WOODSTOCK

GLOBAL WARMING

HOW CAN ARCHITECTURE REDUCE IT?

Co2

GROWING

WOOD

CYCLE

BURNING

CARBON

ALL WOOD IS TRANSPORTED AT 12% MOISTURE CONTENT

TRUCKING FROM FOREST TO HARBOR AND HARBOR ROTTERDAM TO DELFT

B WESTERN USA
WEIGHT: 370KG/M3
TRUCKING: 300KM
SHIPPING: 16381KM
LIFESPAN: 20YR CLASS II

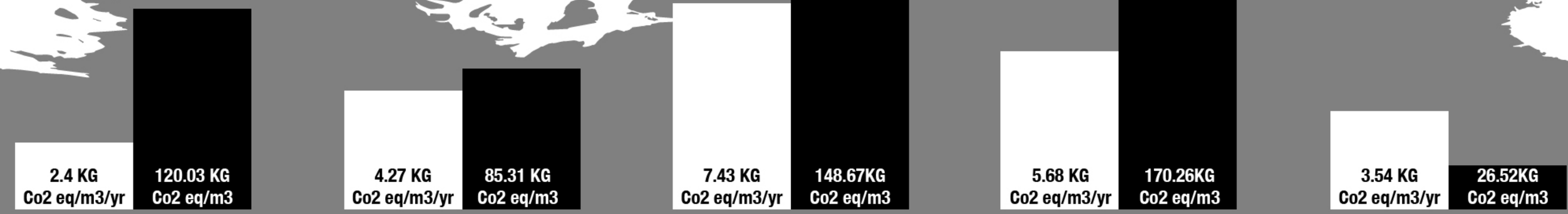
E GERMANY
WEIGHT: 520KG/M3
TRUCKING: 700KM
LIFESPAN: 7.5YR CLASS IV

C MALAYSIA
WEIGHT: 640KG/M3
TRUCKING: 350KM
SHIPPING: 16170KM
LIFESPAN: 20YR CLASS II

D CAMEROON
WEIGHT: 1060KG/M3
TRUCKING: 800KM
SHIPPING: 8427KM
LIFESPAN: 30YR CLASS I

A NEW ZEALAND
WEIGHT: 450KG/M3
TRUCKING: 100KM
SHIPPING: 20811KM
LIFESPAN: 50YR CLASS I

A



A ACCOYA | B WESTERN RED CEDAR | C RED MERANTI | D AZOBE/EKKI | E SCOTSPINE

BUILD WITH WOOD

REQUIREMENTS	DESIGN OBJECTIVE
long preservation	flexible space
energy reduction	climate roof
healthy environment	internal garden

2020
STUDENT HOUSING

2050

OFFICE?

2100

HOTEL/HOSTEL?

2150

DWELLING?

