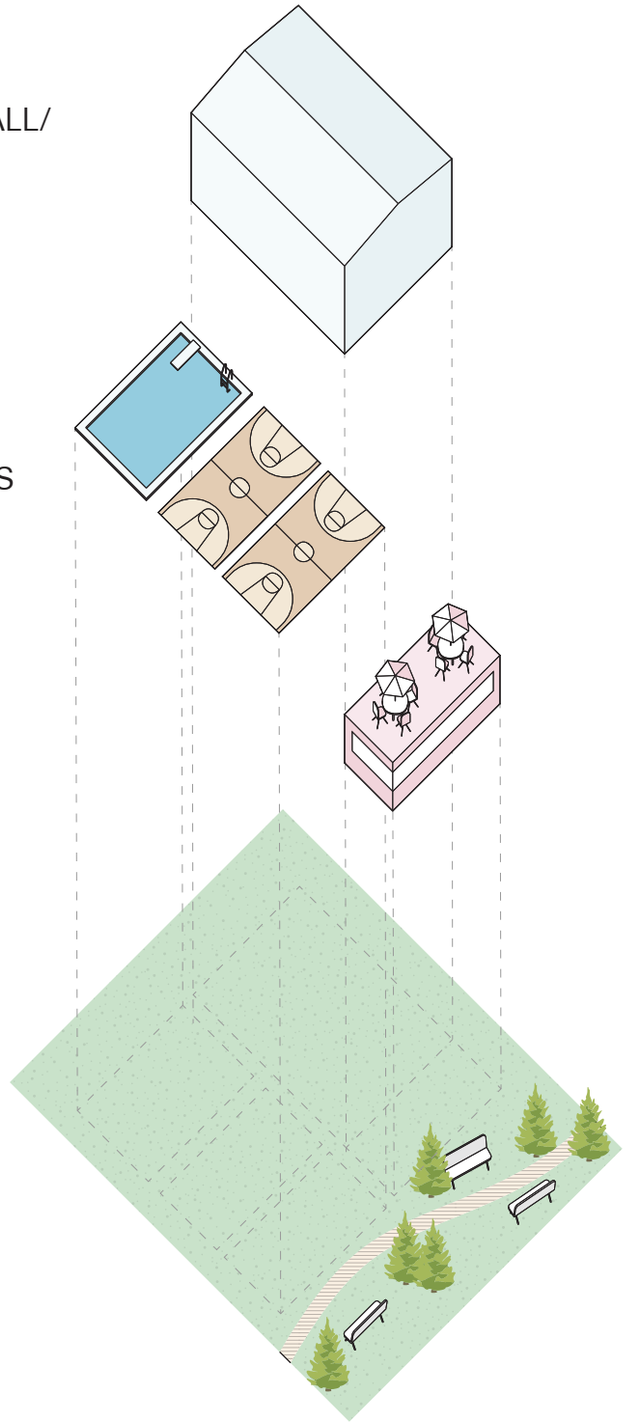
services

SWIMMING HALL/
SPORTS HALL

SWIMMING
POOLS/
SPORTS FIELDS

CAFE/
CHANGING
ROOMS

PUBLIC
SPACE



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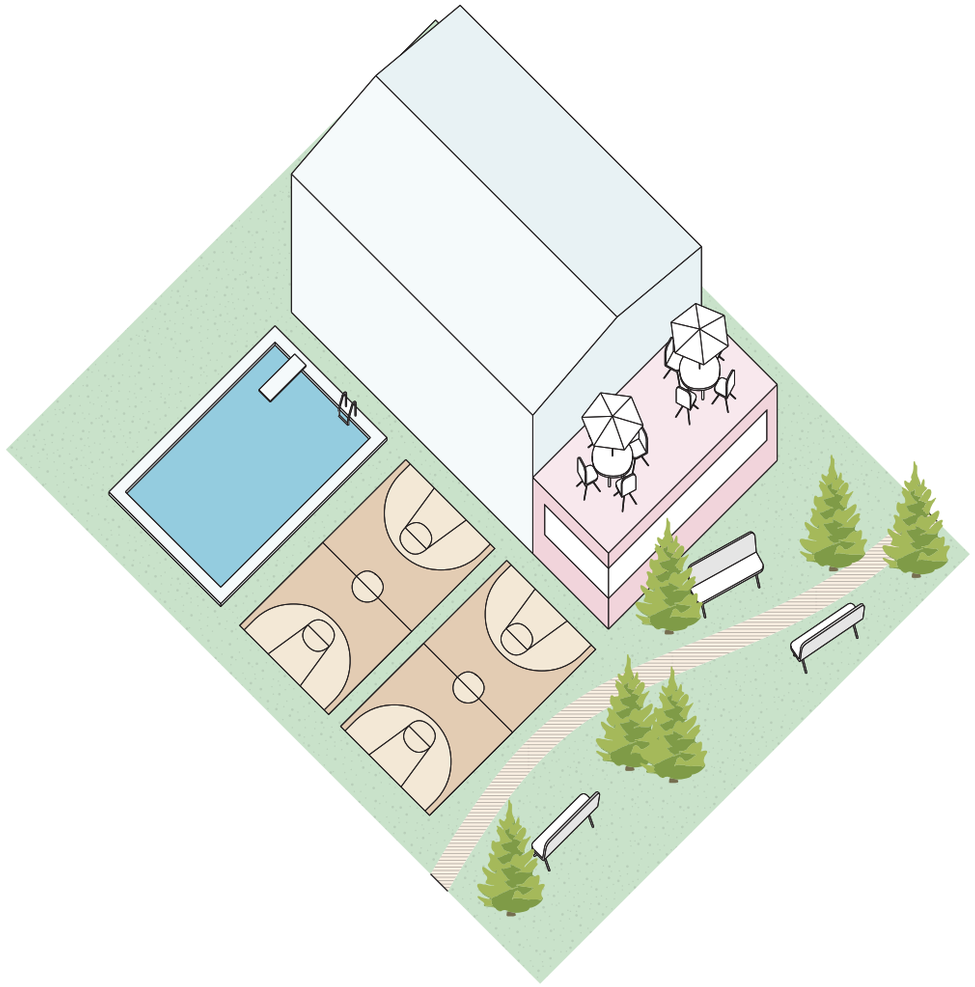
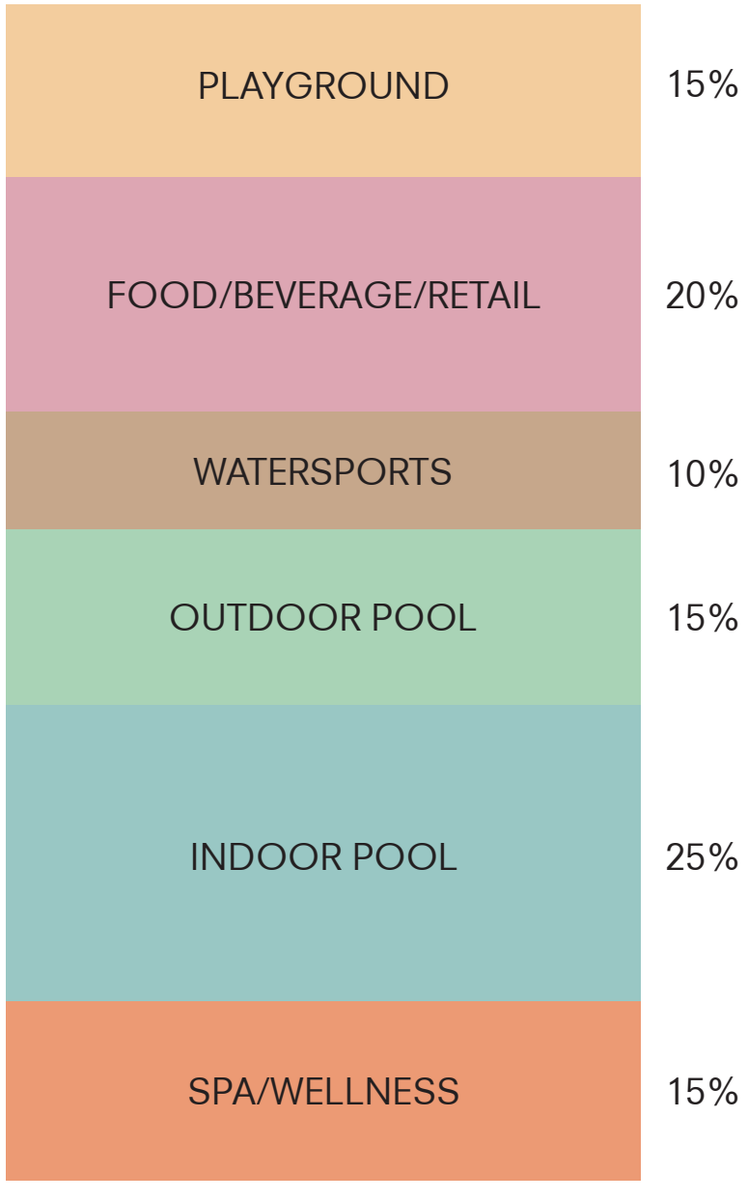
SPORTS COMPLEX
IN PUBLIC REALM



COMPOSITION



PROGRAMME PROPORTION

SPA/
WELLNESS

BEACH BAR

REVENUE

GOVERNMENT FUNDS

CANAL DIPPING
free

+

LOTTERY
SPONSORSHIP

+

SPORTS BRAND
SPONSORSHIP

WAGES OF STAFFS &
DAILY
MAINTENANCE

WATER PLAYGROUND
free

WATERSPORTS
very basic fee

INDOOR POOL
symbolic fee

OUTDOOR POOL
symbolic fee

PRIVATE

SPA/WELLNESS

OUTDOOR POOL

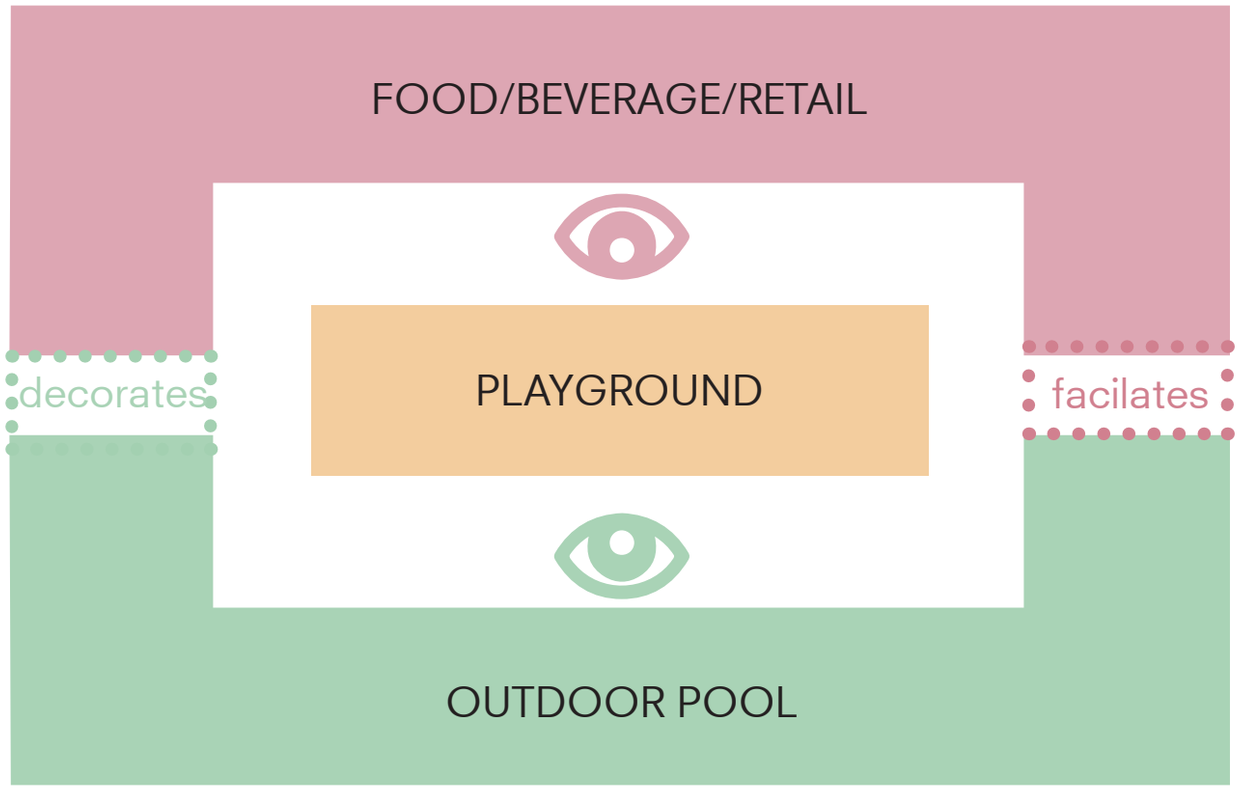
INDOOR POOL

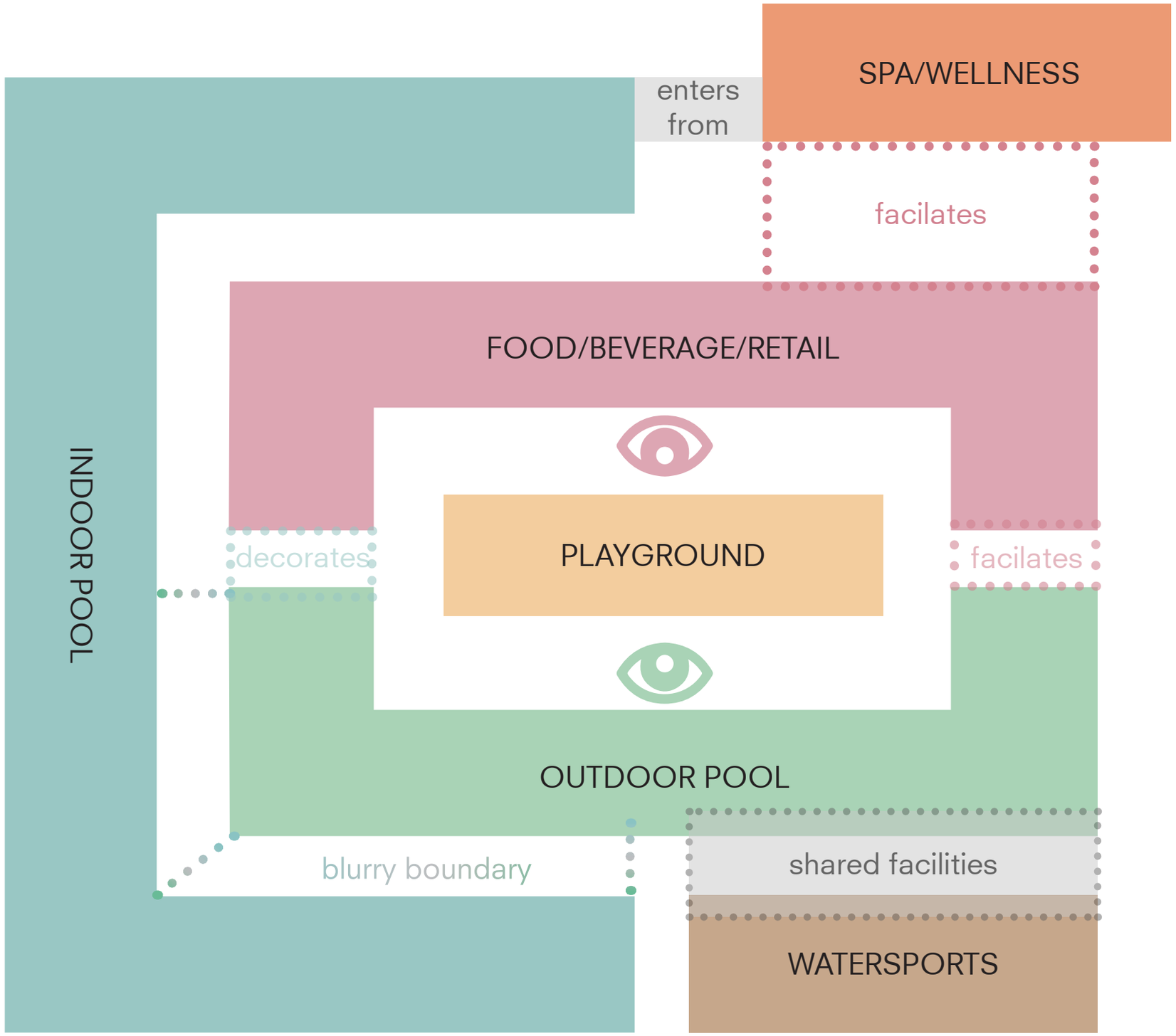
WATERSPORTS

FOOD/BEVERAGE/RETAIL

PLAYGROUND

PUBLIC

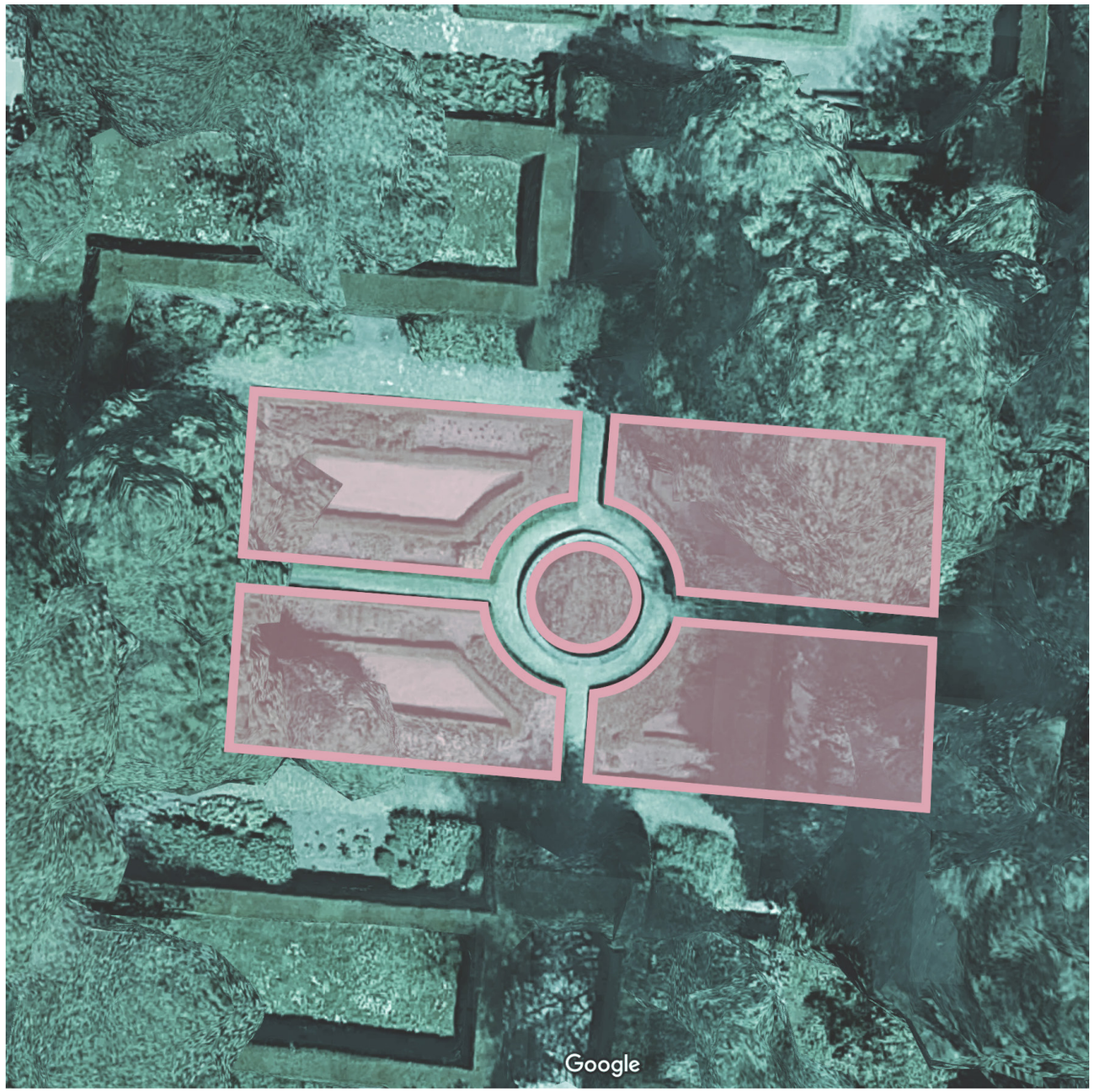

FOOD/BEVERAGE/RETAIL
PLAYGROUND
decorates
facilates
OUTDOOR POOL

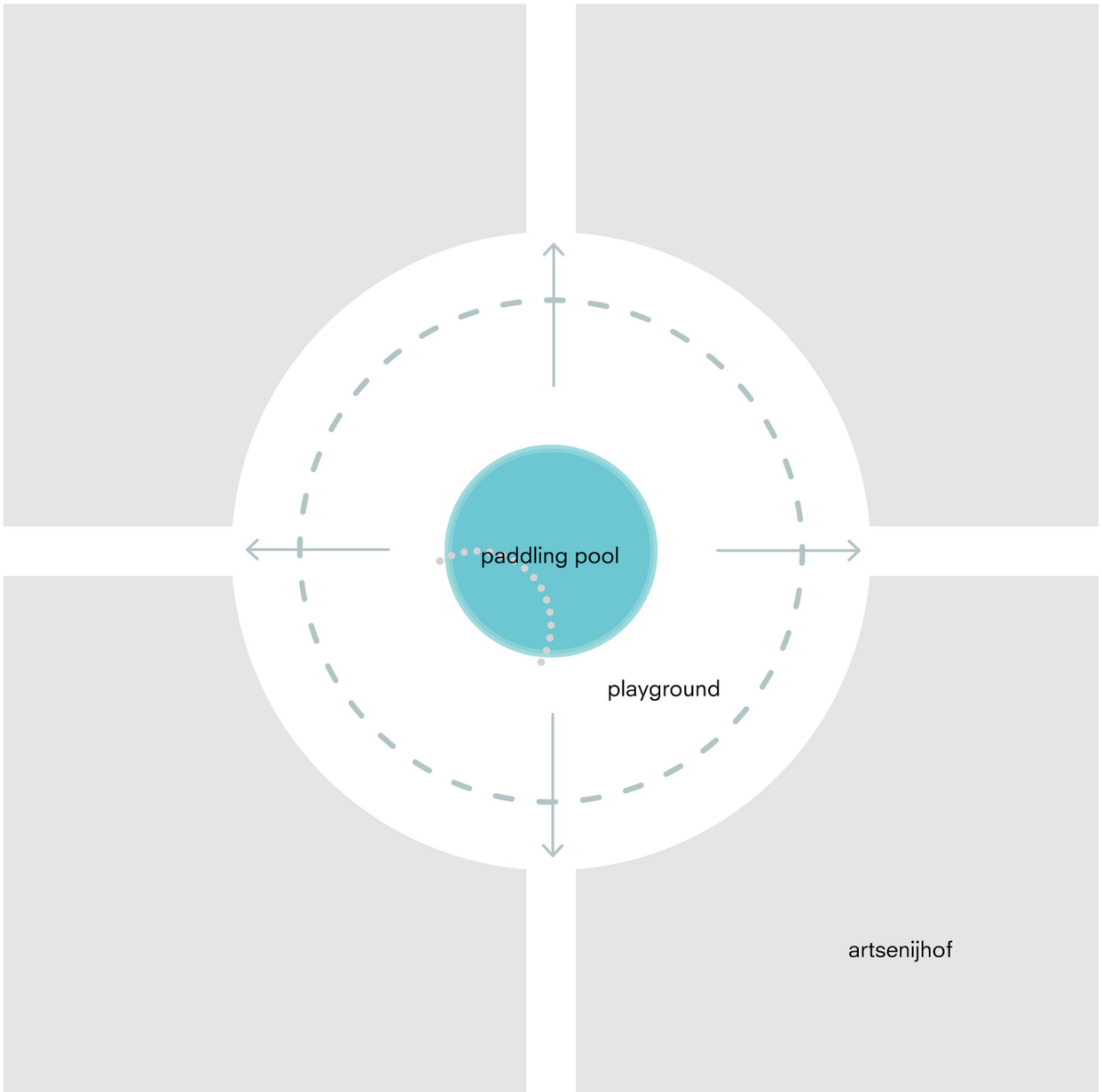

SPA/WELLNESS
enters from
facilates
FOOD/BEVERAGE/RETAIL
INDOOR POOL
decorates
PLAYGROUND
facilates
OUTDOOR POOL
blurry boundary
shared facilities
WATERSPORTS