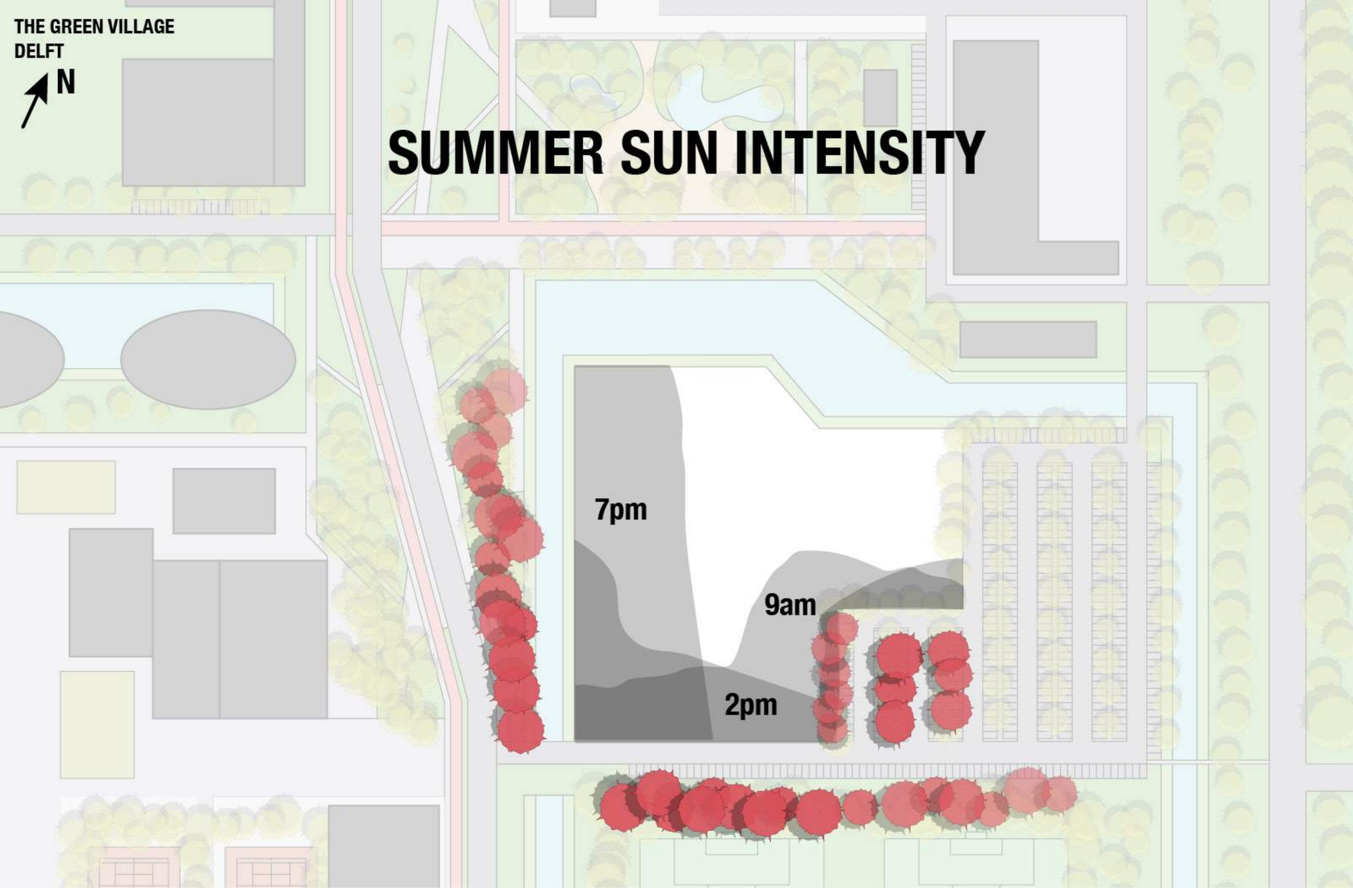
PROGRAM FLEXIBLE SPACE

SITE

THE GREEN VILLAGE
DELFT

N

SUMMER SUN INTENSITY



SUMMER SUN INTENSITY

THE GREEN VILLAGE
DELFT

N

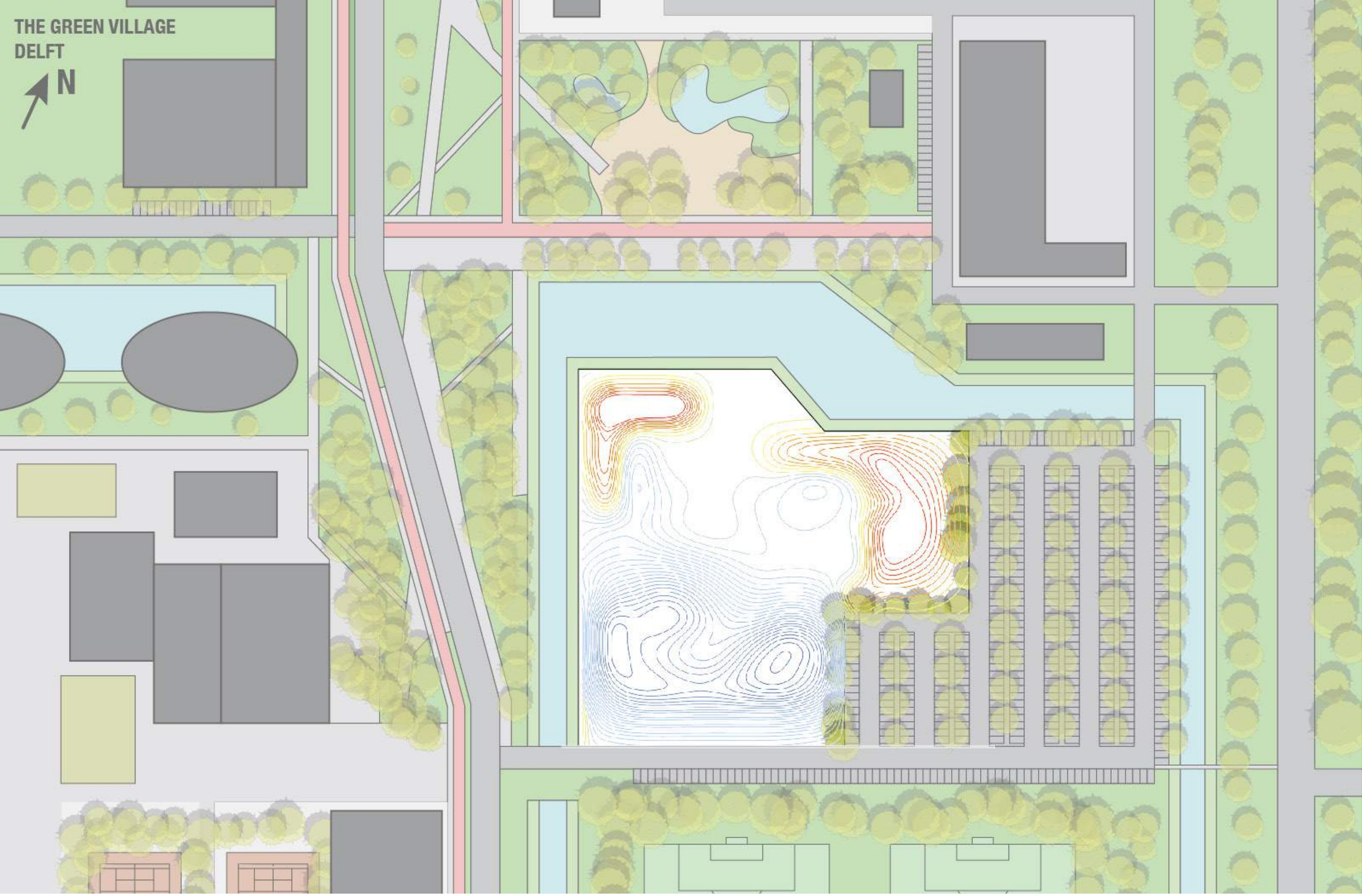