SITE INSIPRATION




Google


Google


paddling pool
playground
artsenijhof




REMBRANDTPARK
VONDELPARK
MUSEUMPLEIN
SARPHATIPARK
BEATRIXPARK




weather: cloudy
pedestrian: 0


weather: sunny
pedestrian: 0


weather: cloudy
pedestrian: 0
sculpture: 1
bikers: 3

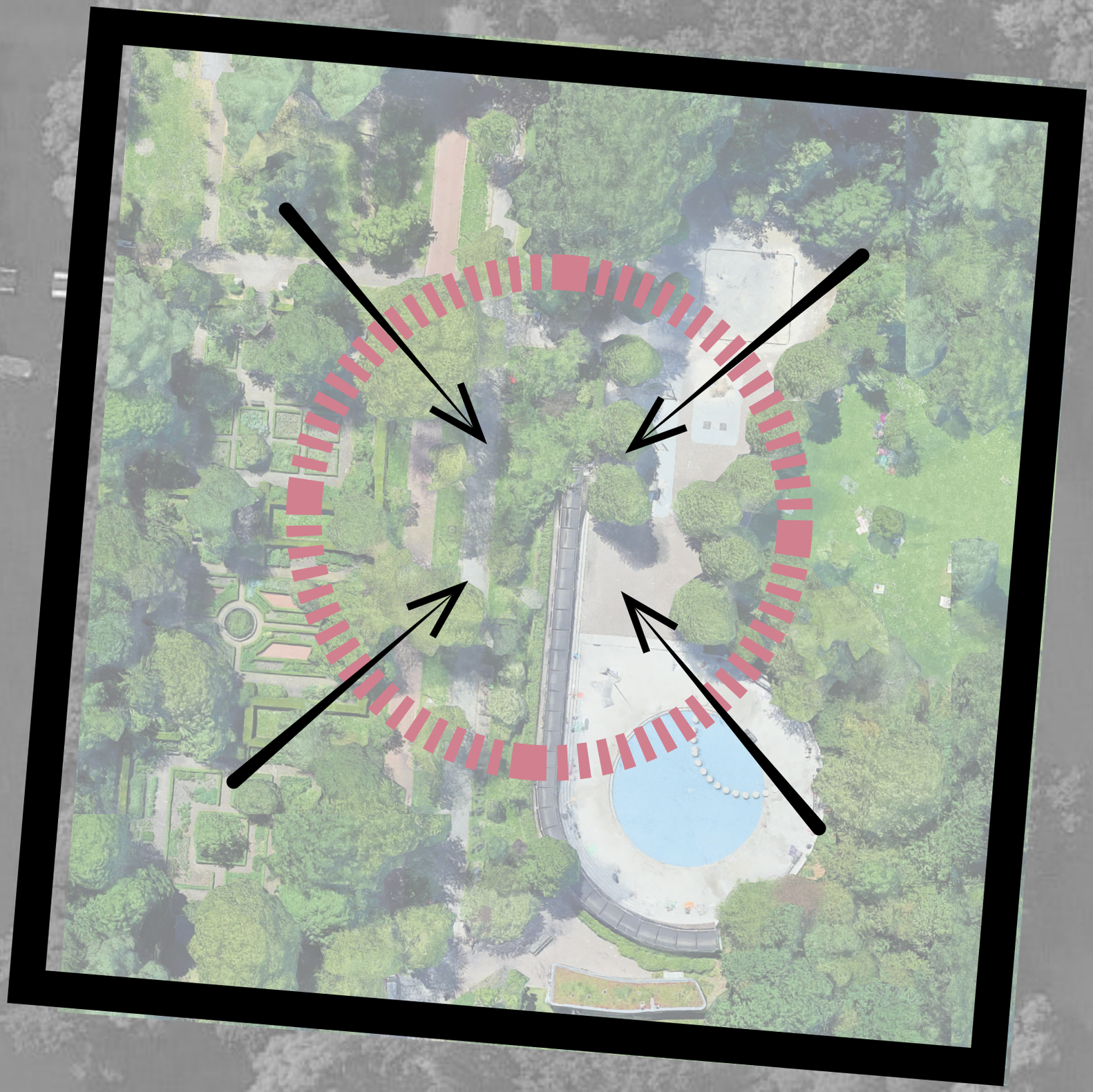

weather: cloudy
pedestrian: 1

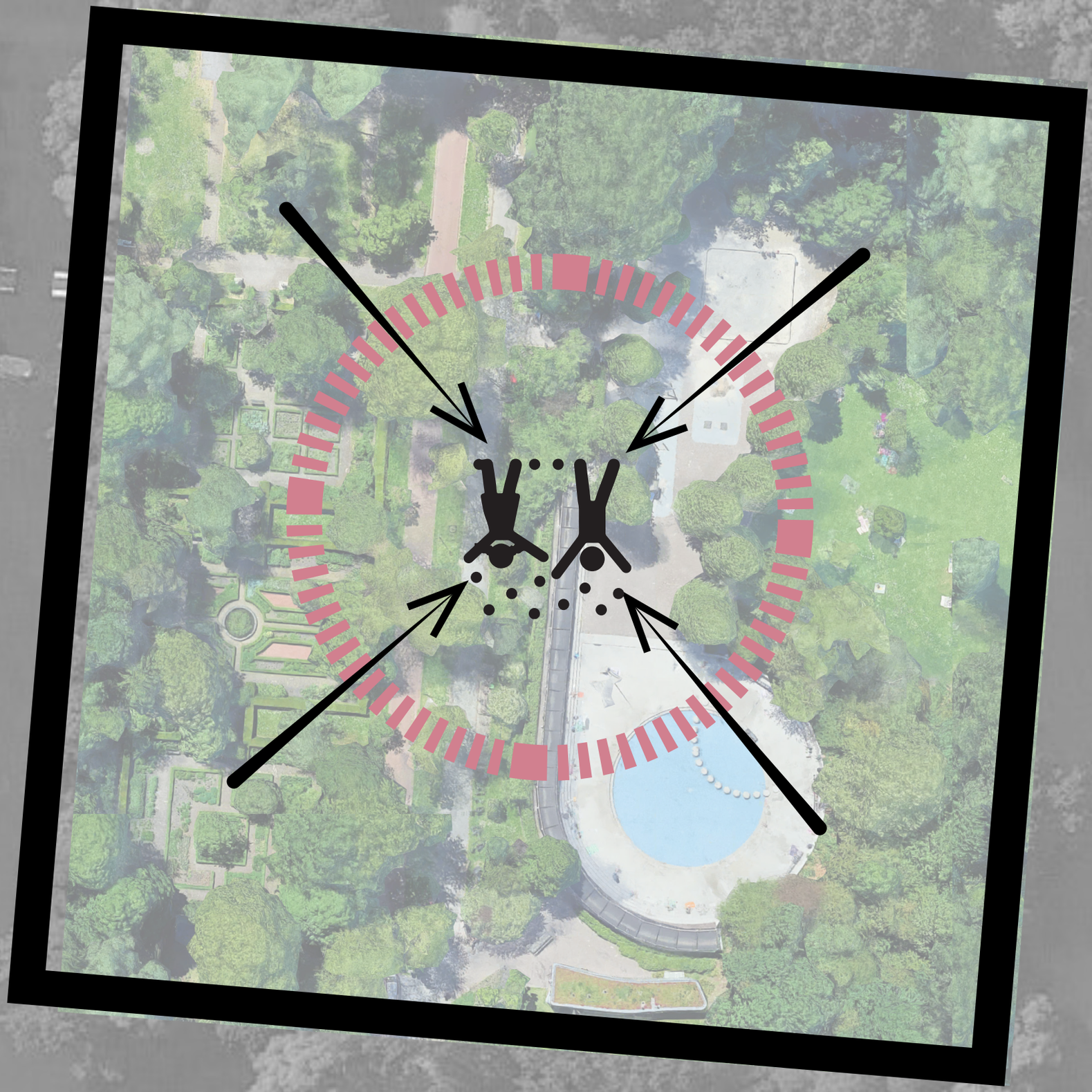

Google

FREE



SAFE & CONTROLLABLE





EXTERNAL INSPIRATION



BEATRIXPARK - ENGLISH LANDSCAPE GARDEN

LANDSCAPE

山水

(mountain) (water)