WINTER SUN INTENSITY

7pm

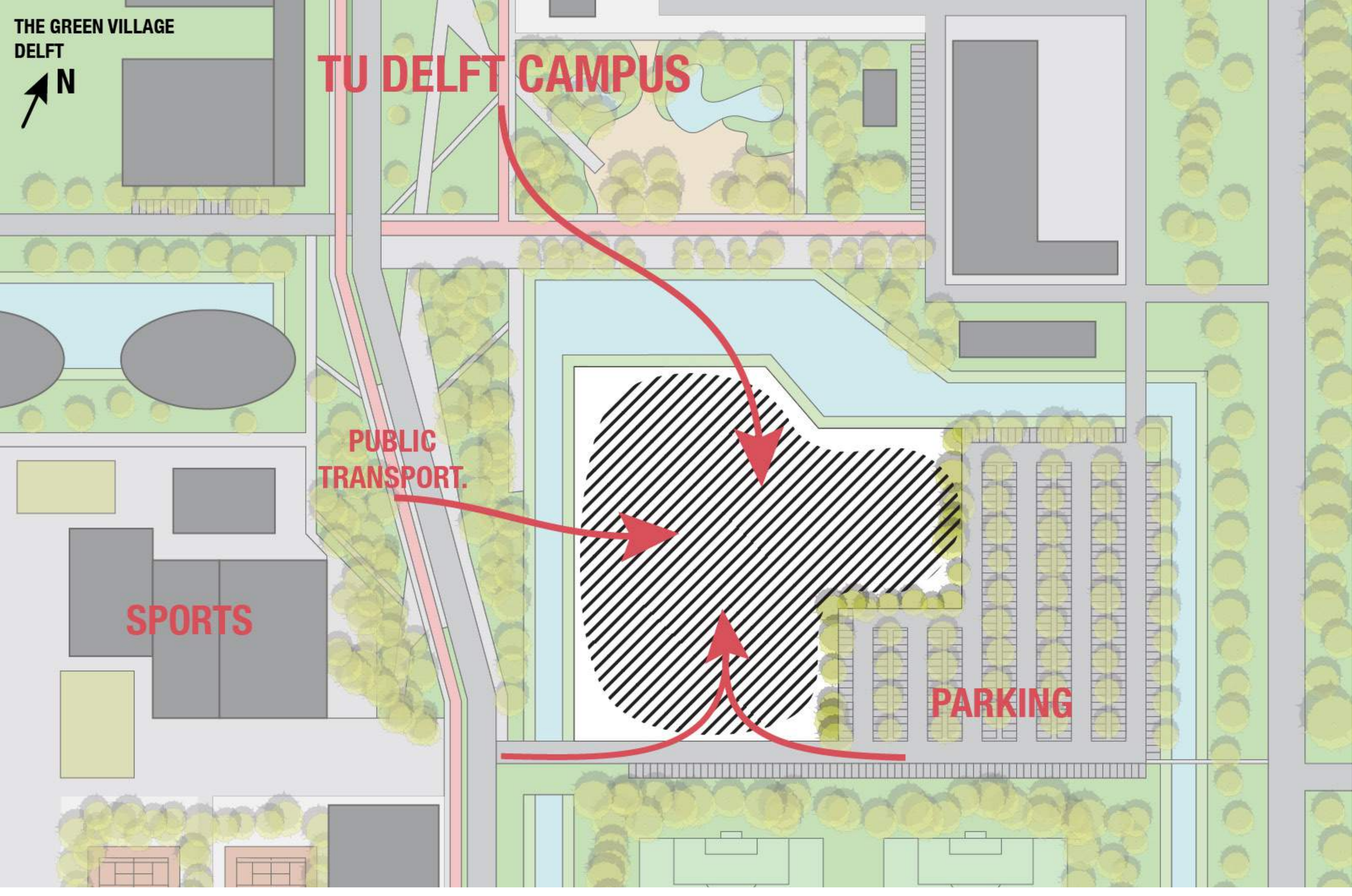
9am

2pm

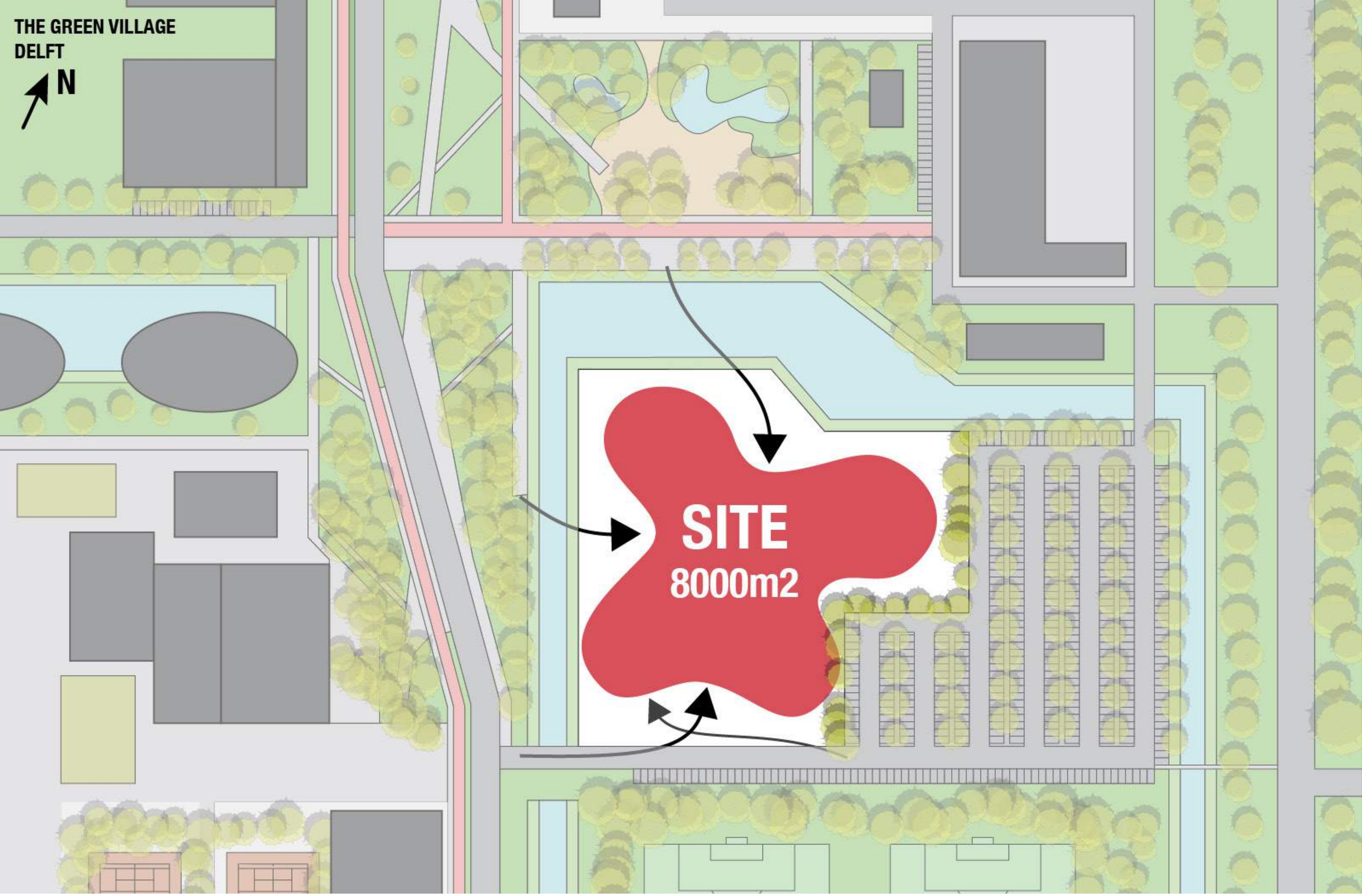
WINTER SUN INTENSITY



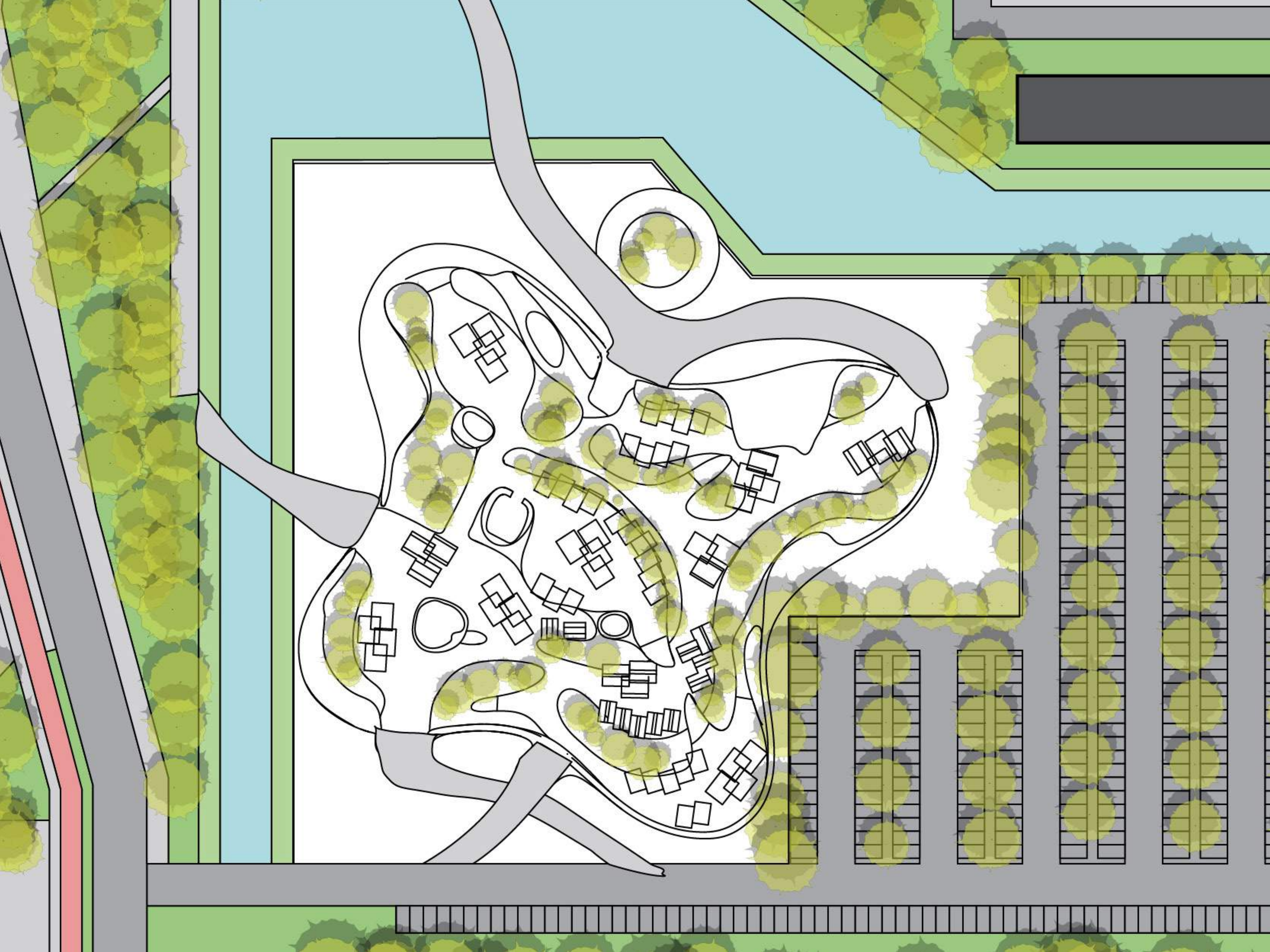
LANDSCAPE