Poet on a Mountaintop, Shen Zhou

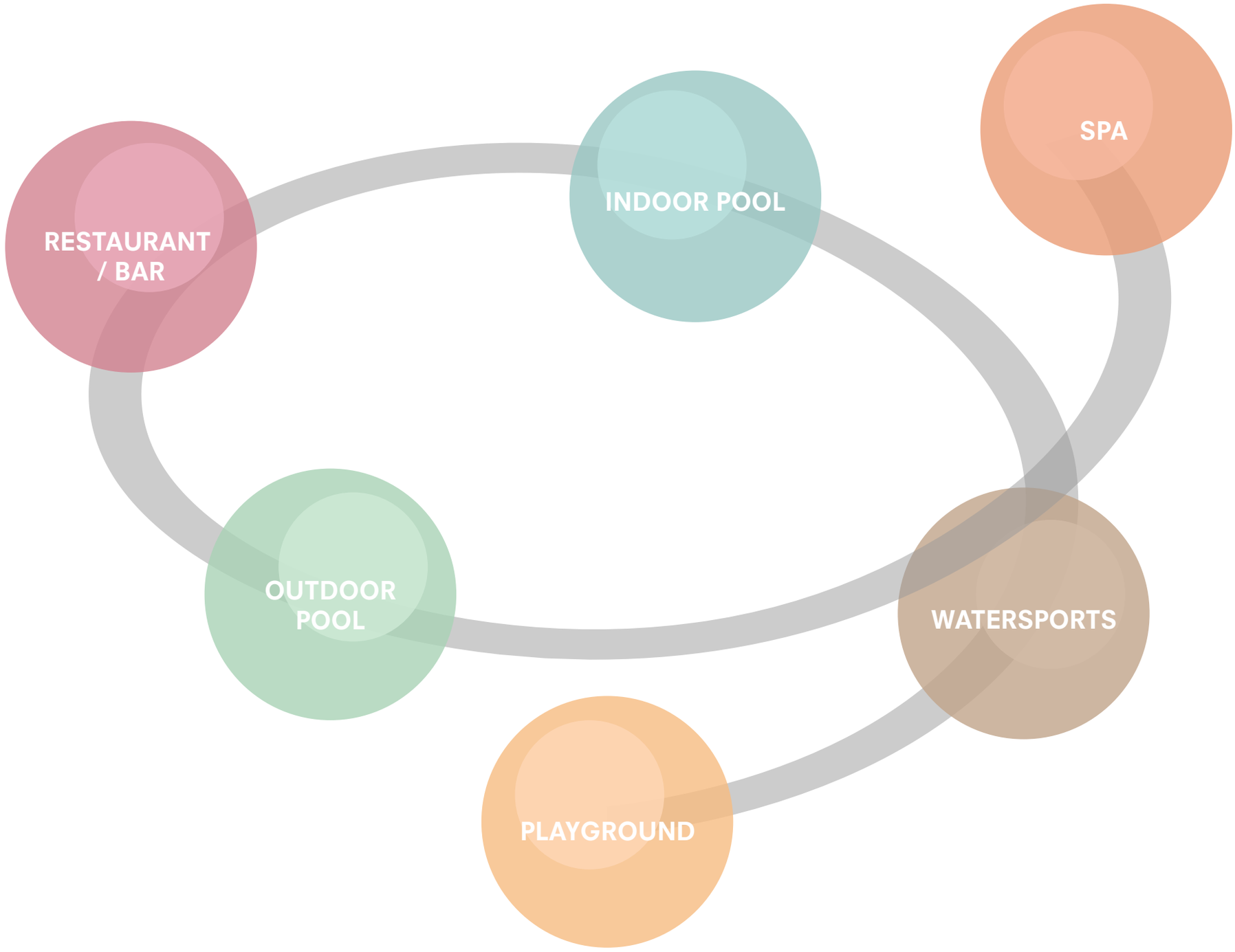

白雲如帶束山腰石
磴飛空細路遥嶺僑
杖藜舒眺望欲因鳴
澗谷吹簫沈周





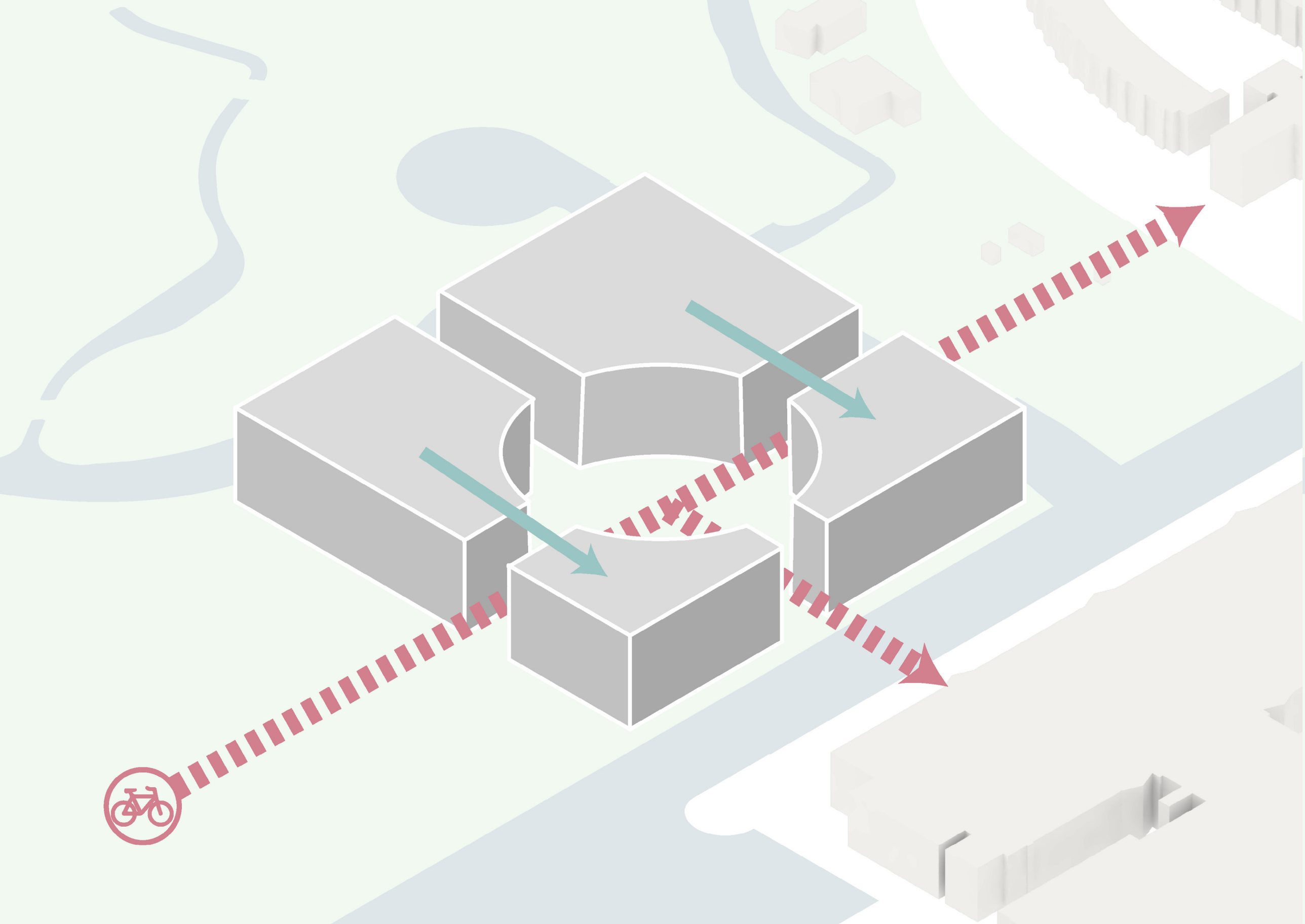
Kelimutu, Flores, Indonesia

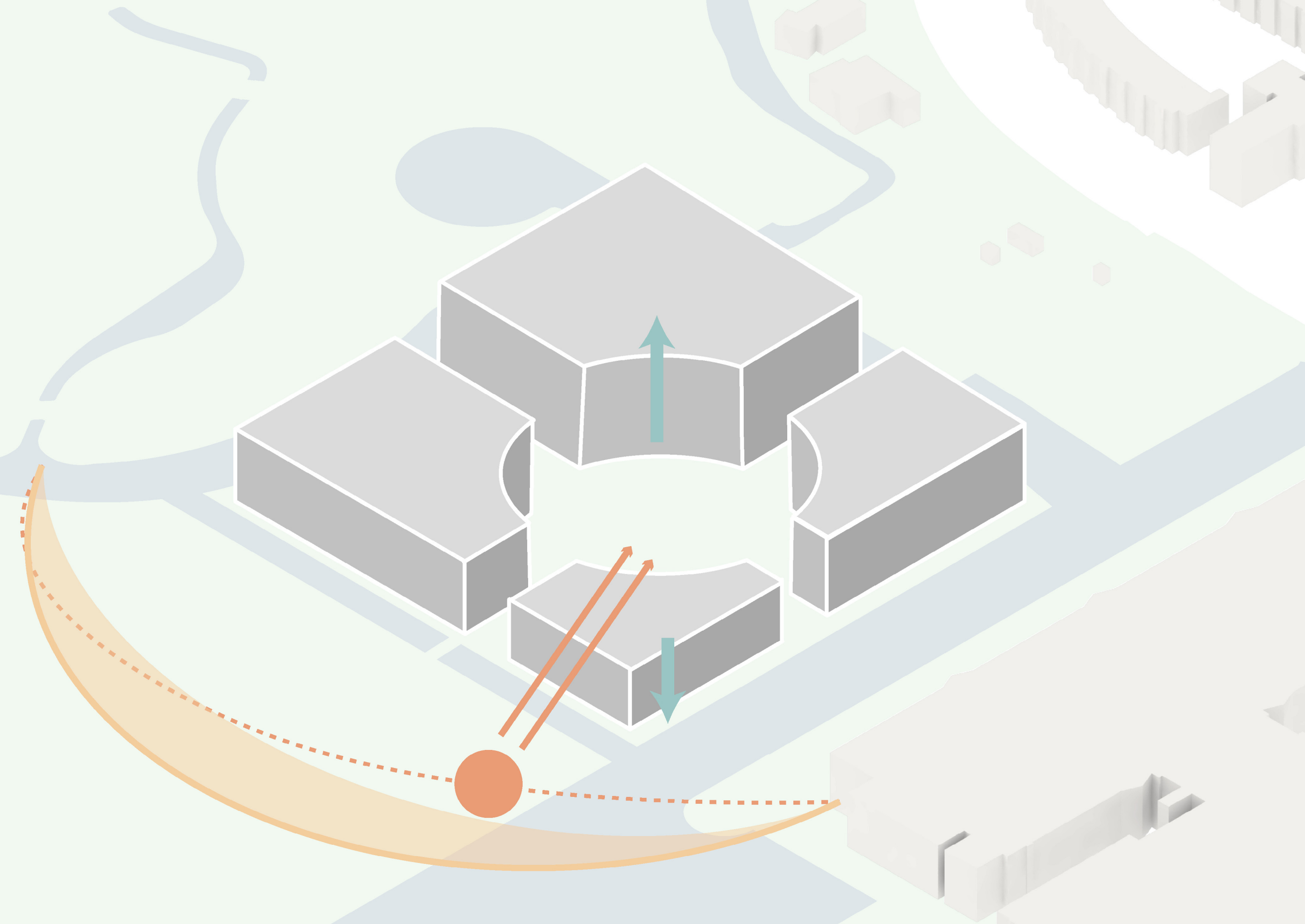


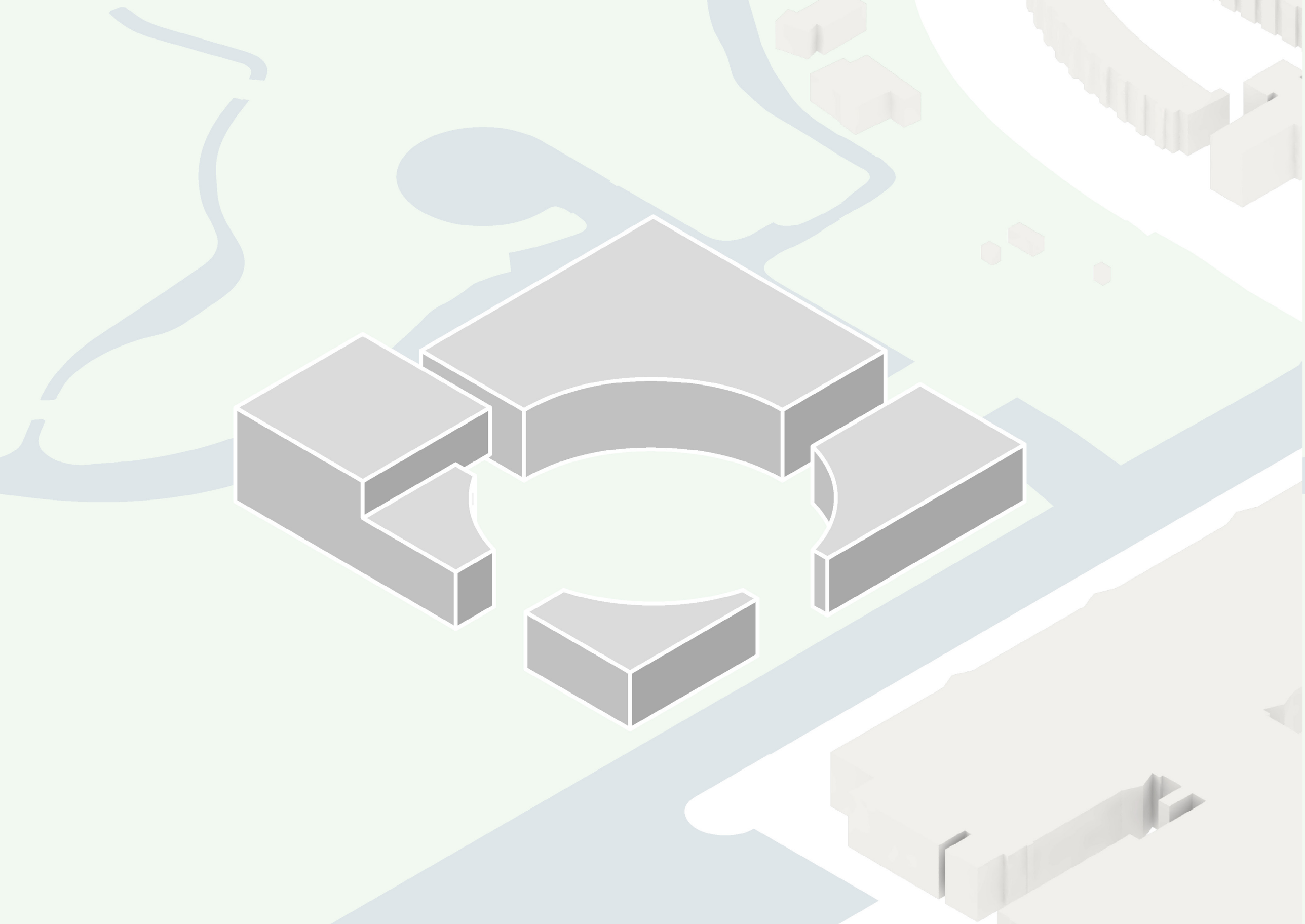

RESTAURANT
/ BAR
INDOOR POOL
SPA
OUTDOOR
POOL
WATERSPORTS
PLAYGROUND

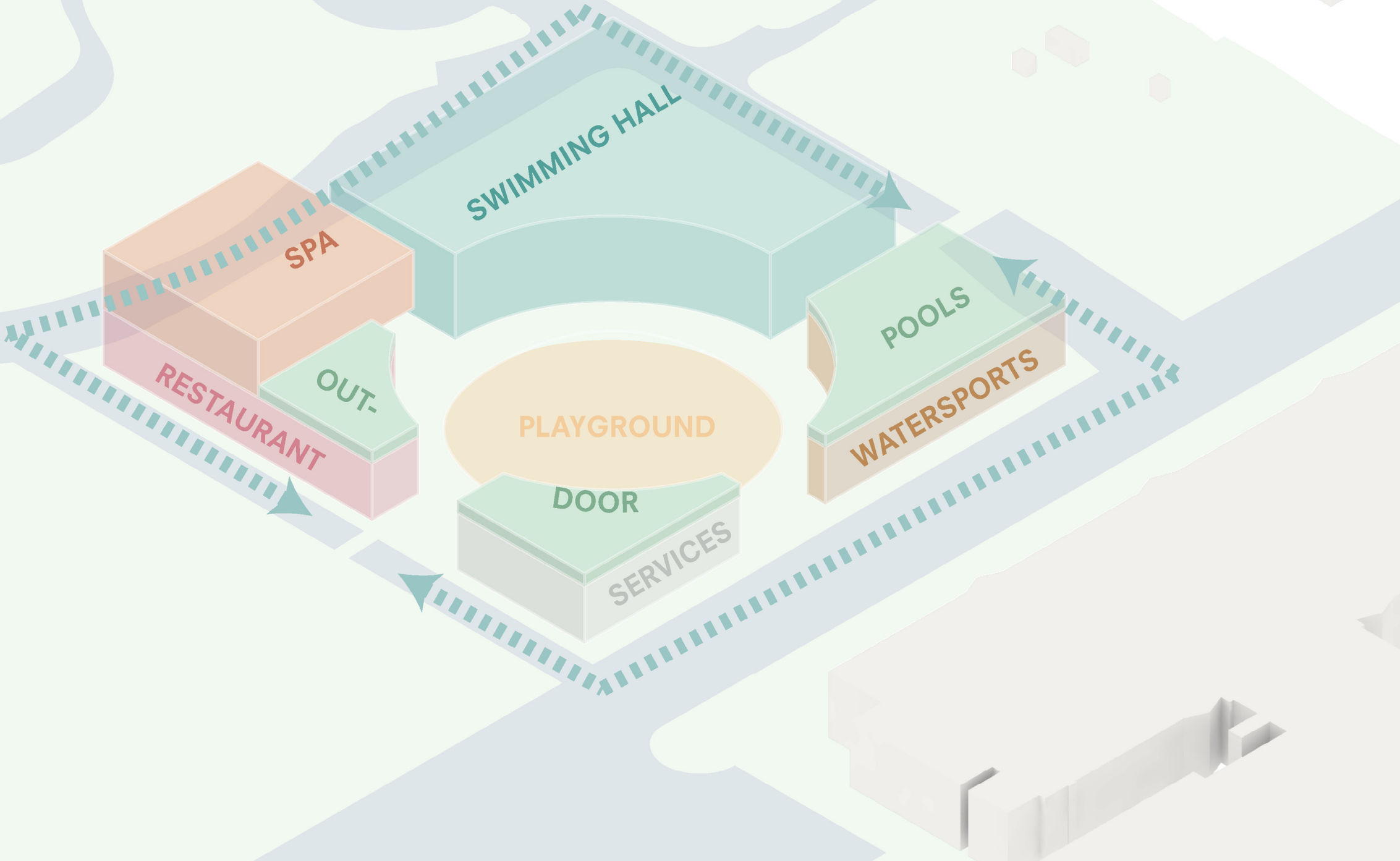
MASSING DEVELOPMENT

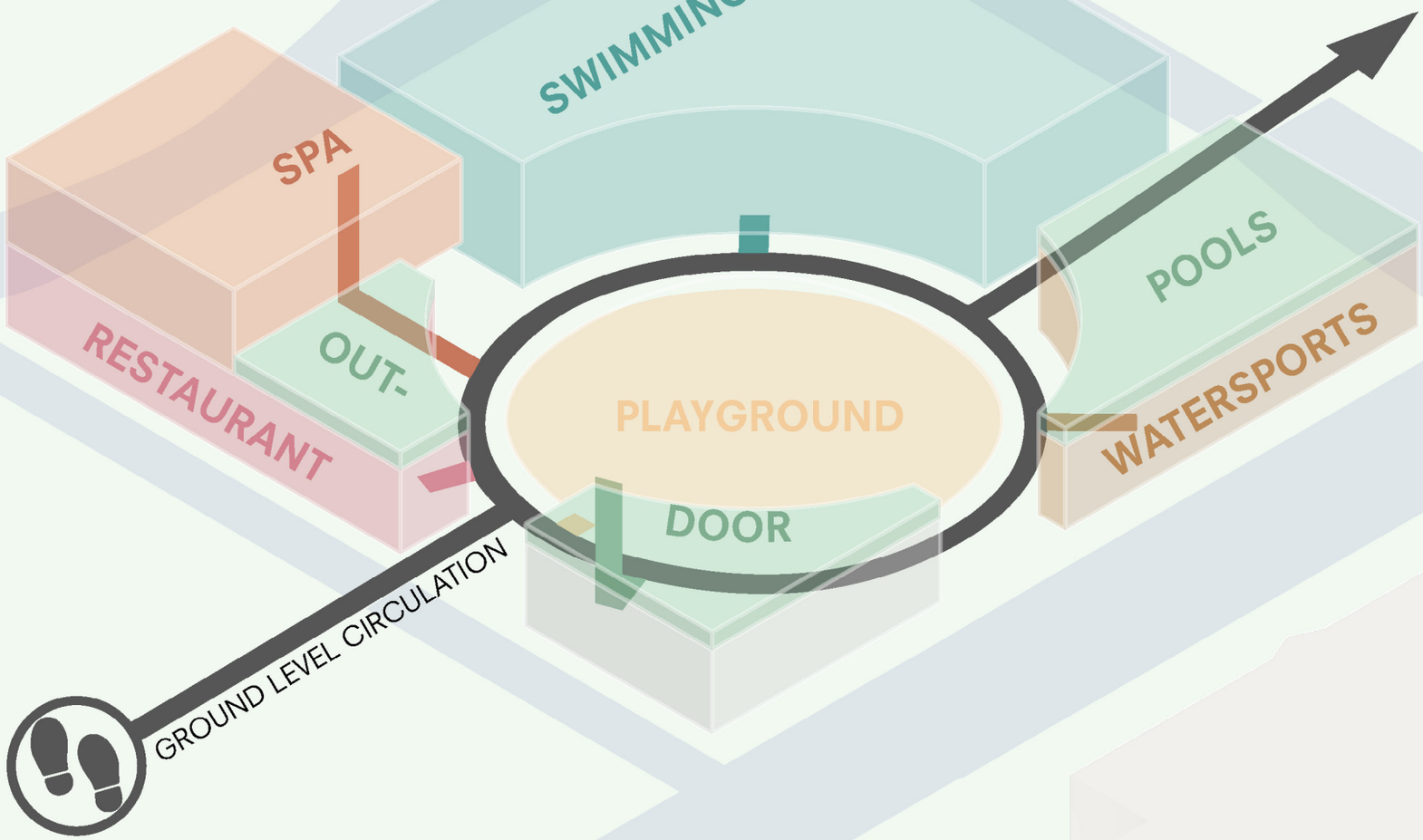


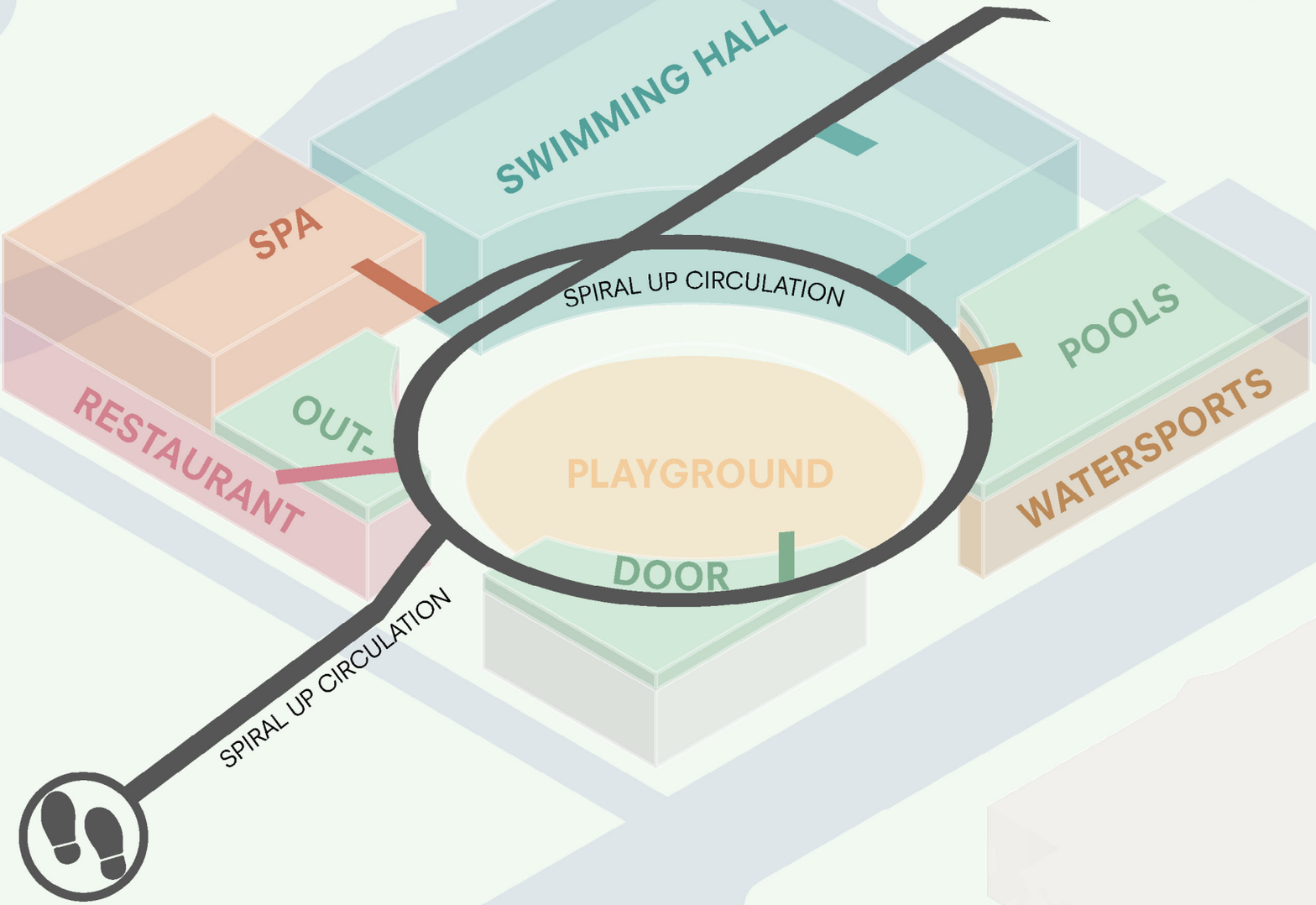


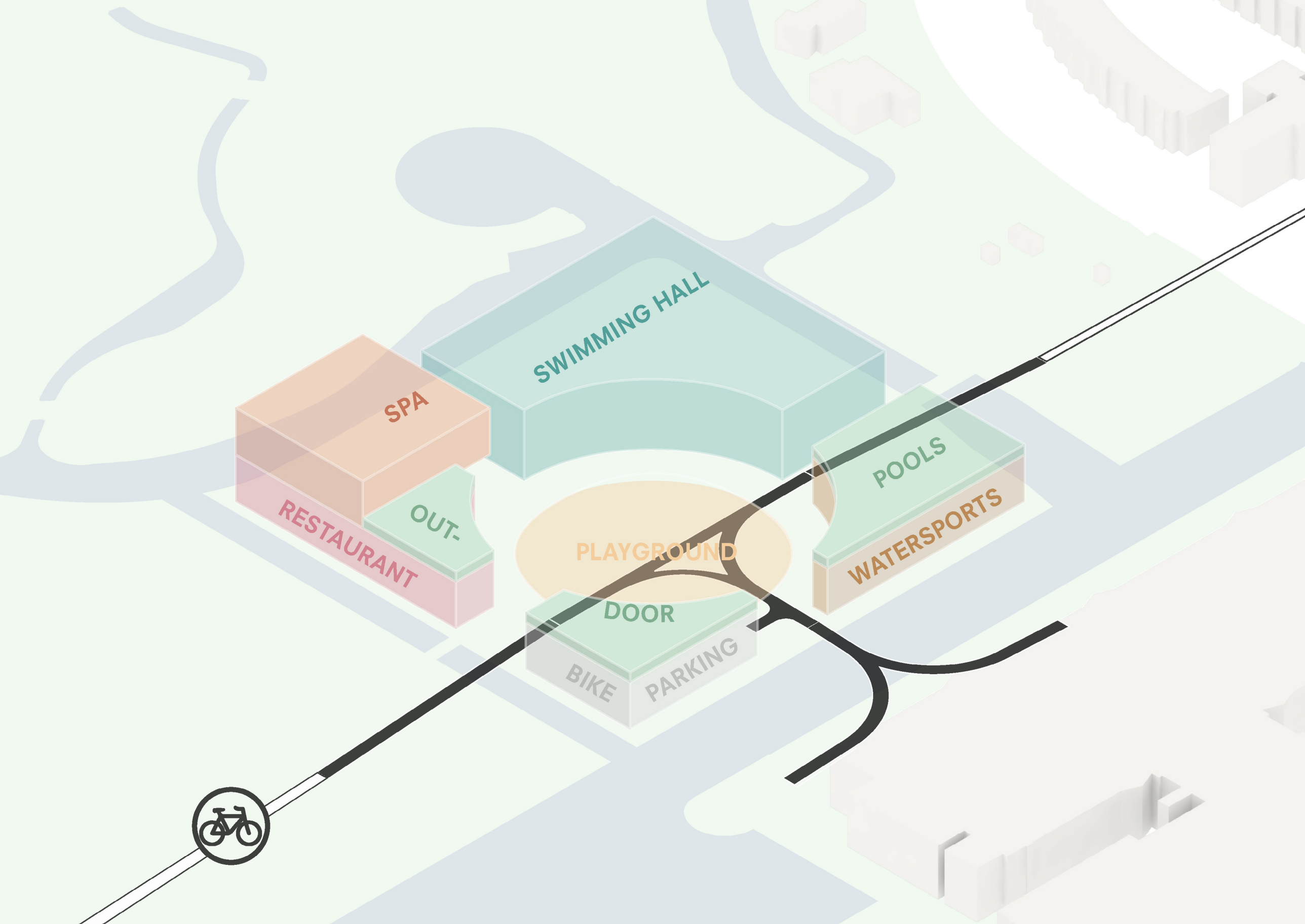





SWIMMING HALL
SPA
RESTAURANT
OUT-
PLAYGROUND
DOOR
SERVICES
POOLS
WATERSPORTS


SWIMMING HALL
SPA
RESTAURANT
OUT-
PLAYGROUND
DOOR
POOLS
WATERSPORTS
GROUND LEVEL CIRCULATION


SWIMMING HALL
SPA
SPIRAL UP CIRCULATION
POOLS
RESTAURANT
OUT-
PLAYGROUND
WATERSPORTS
DOOR
SPIRAL UP CIRCULATION


SWIMMING HALL
SPA
RESTAURANT
OUT-
POOLS
WATERSPORTS
PLAYGROUND
DOOR
BIKE
PARKING

PROGRAMME VISUALISATION

PLAYGROUND

target group:
children and their parents

open all day, free entry

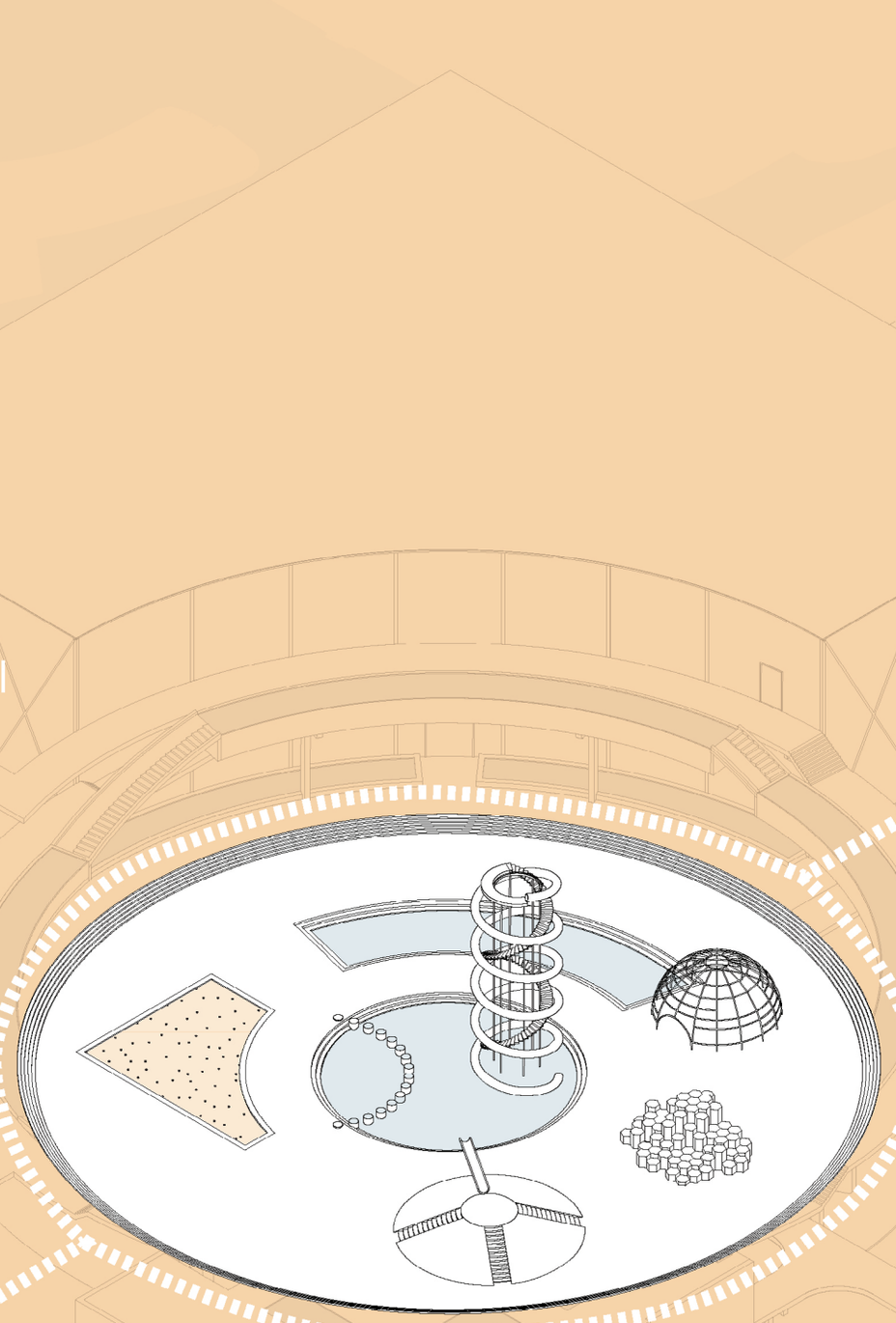
the original paddling pool will be move to the centre of the playground, with other retro elements in Aldo van Eyck's style, and series of slides.

also acts as meeting point

TOTAL AREA: 4071 m2

POOL AREA: 545 m2

SAND PIT: 180 m2



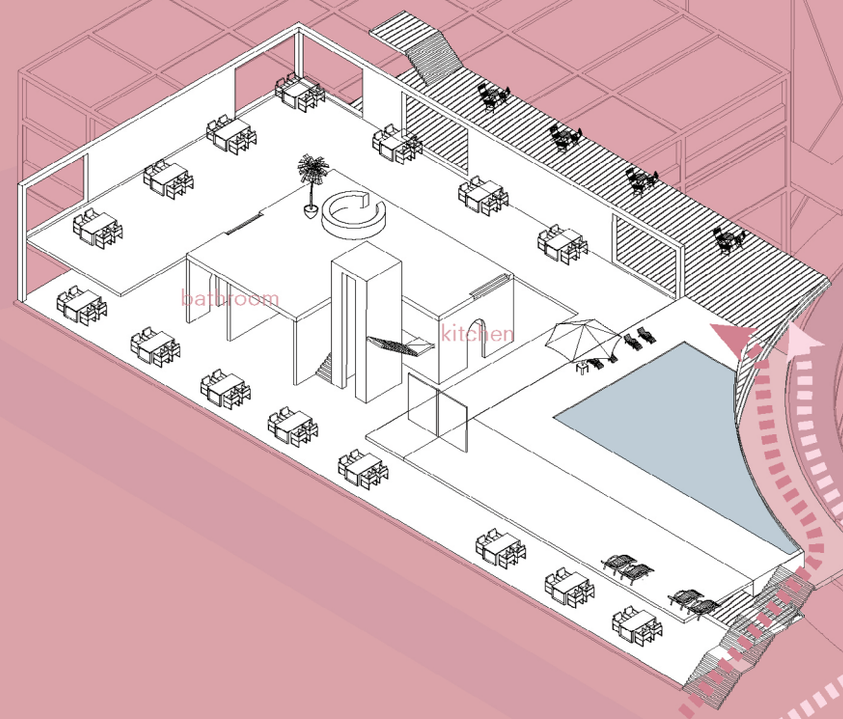


TOTAL AREA: 4467 m2

OUTDOOR AREA: 1470 m2

INDOOR SITTING AREA: 2721 m2

KITCHEN / STORAGE: 242 m2

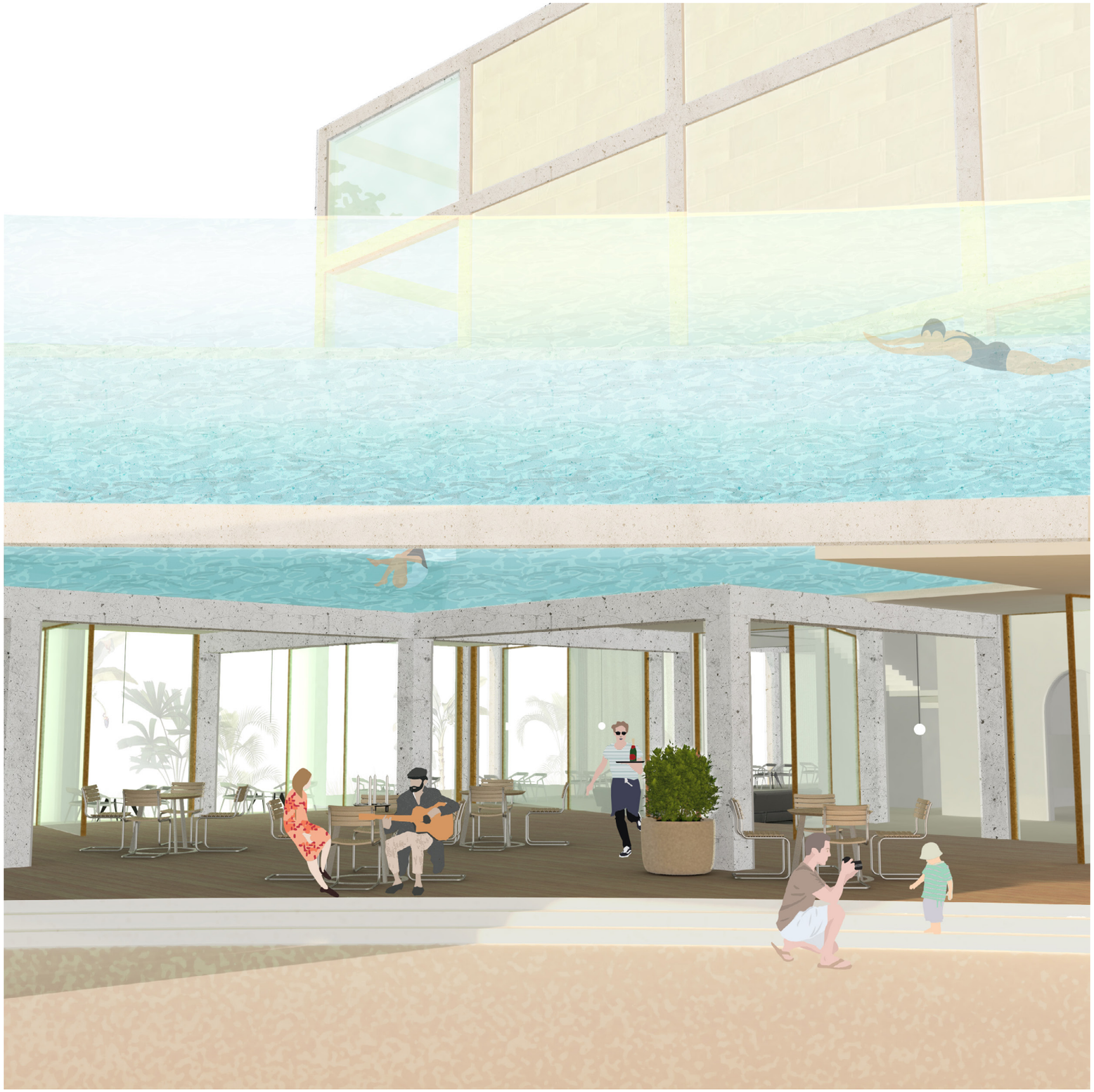


RESTAURANT / BAR / CANAL DIPPING POINT

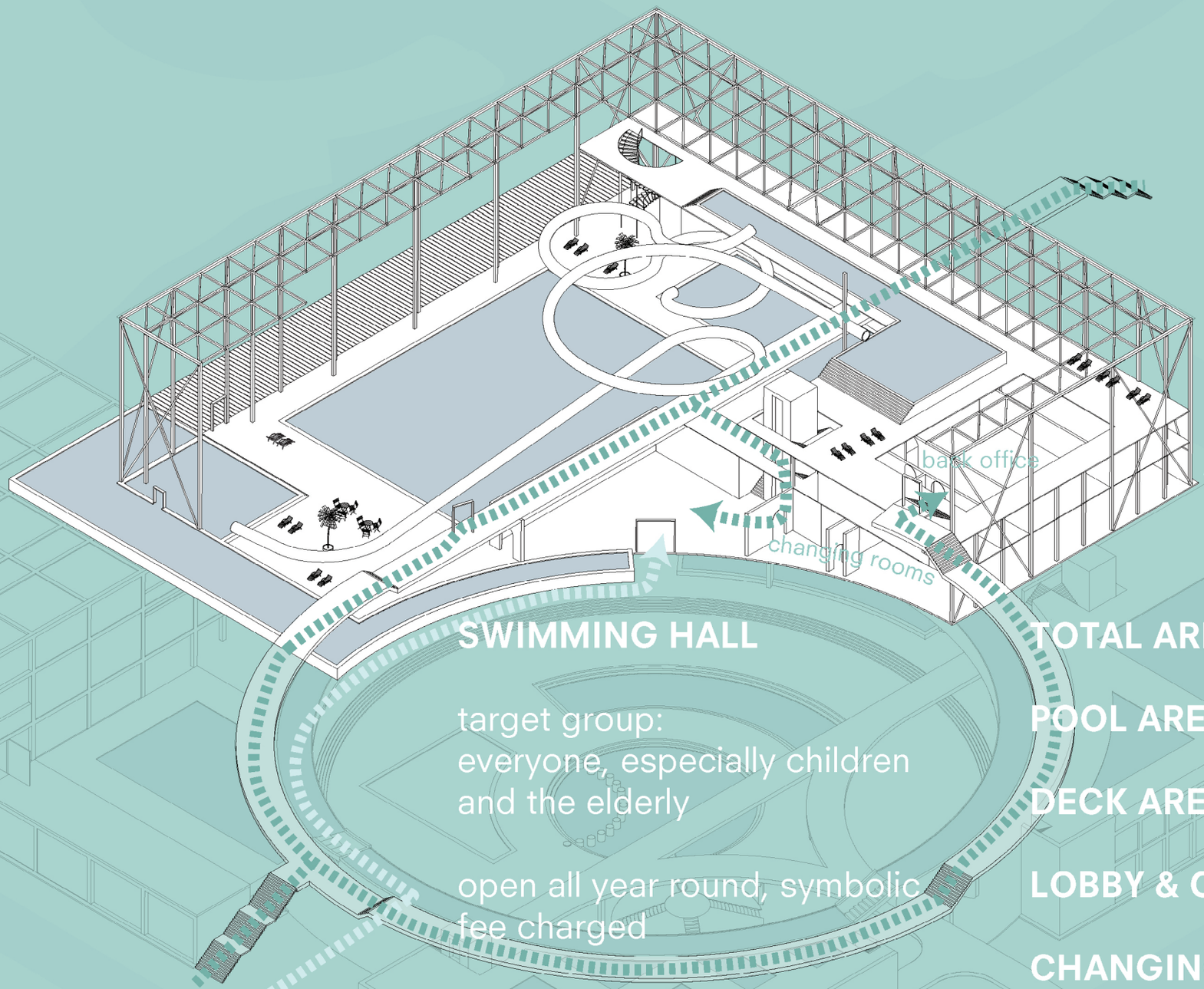
target group:
everyone

open all day, free entry

the restaurant facilitates not even the whole complex but also the whole park and we are expecting customers from RAI and Zuidas for workday business lunch. The upper level with pool can hold events such as pool parties or rooftop







SWIMMING HALL

target group:
everyone, especially children and the elderly

open all year round, symbolic fee charged

the main body of the swimming complex, provides heated child pool and big pool for laps or water games, as well as a leisure pool connecting indoor and outdoor area.

TOTAL AREA: 7611 m2

POOL AREA: 1765 m2

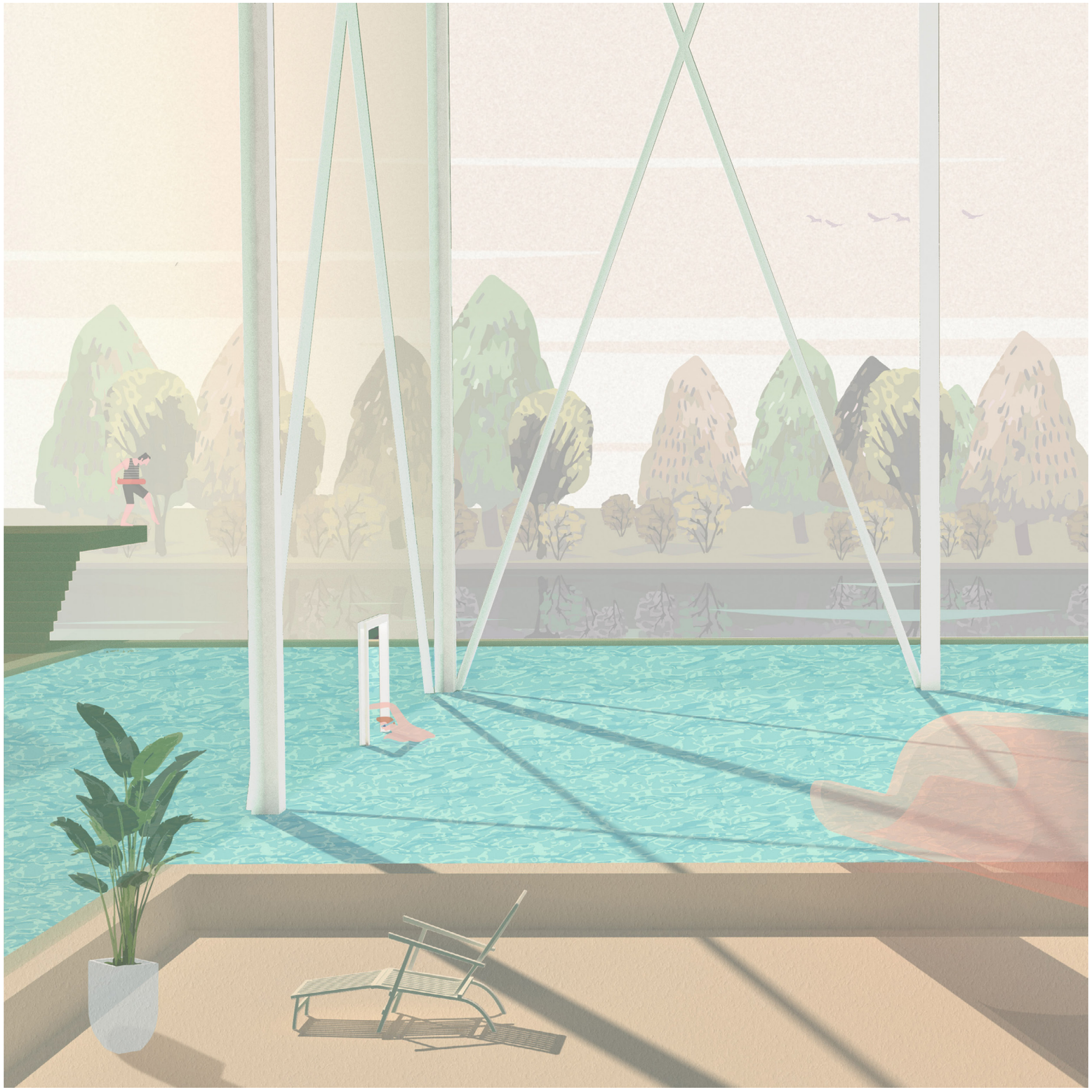
DECK AREA: 3084 m2

LOBBY & CIRCULATION: 739 m2

CHANGING ROOMS: 1150 m2

BACK OFFICE: 1044 m2





WATERSPORTS CENTRE

target group:
everyone, especially young people

open all year round, charged as market price

alternate of traditional rowing clubs. provides coaching and rental services for everyone who enjoy watersports in the nice canals or the wave pool on the roof

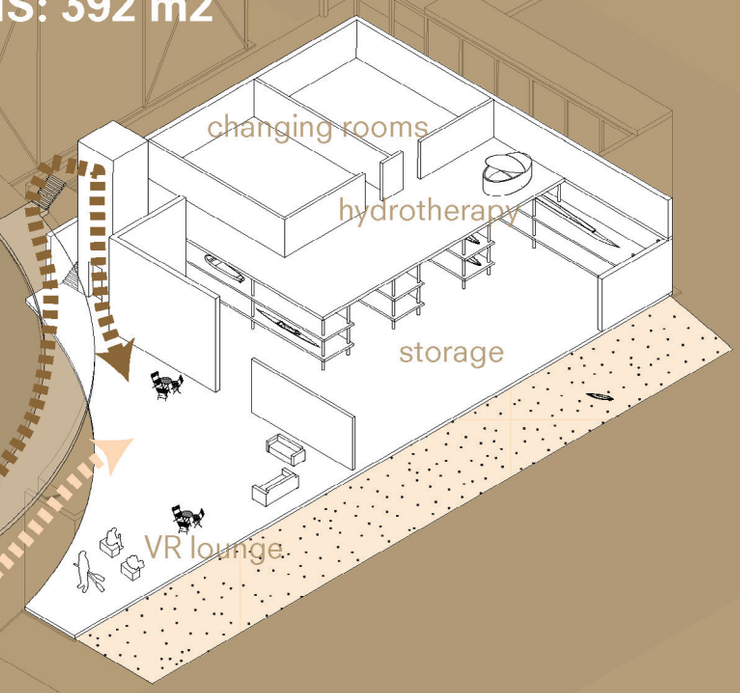
TOTAL AREA: 2834 m2

STORAGE AREA: 1204 m2

LOBBY & CIRCULATION: 683 m2

CHANGING ROOMS: 392 m2

LOUNGE: 555m2




BEATRIXPARK
Surf Club
AMSTERDAM

OUTDOOR POOLS

target group:
everyone

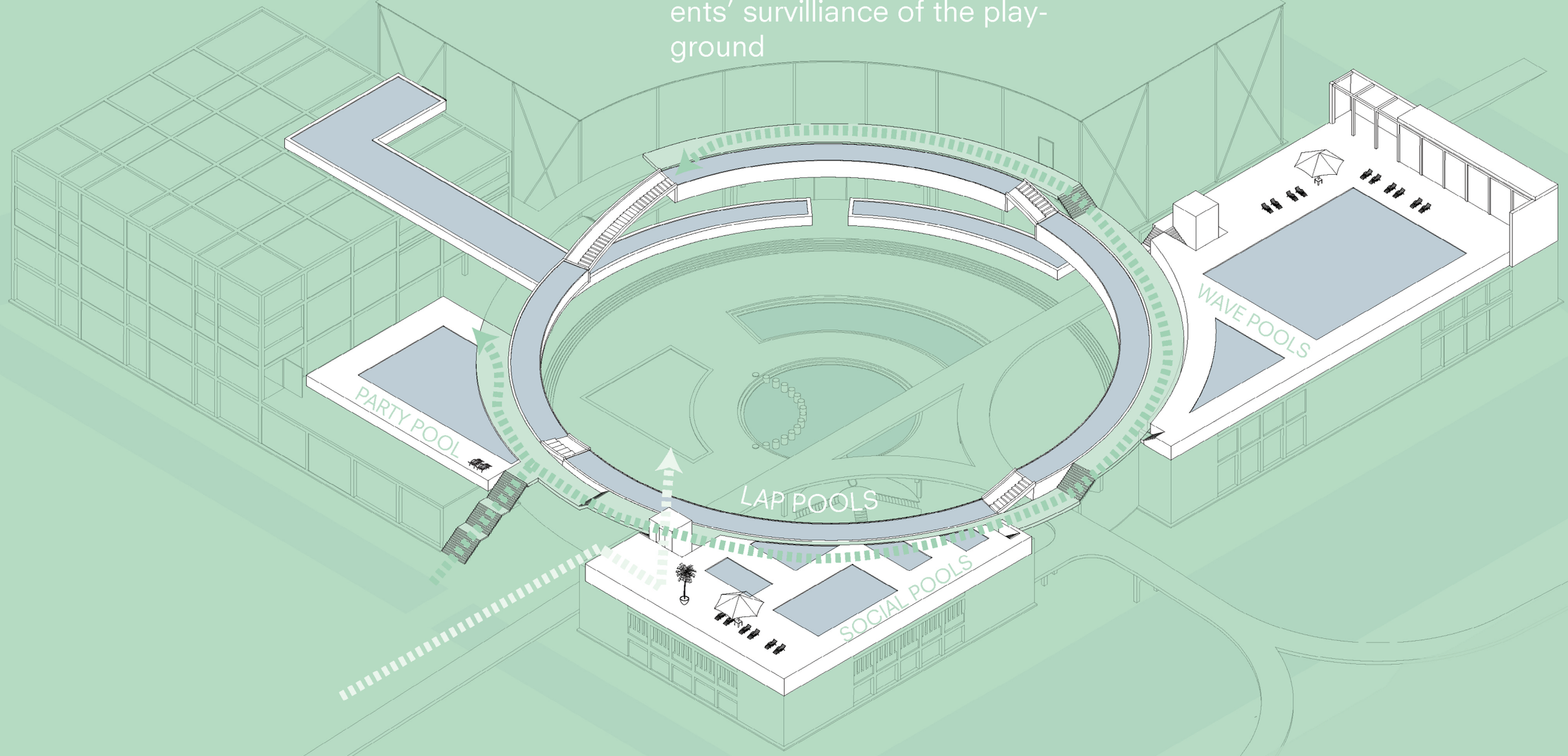
open in summer, free of charge

going up the to the different sets of outdoor pools circulating the playground is just like hiking up along the crater mountain. it provides great view of the park as well as parents' survilliance of the playground

TOTAL AREA: 6085 m2

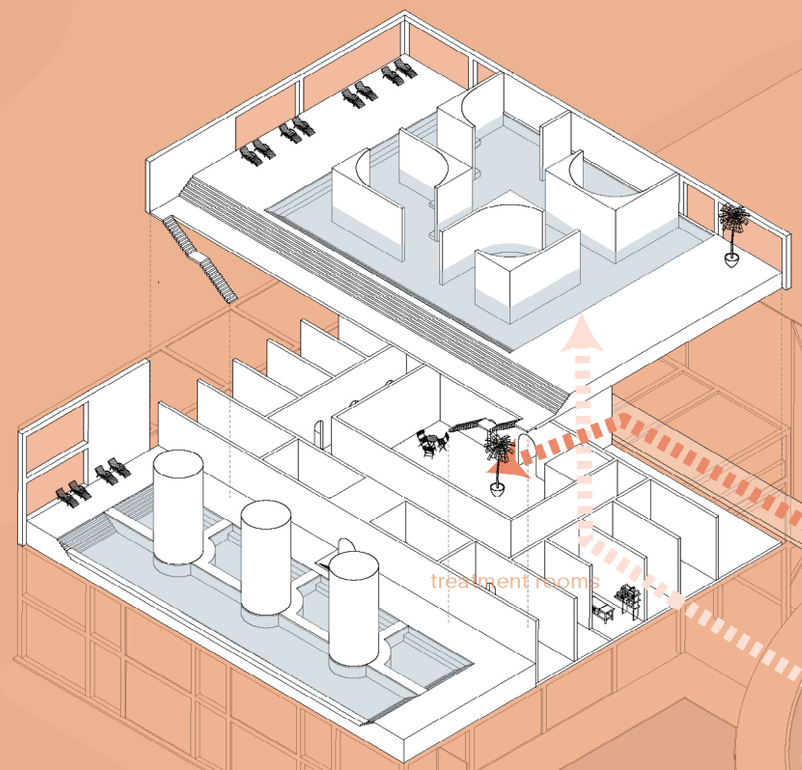
POOL AREA: 2353 m2

DECK AREA: 3732 m2









SPA

target group:
sophiscated customers

open all year round, charged as market price

provide luxury services for occasional treats or relaxing night with besties. big source for income of the complex