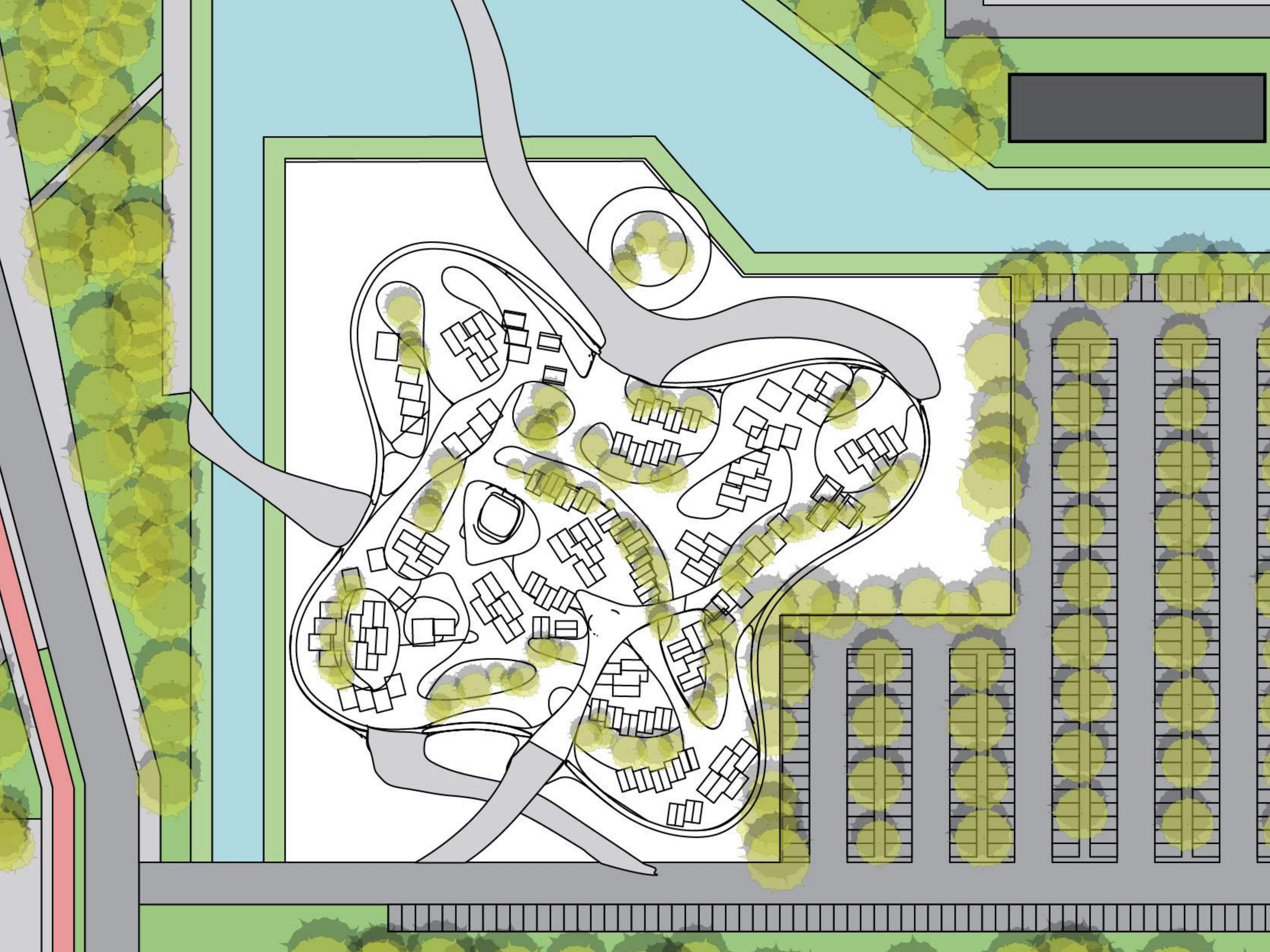

THE GREEN VILLAGE
DELFT
N
TU DELFT CAMPUS
PUBLIC
TRANSPORT.