TOTAL AREA: 3034 m2

POOL AREA: 1064 m2

DECK AREA: 548 m2

TREATMENT ROOMS: 248 m2

LOBBY & CIRCULATION: 714 m2

CHANGING ROOMS: 322 m2

BACK OFFICE: 138 m2





FLOOR PLANS

changing rooms

swimming hall

restaurant

kitchen

equipment storage

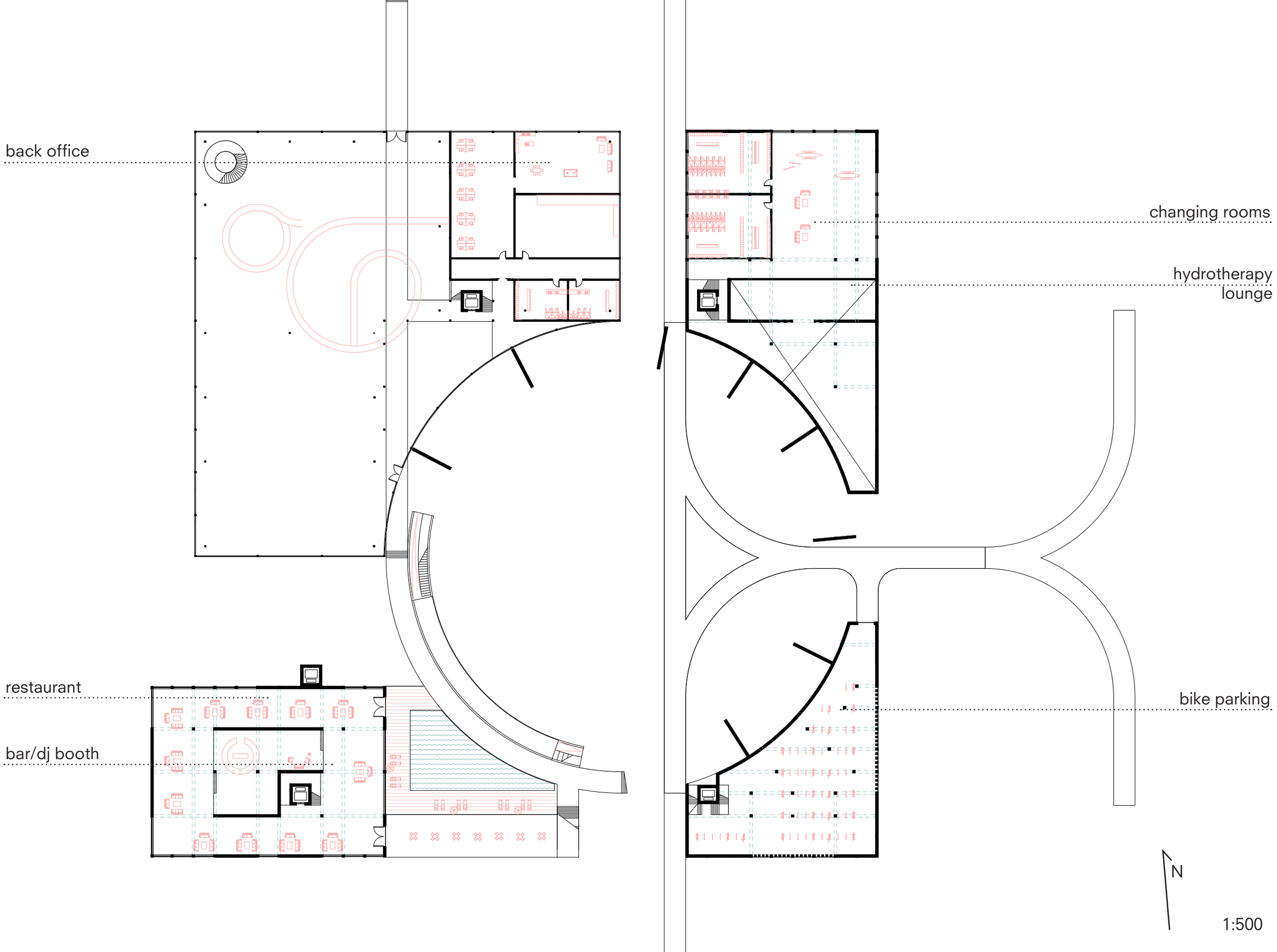
watersports centre

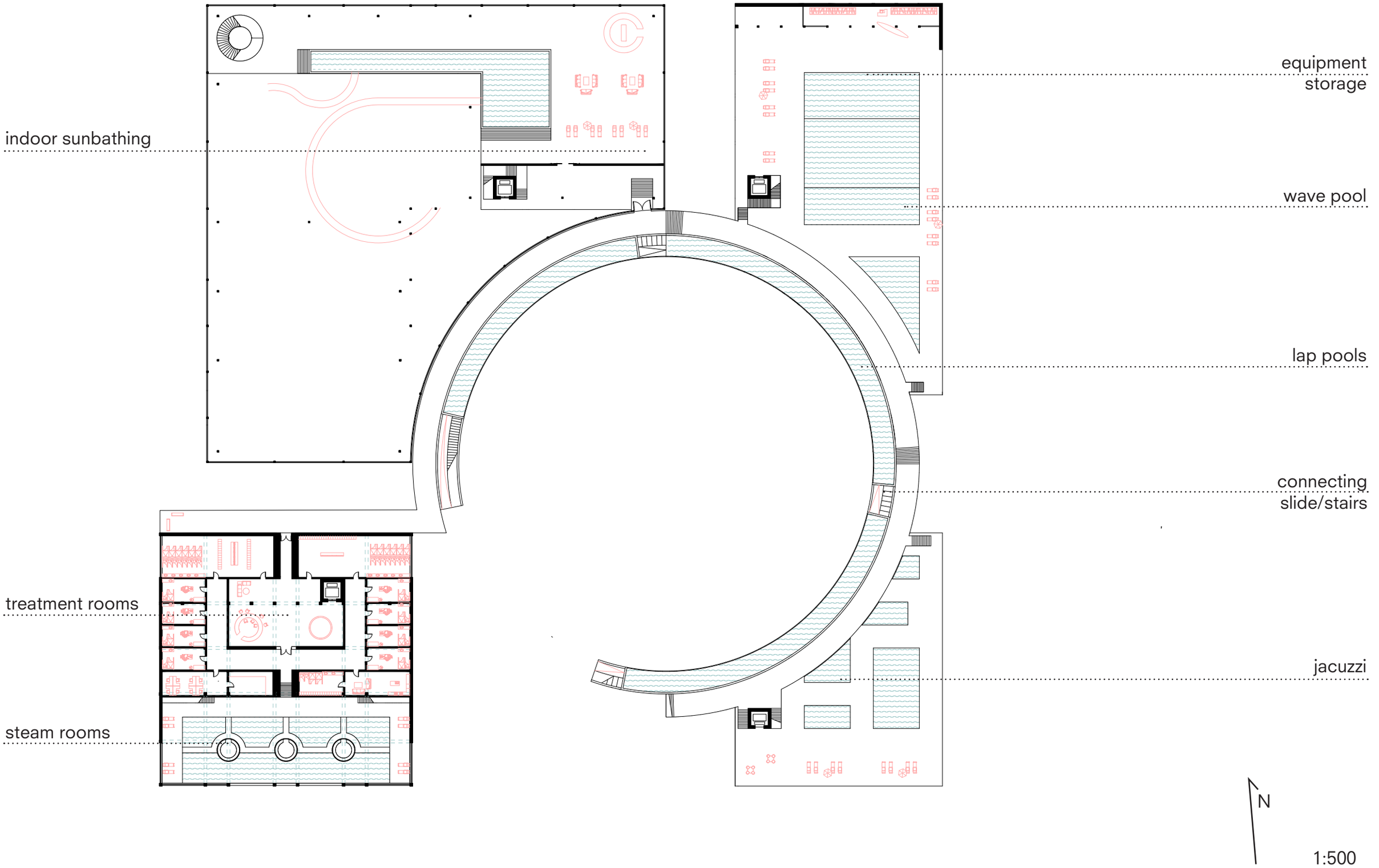
shops

public changing rooms

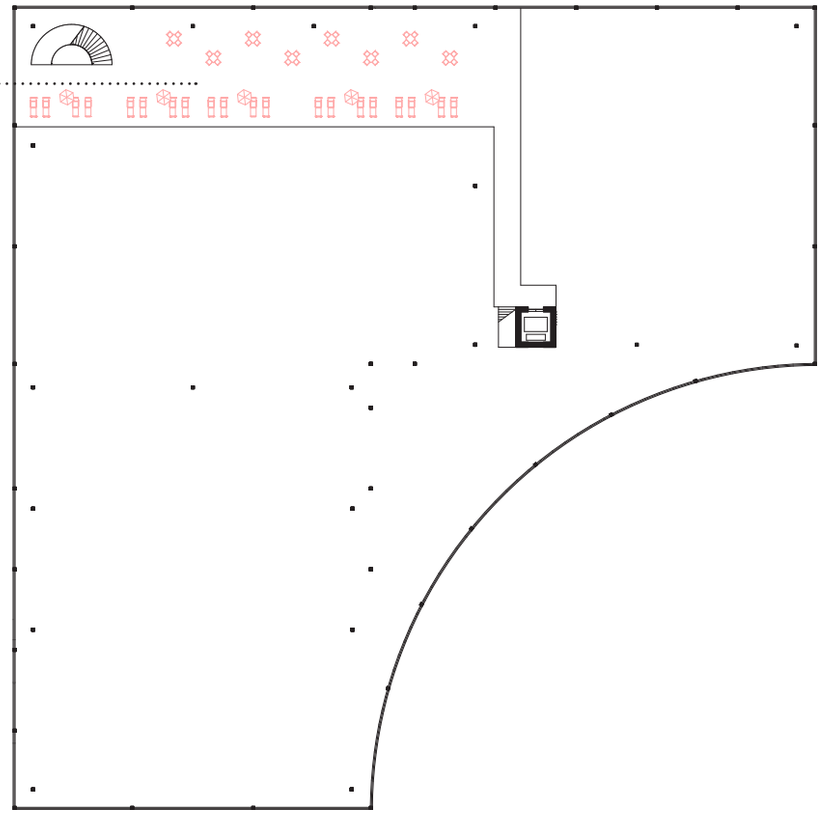
N

1:500 on A2

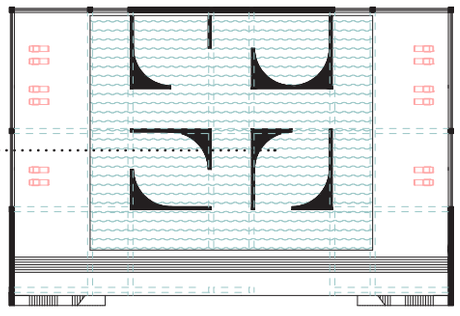

back office
changing rooms
hydrotherapy
lounge
restaurant
bar/dj booth
bike parking
N
1:500


indoor sunbathing
treatment rooms
steam rooms
equipment
storage
wave pool
lap pools
connecting
slide/stairs
jacuzzi
N
1:500

public viewing point

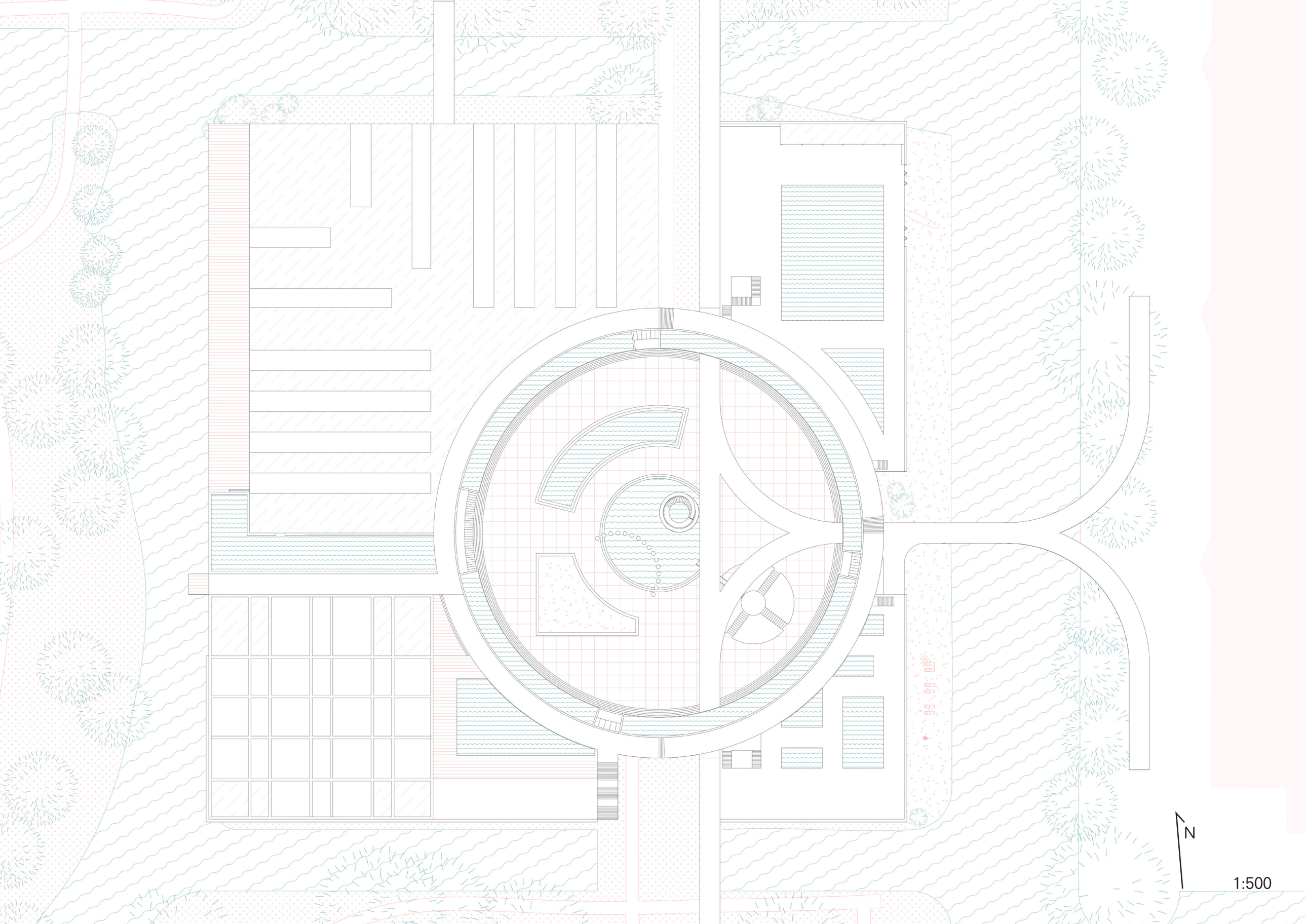


spa pool



N

1:500


N
1:500

FACADES AND MATERIALS

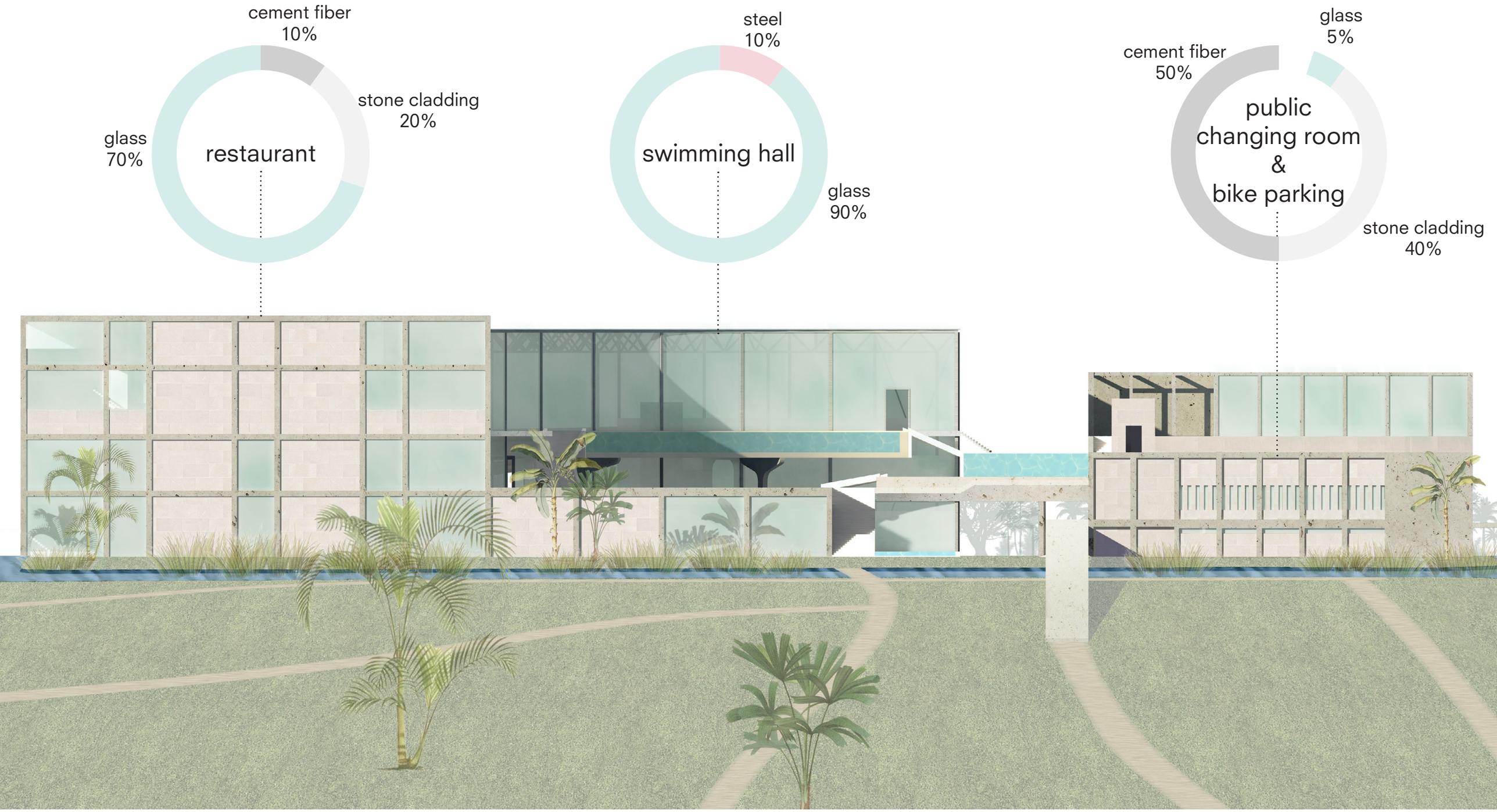


RAI

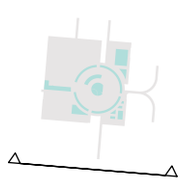
SWIMMING COMPLEX

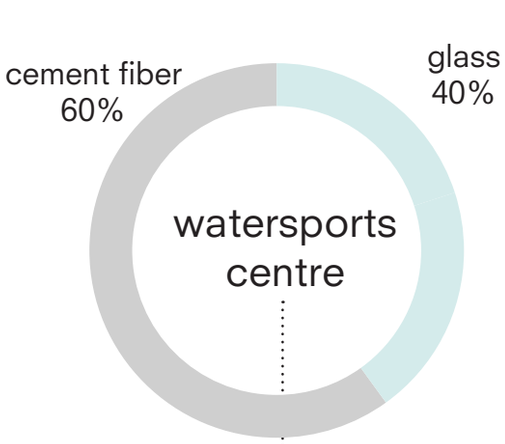
RAI

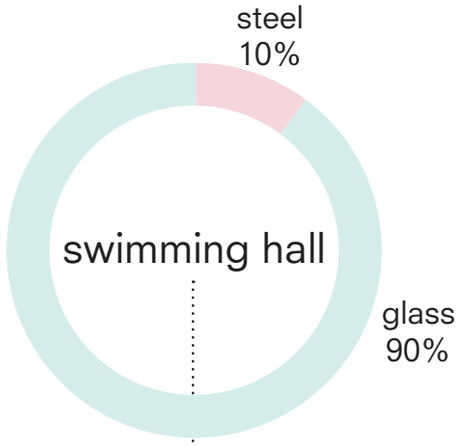


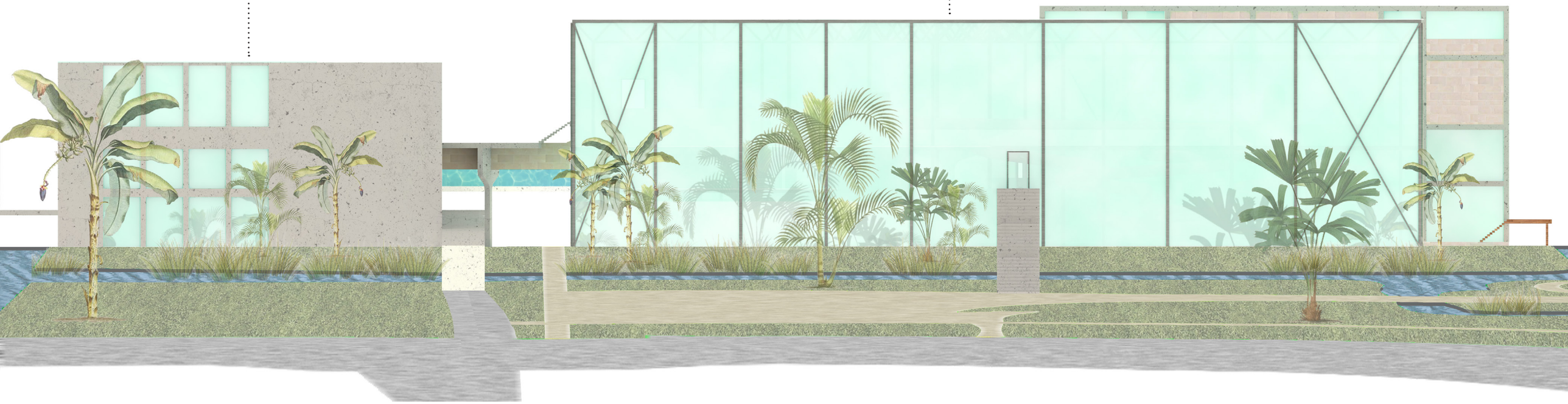


SOUTH FACADE





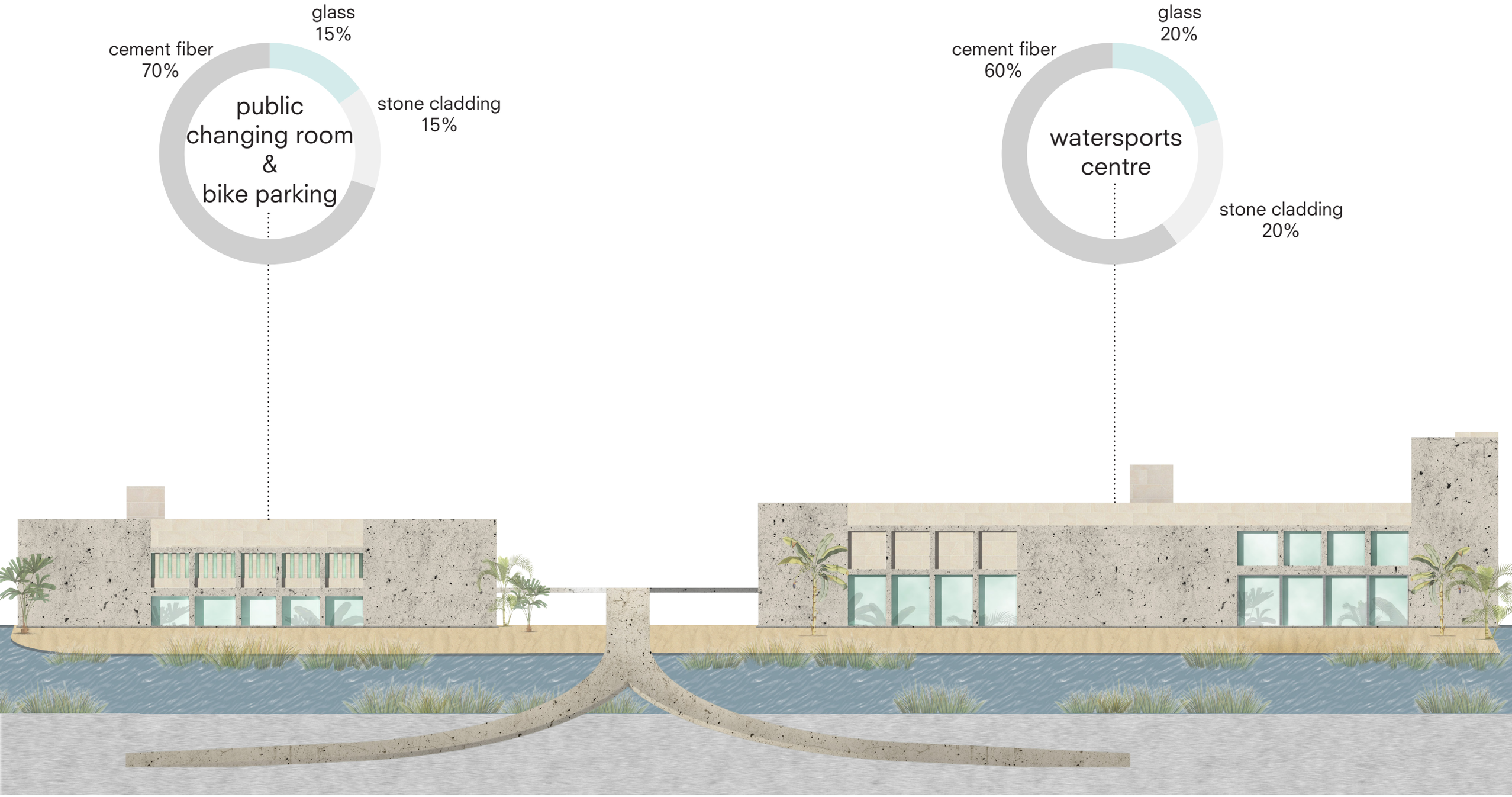




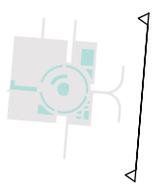
RAI

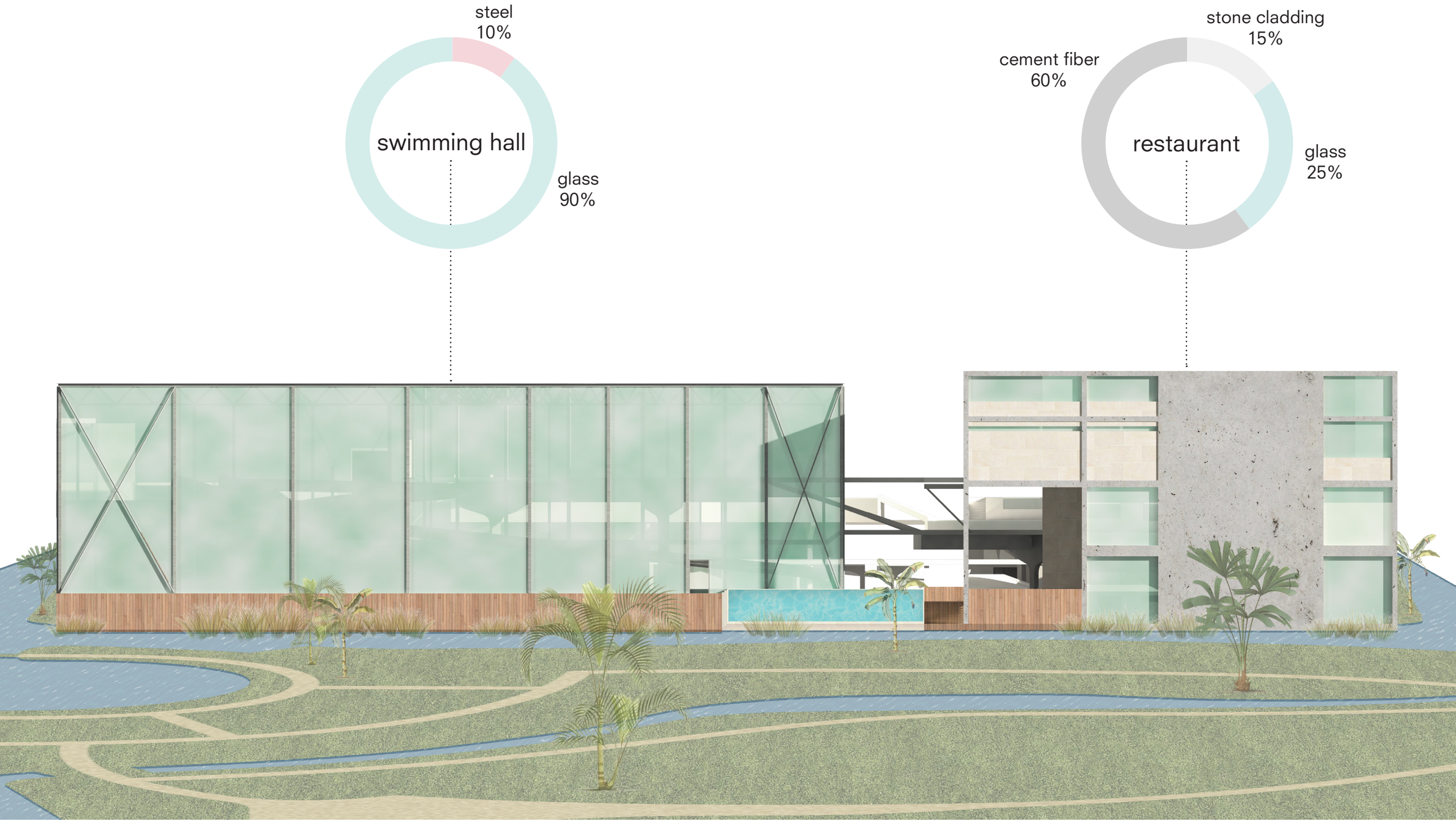
PARK

NORTH FACADE


glass
15%
cement fiber
70%
stone cladding
15%
public
changing room
&
bike parking
glass
20%
cement fiber
60%
watersports
centre
stone cladding
20%
RAI
PARK