SPORTS
PARKING

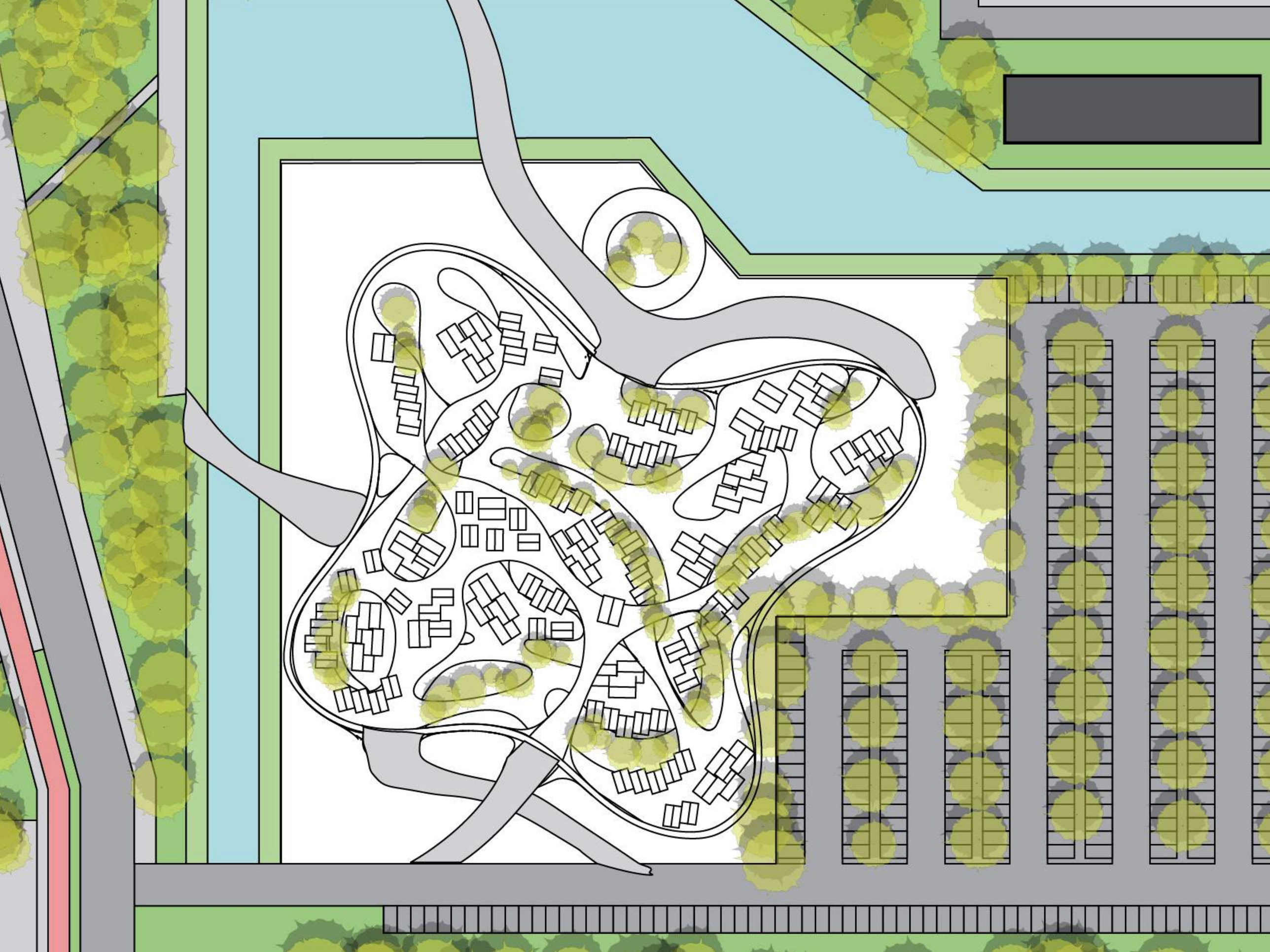
ENTRIES

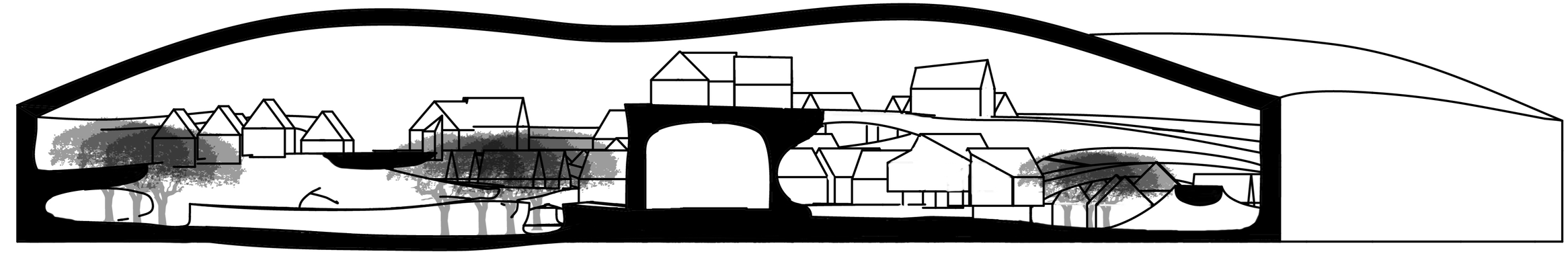