EAST FACADE

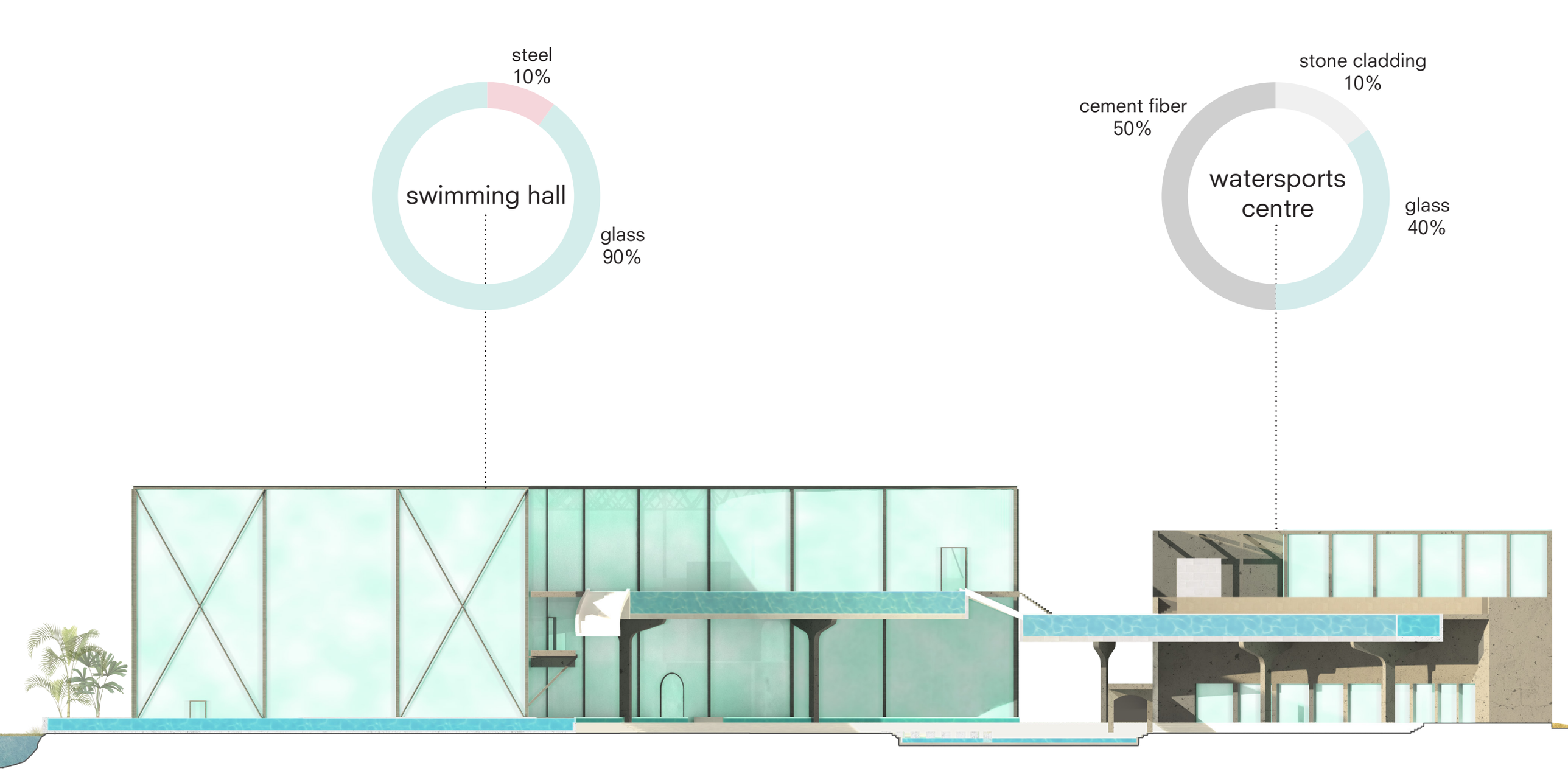




PARK

WEST FACADE

PARK



INNER FACADE



BUILDING TECHNOLOGY

translucent photovoltaic panels

glass roof system

steel space frame

steel beams

concrete beams

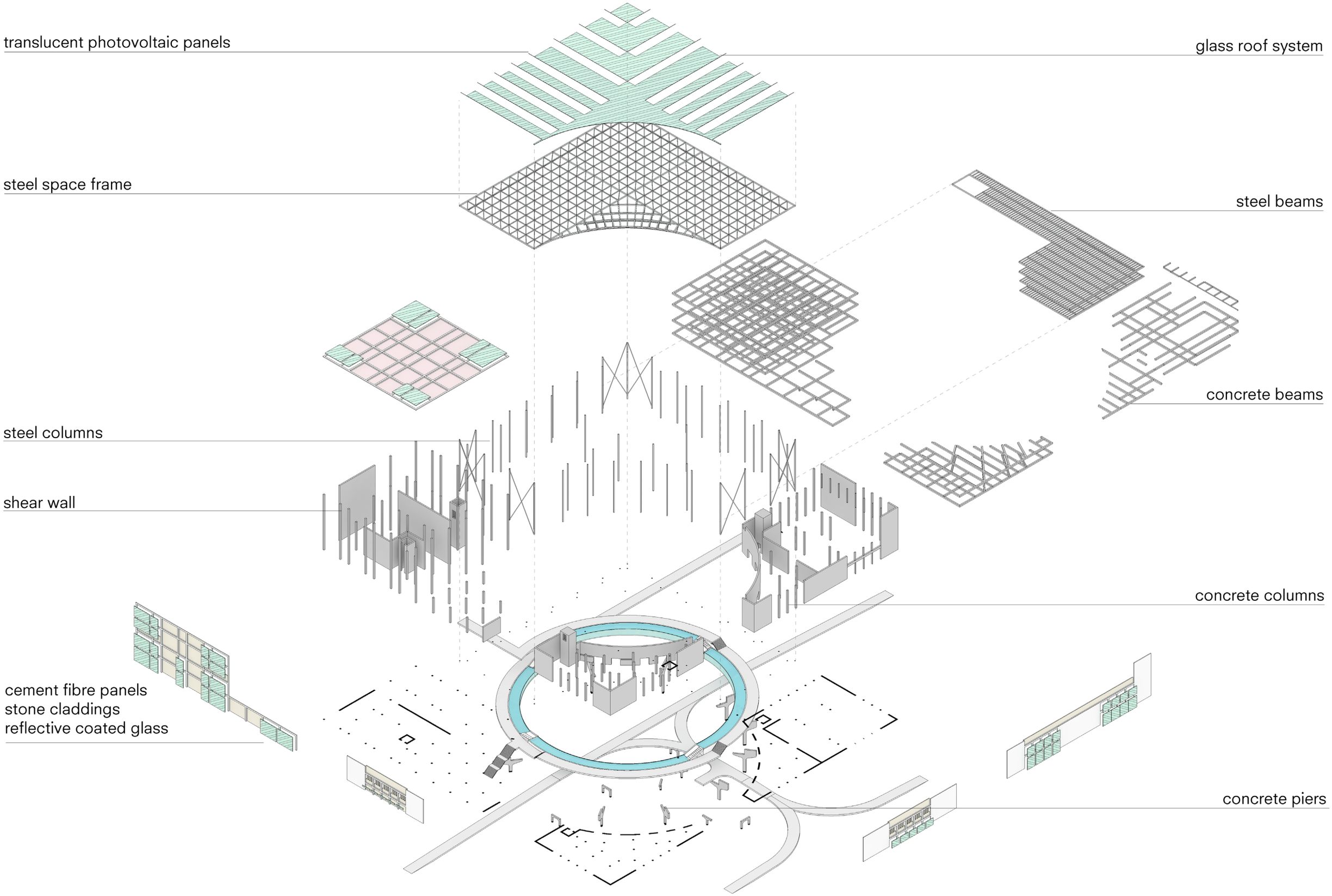
steel columns

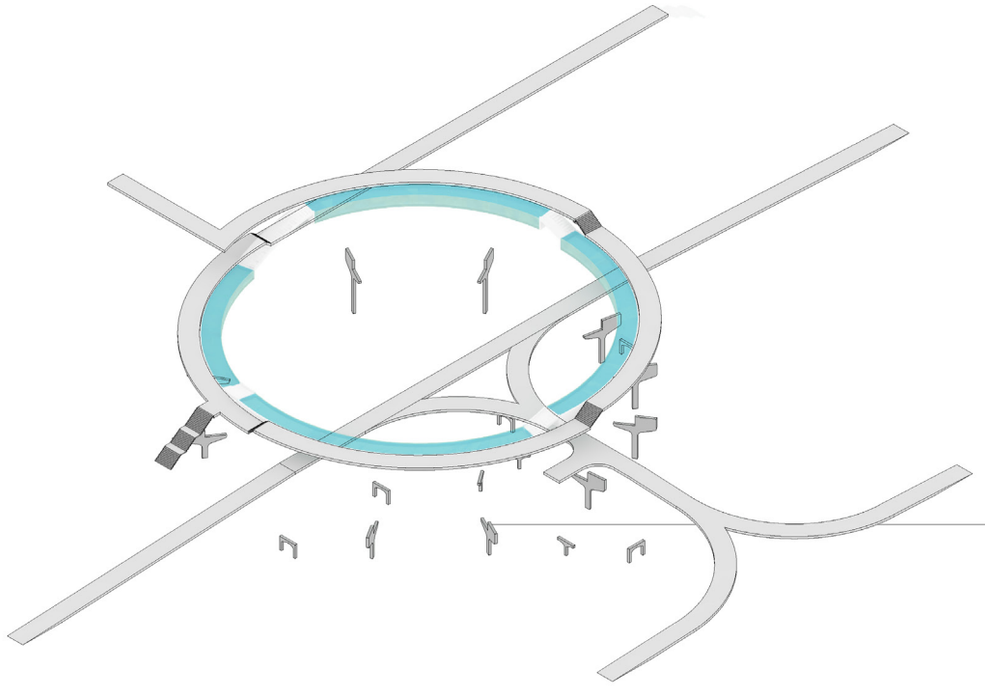
shear wall

concrete columns

cement fibre panels
stone claddings
reflective coated glass

concrete piers





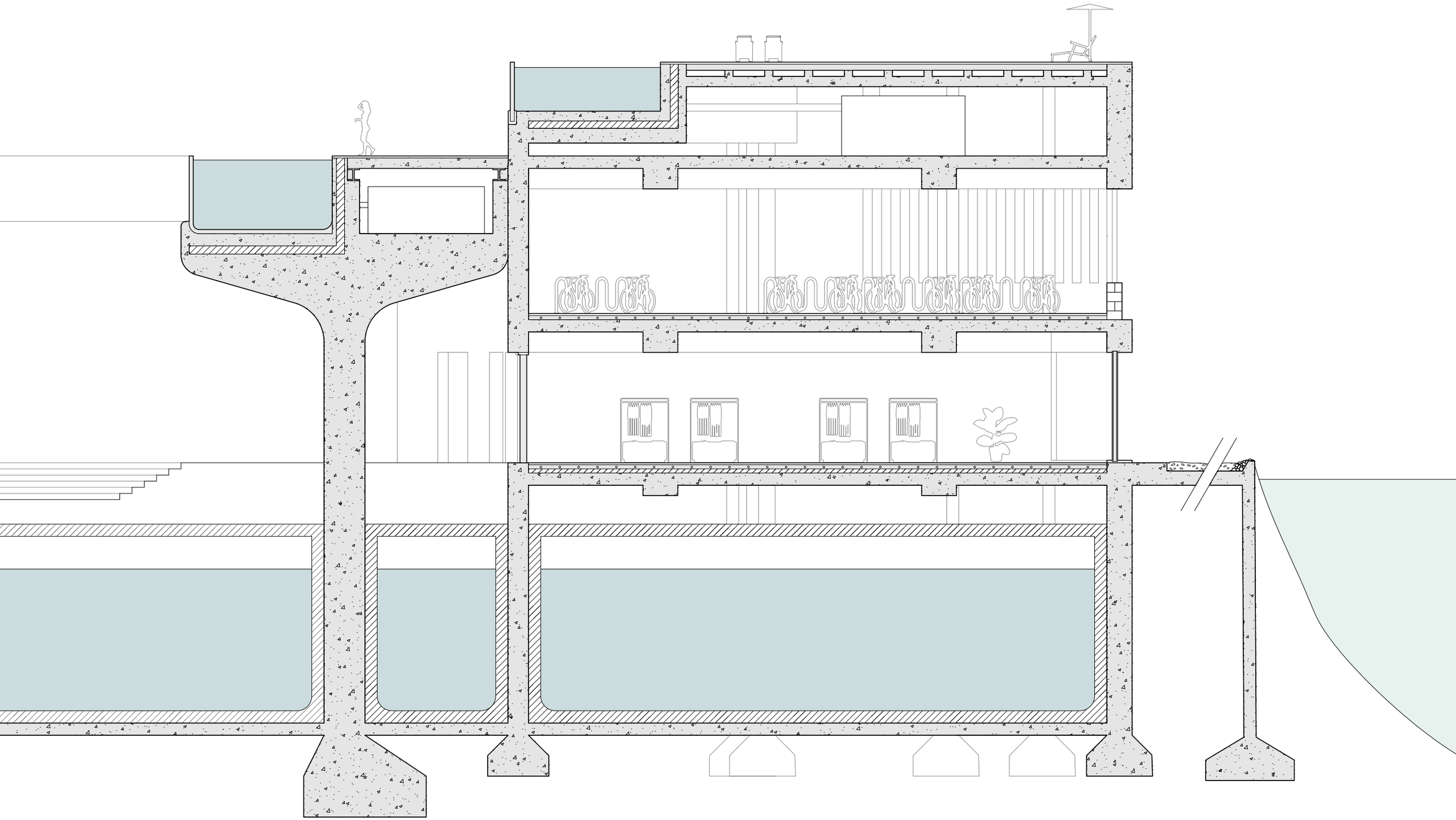
concrete piers

concrete beams

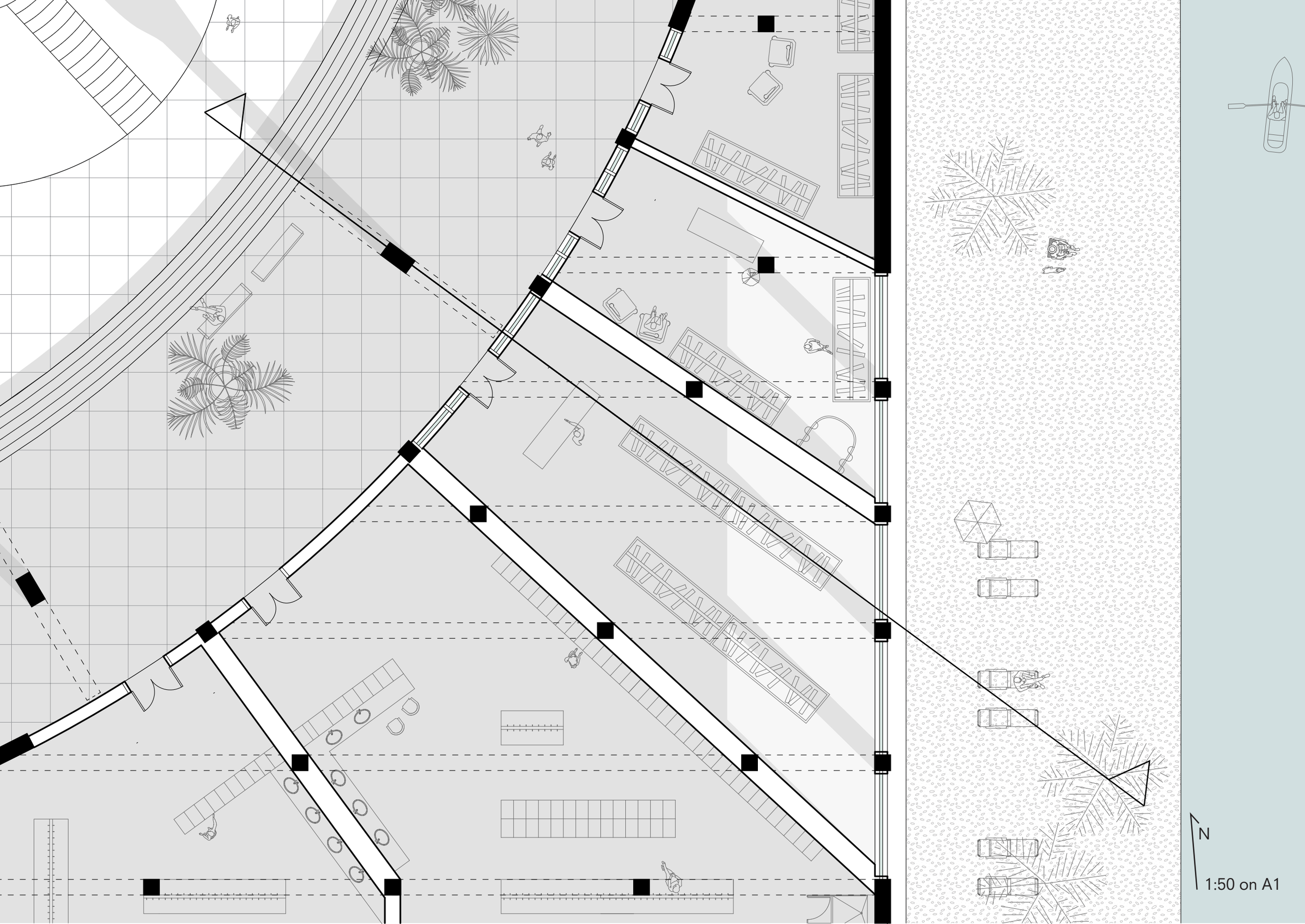
shear wall

concrete columns

cement fibre panels
stone claddings
reflective coated glass



1:50 on A0

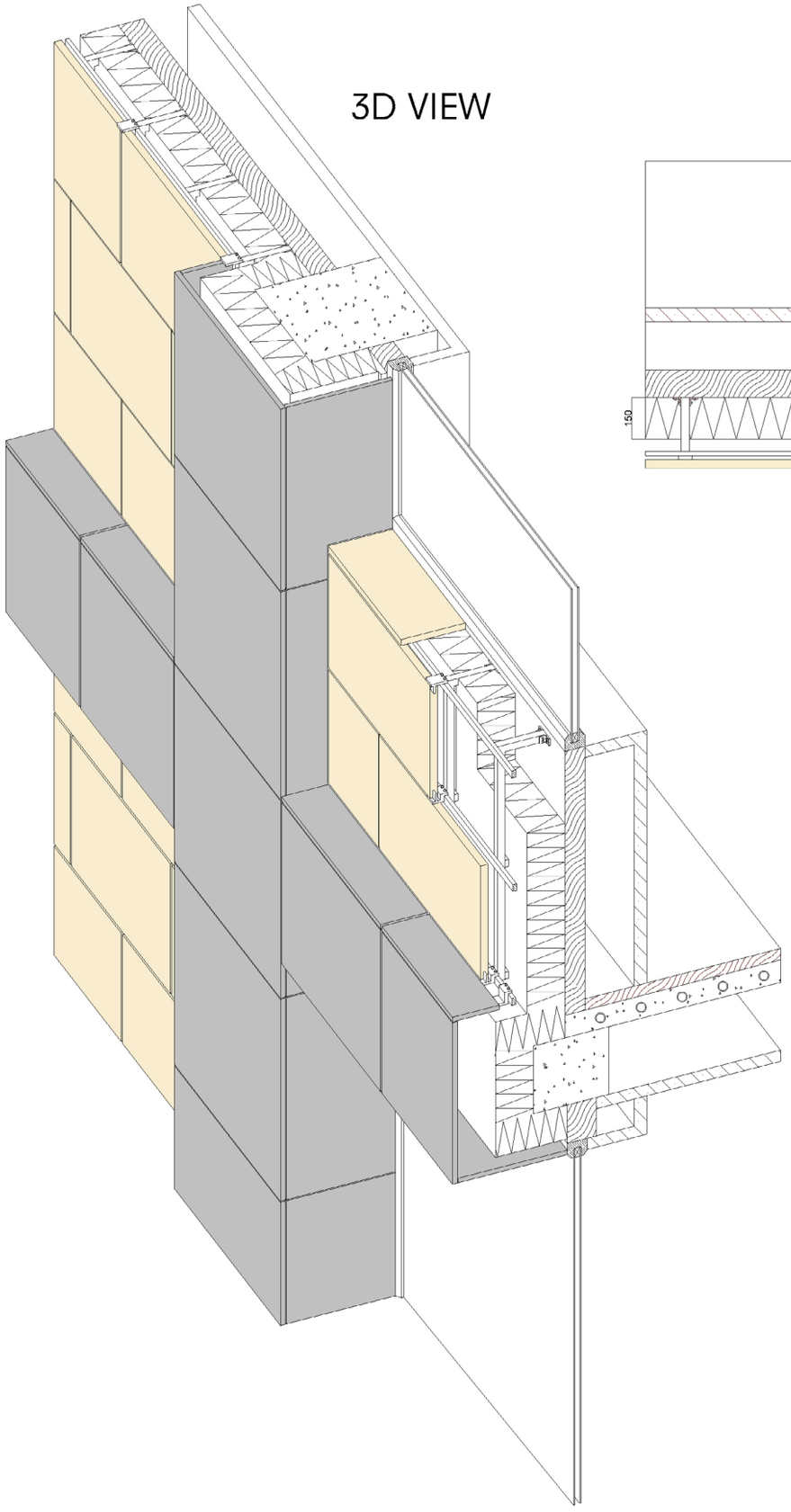

N
1:50 on A1



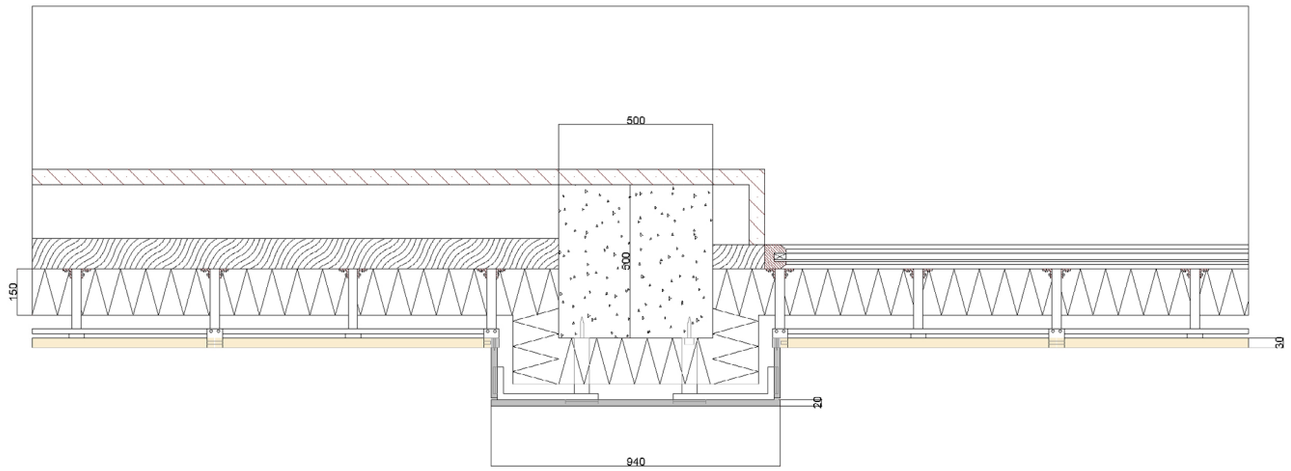
SOUTH FACADE FRAGMENTS

1:50 on A1

3D VIEW



HORIZONTAL VIEW



REINFORCED CONCRETE

80MM THICK MULTIPLEX

150MM THICK ROCKWOOL INSUALTION

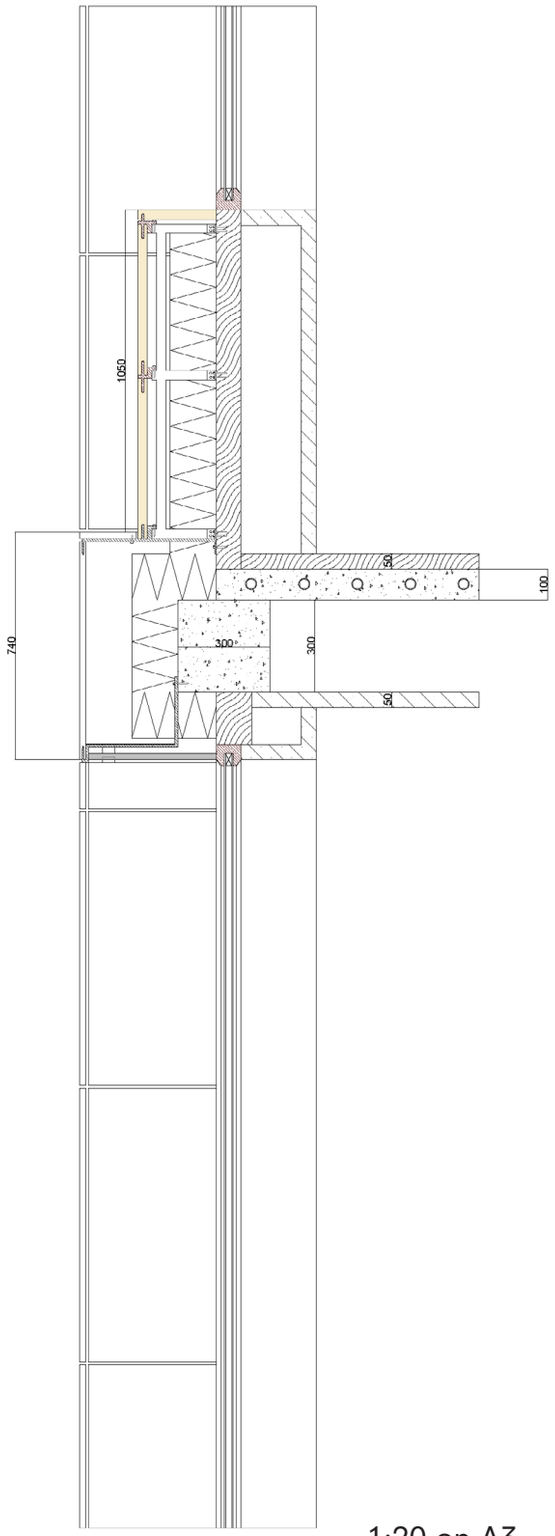
20MM THICK CEMENT FIBRE BOARD

30MM THICK STONE TILE

ALUMINIUM WINDOW FRAME

50MM THICK GYPSUM BOARD

SECTION



1:20 on A3

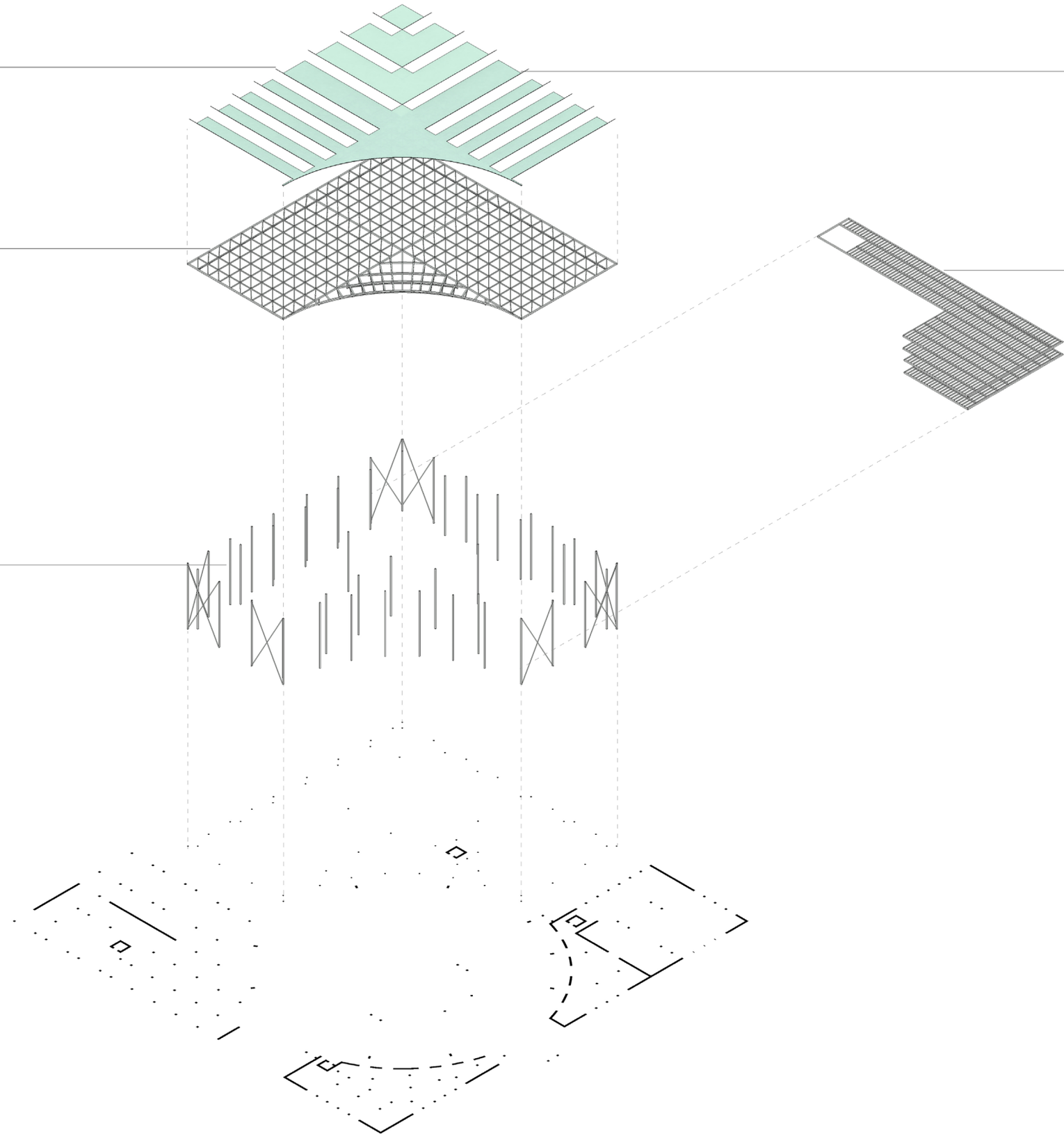
translucent photovoltaic panels

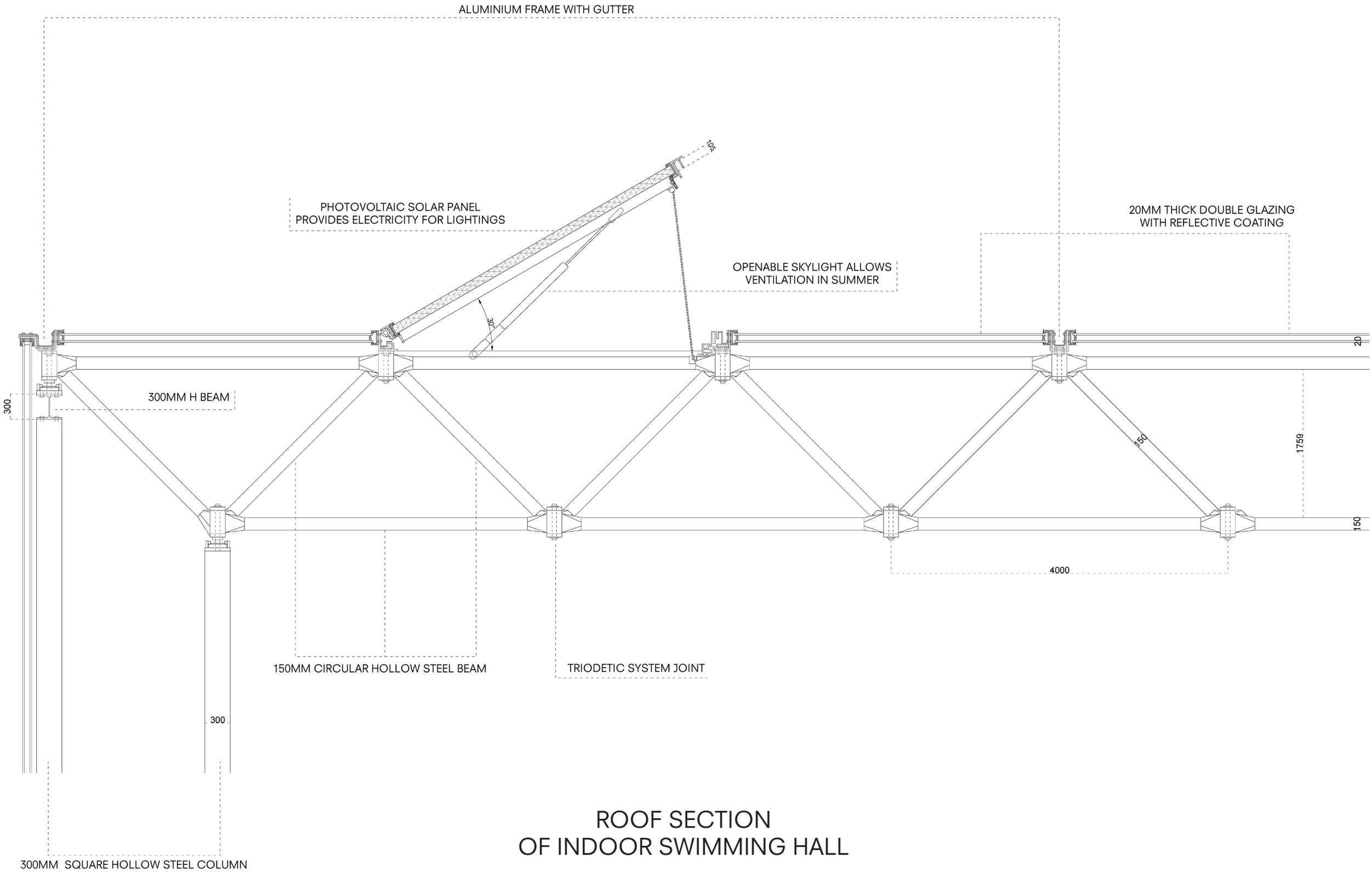
glass roof system

steel space frame

steel beams

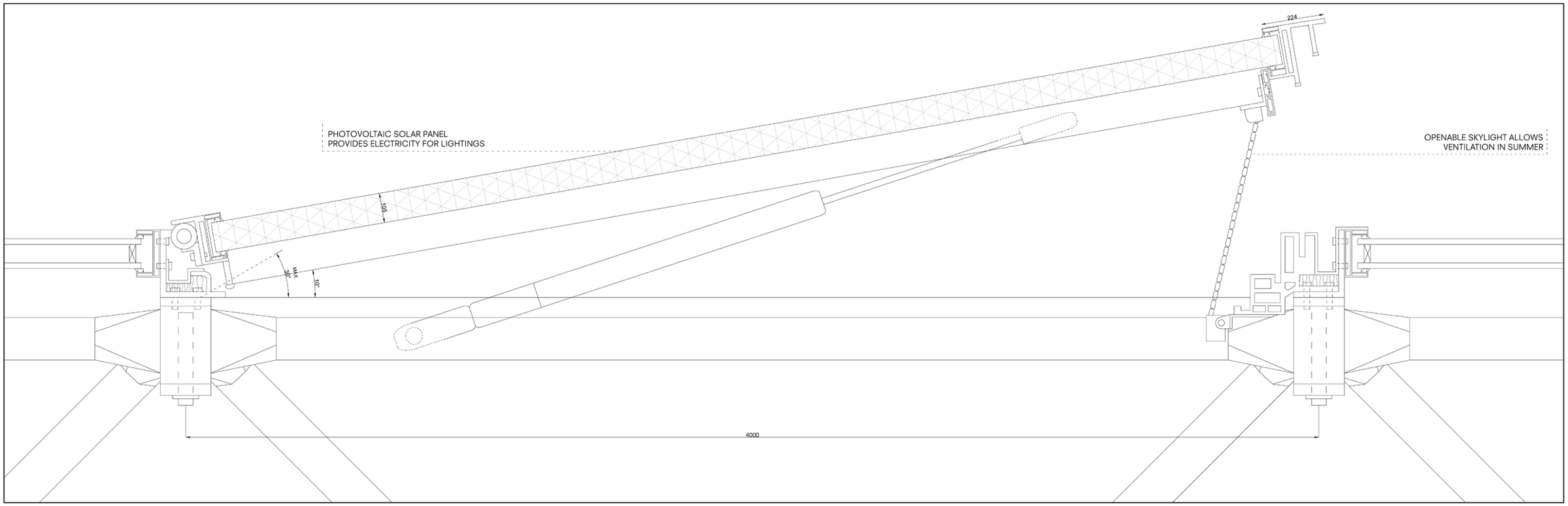
steel columns

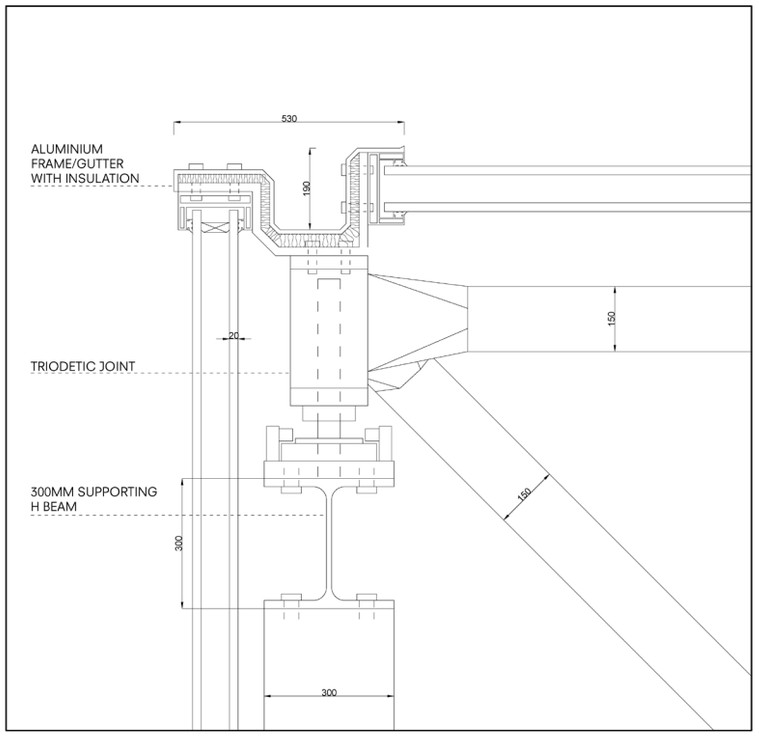


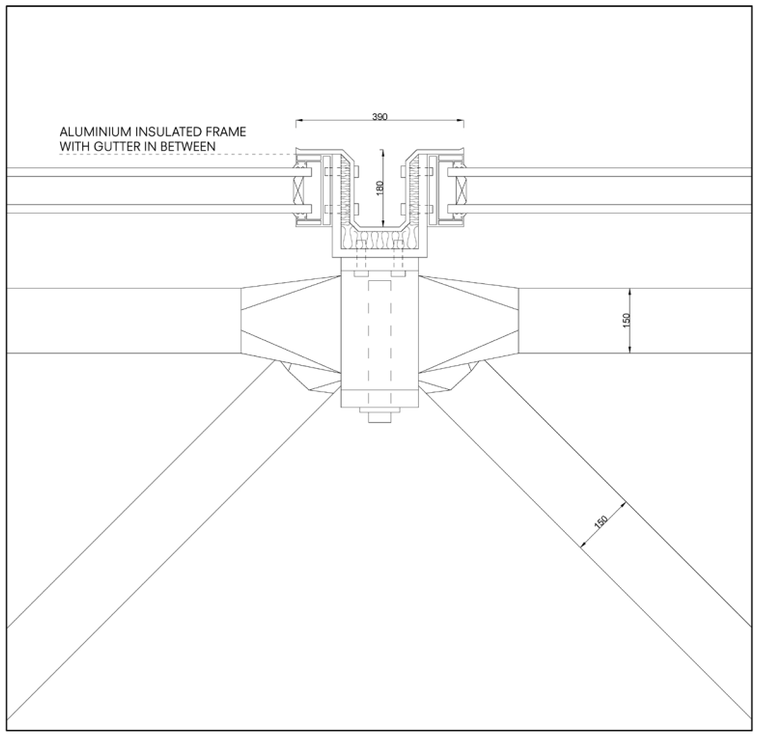


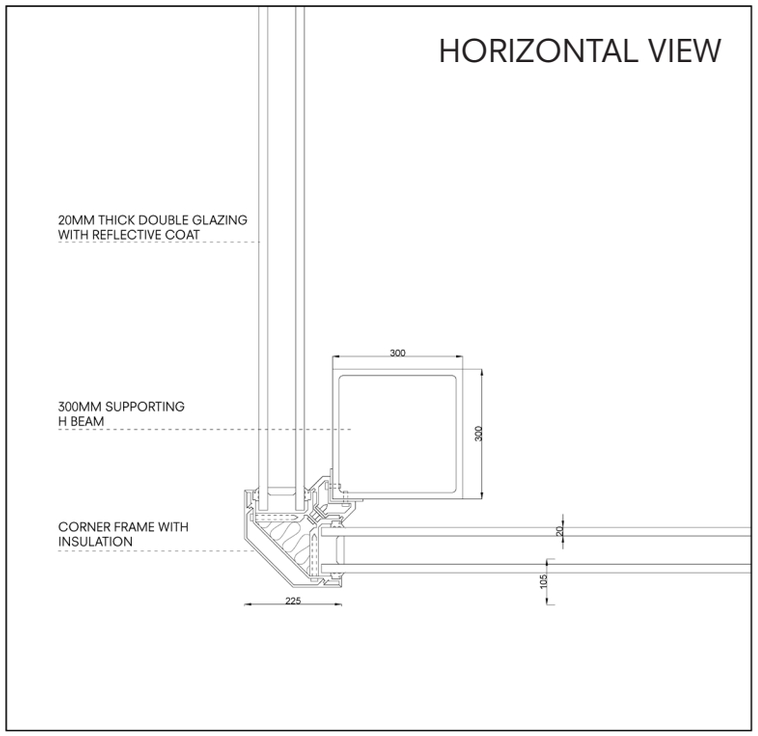
ROOF SECTION
OF INDOOR SWIMMING HALL

1:20 on A1

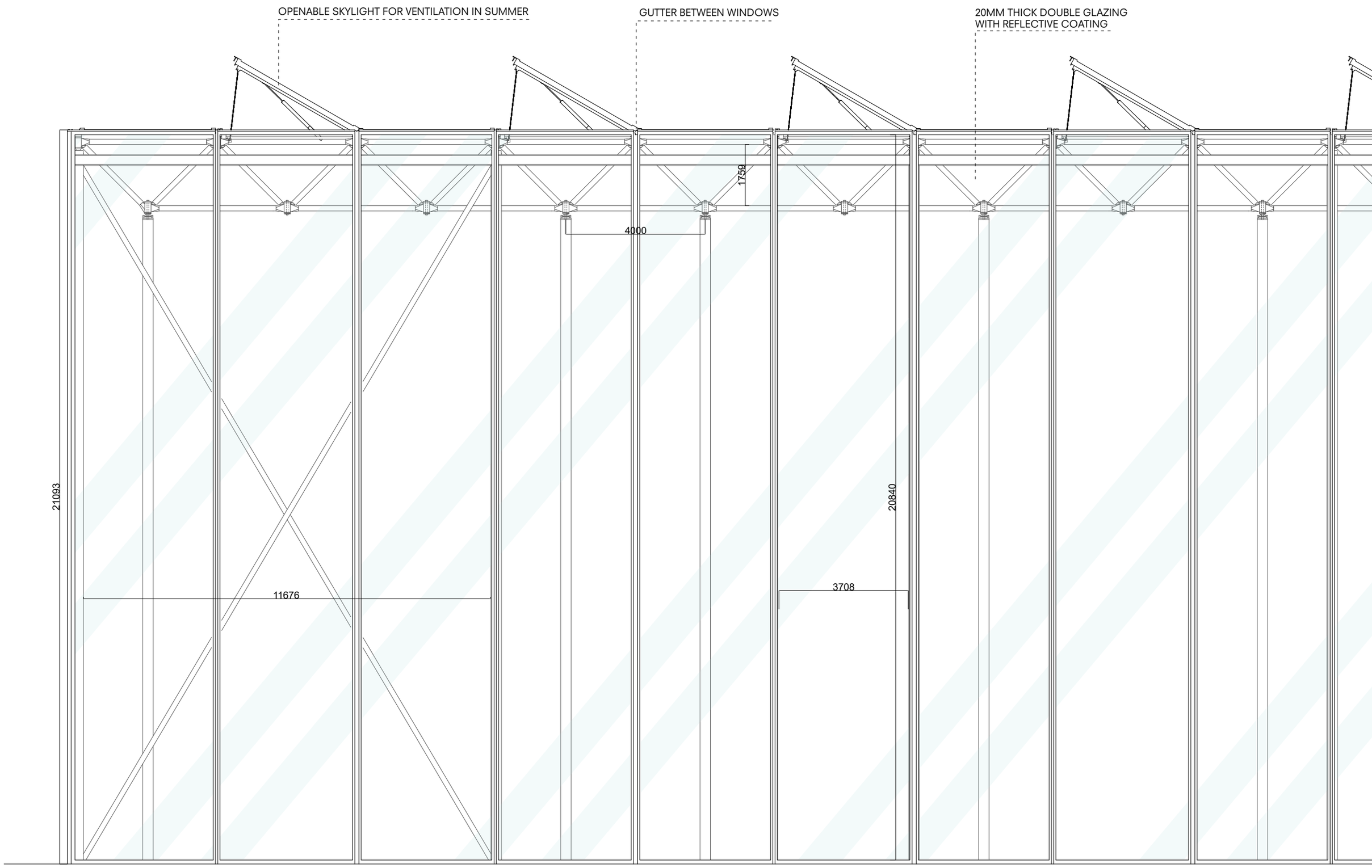

PHOTOVOLTAIC SOLAR PANEL
PROVIDES ELECTRICITY FOR LIGHTINGS
OPENABLE SKYLIGHT ALLOWS
VENTILATION IN SUMMER
224
105
30° MAX
10°
4000


ALUMINIUM
FRAME/GUTTER
WITH INSULATION
TRIODETIC JOINT
300MM SUPPORTING
H BEAM
530
190
20
150
150
300
300


ALUMINIUM INSULATED FRAME
WITH GUTTER IN BETWEEN
390
180
150
150


HORIZONTAL VIEW
20MM THICK DOUBLE GLAZING
WITH REFLECTIVE COAT
300MM SUPPORTING
H BEAM
CORNER FRAME WITH
INSULATION
300
300
20
105
225

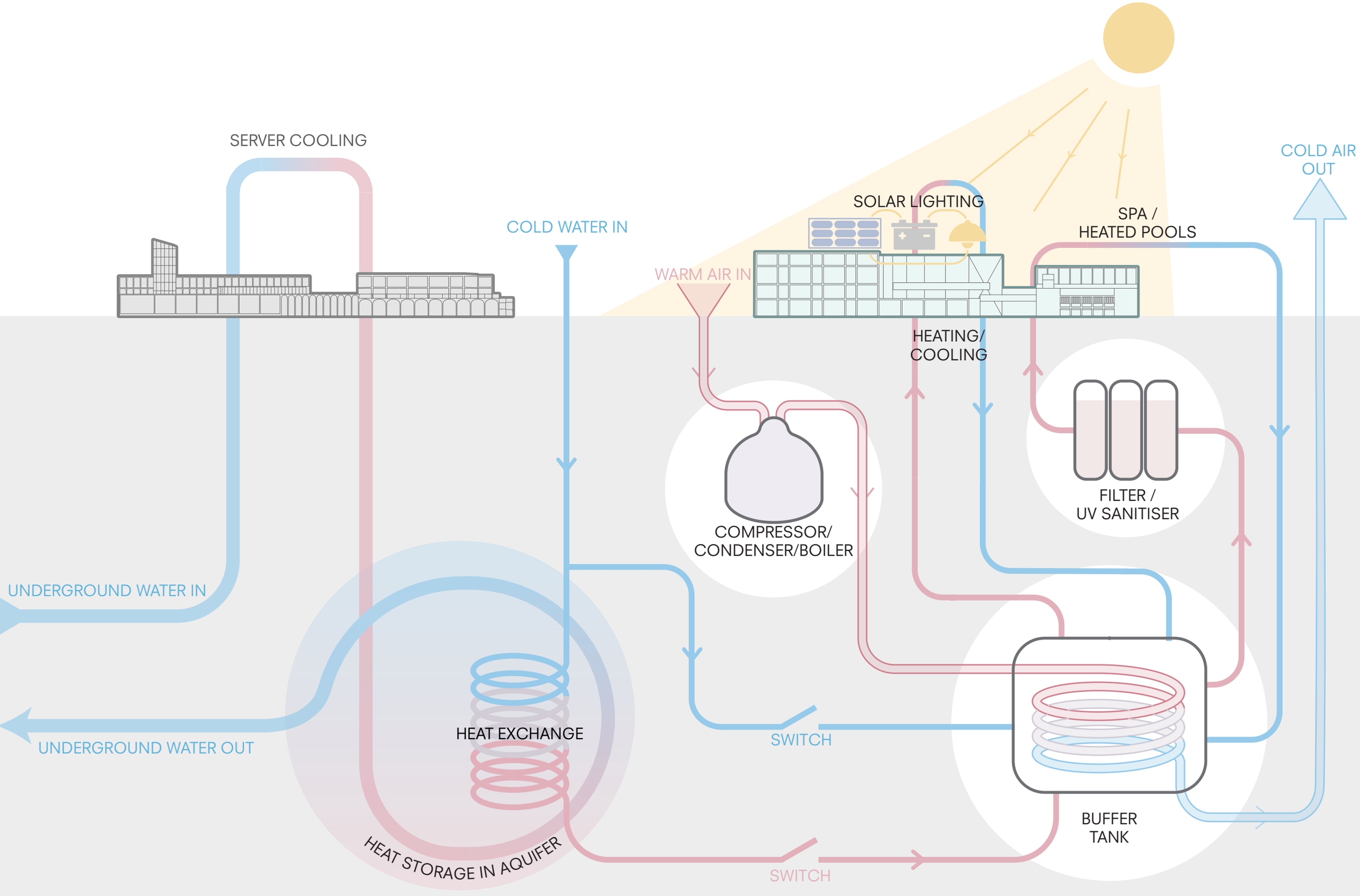
1:5 on A0


OPENABLE SKYLIGHT FOR VENTILATION IN SUMMER
GUTTER BETWEEN WINDOWS
20MM THICK DOUBLE GLAZING
WITH REFLECTIVE COATING
1759
4000
21093
11676
20840
3708

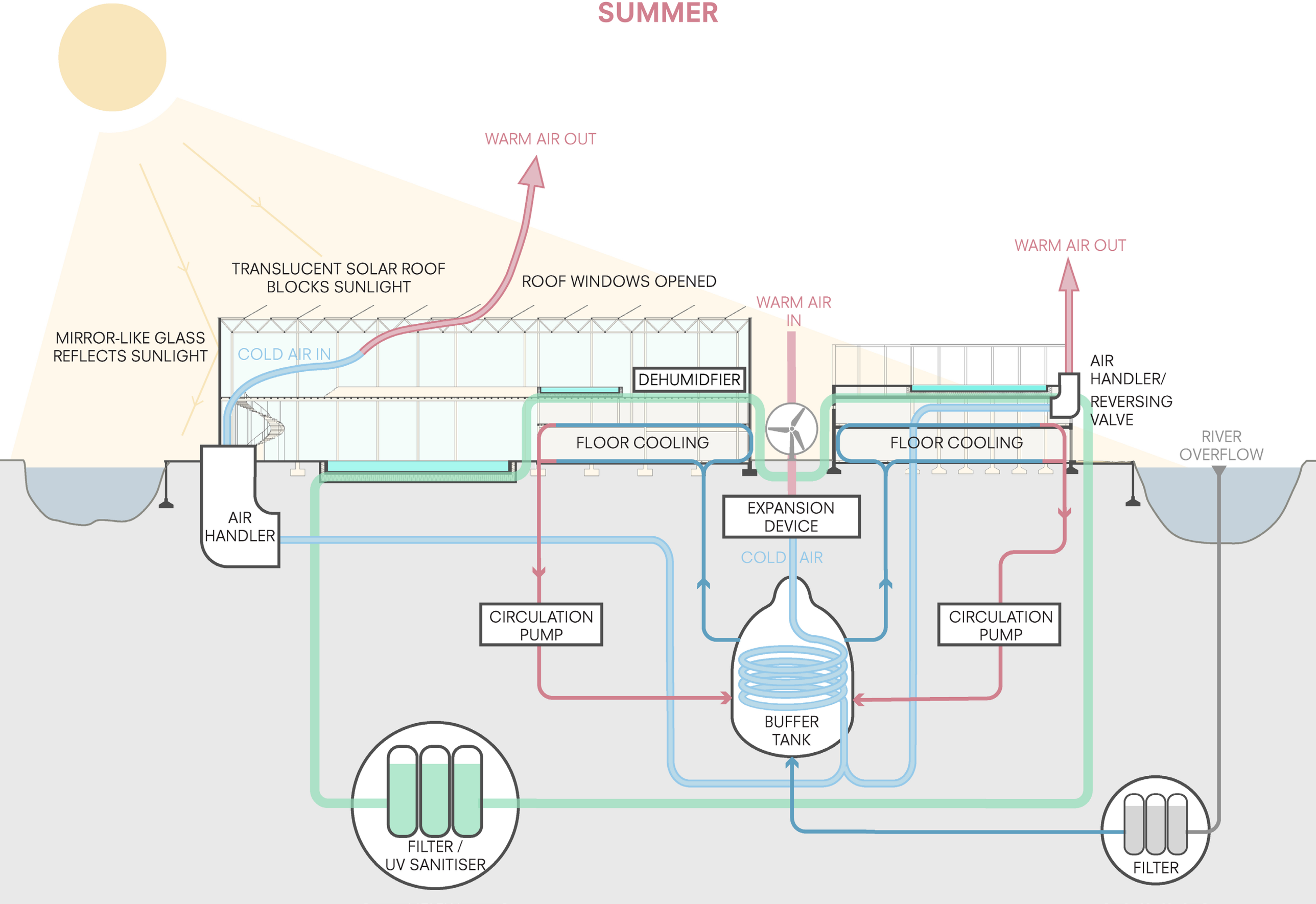
1:50 on A1

DATA EMBASSY

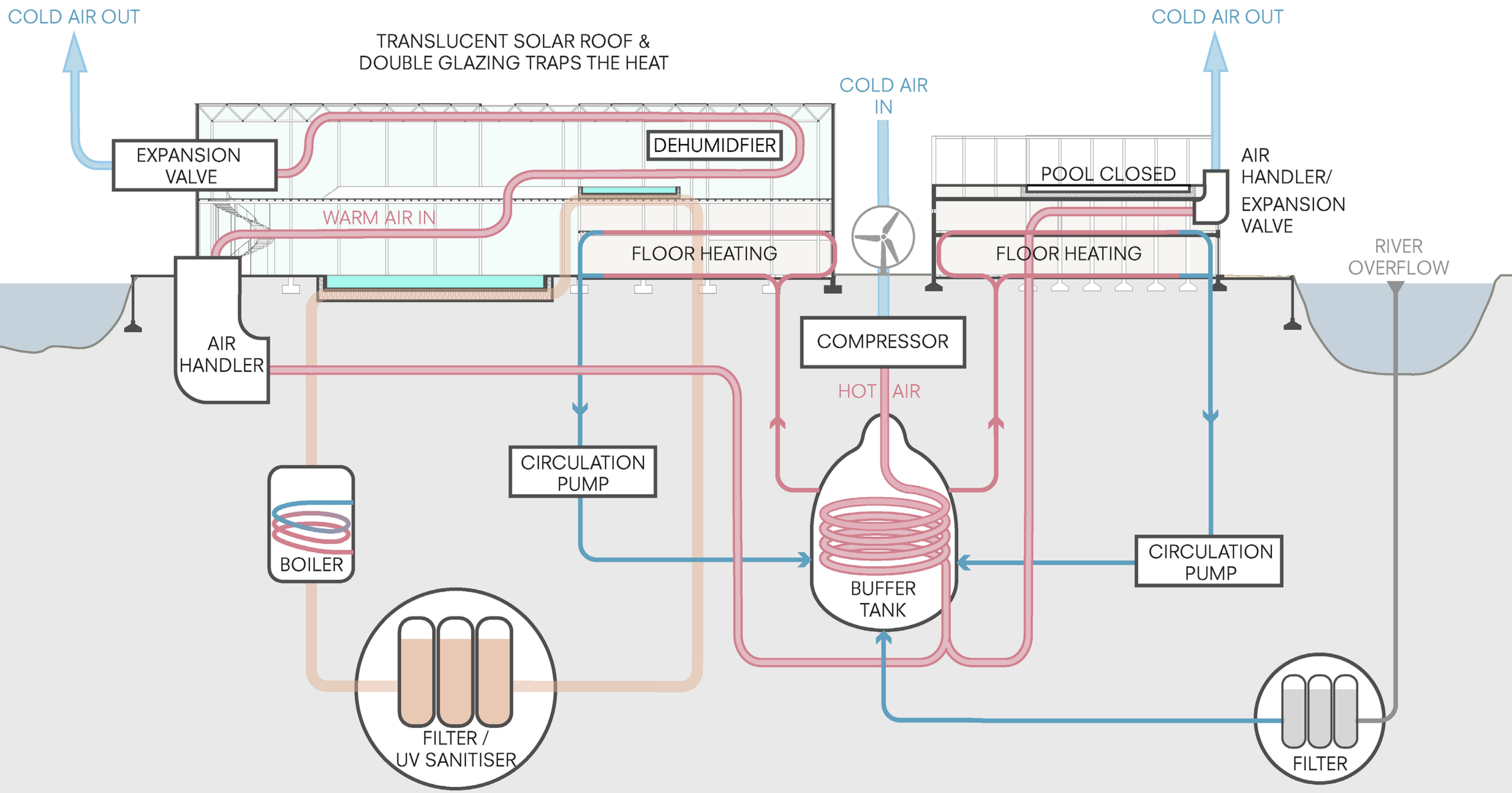
SWIMMING COMPLEX



SUMMER


WARM AIR OUT
TRANSLUCENT SOLAR ROOF
BLOCKS SUNLIGHT
ROOF WINDOWS OPENED
WARM AIR
IN
WARM AIR OUT
MIRROR-LIKE GLASS
REFLECTS SUNLIGHT
COLD AIR IN
DEHUMIDFIER
AIR
HANDLER/
REVERSING
VALVE
FLOOR COOLING
FLOOR COOLING
RIVER
OVERFLOW
AIR
HANDLER
EXPANSION
DEVICE
COLD AIR
CIRCULATION
PUMP
CIRCULATION
PUMP
BUFFER
TANK
FILTER /
UV SANITISER
FILTER

WINTER

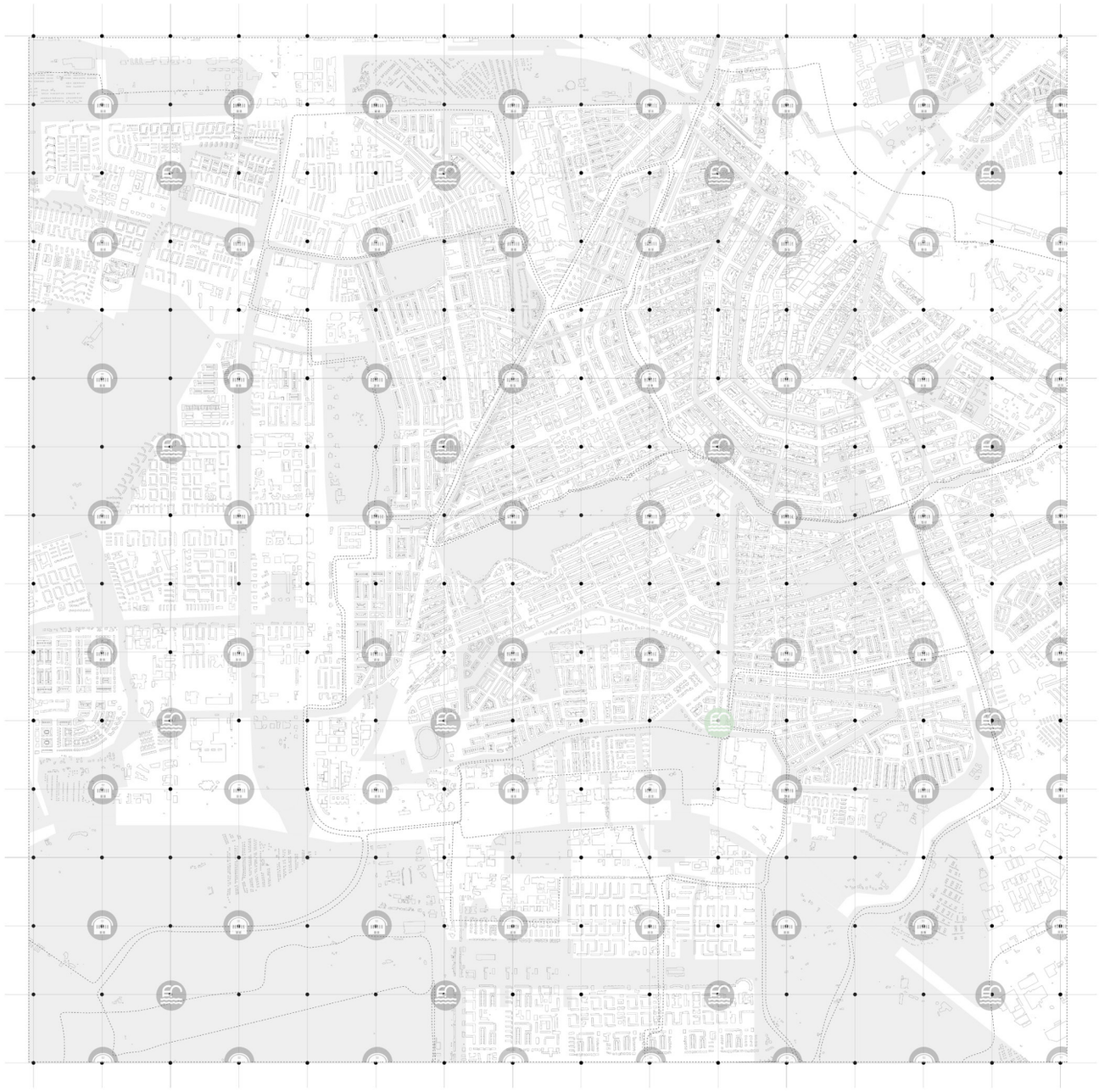

COLD AIR OUT
TRANSLUCENT SOLAR ROOF &
DOUBLE GLAZING TRAPS THE HEAT
COLD AIR
IN
COLD AIR OUT
EXPANSION
VALVE
DEHUMIDFIER
POOL CLOSED
AIR
HANDLER/
EXPANSION
VALVE
WARM AIR IN
FLOOR HEATING
FLOOR HEATING
RIVER
OVERFLOW
AIR
HANDLER
COMPRESSOR
HOT AIR
CIRCULATION
PUMP
BOILER
BUFFER
TANK
CIRCULATION
PUMP
FILTER /
UV SANITISER
FILTER


6
9



N

1:5000 on A2





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D A N K U W E L