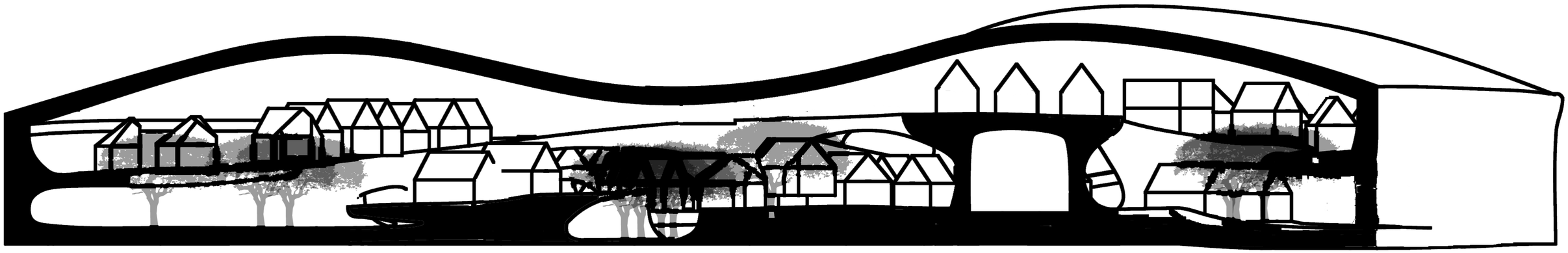
BUILDING PLOT

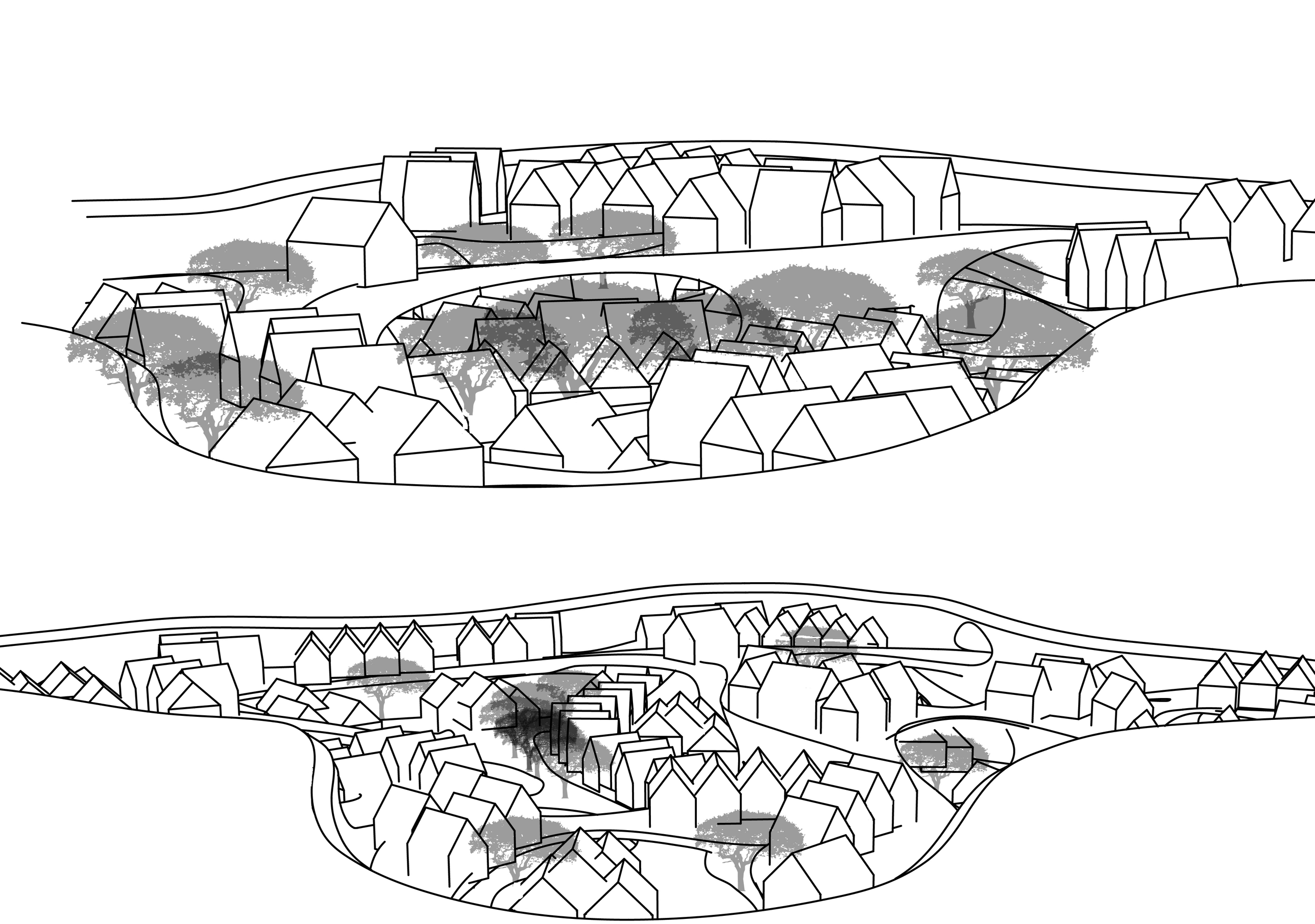


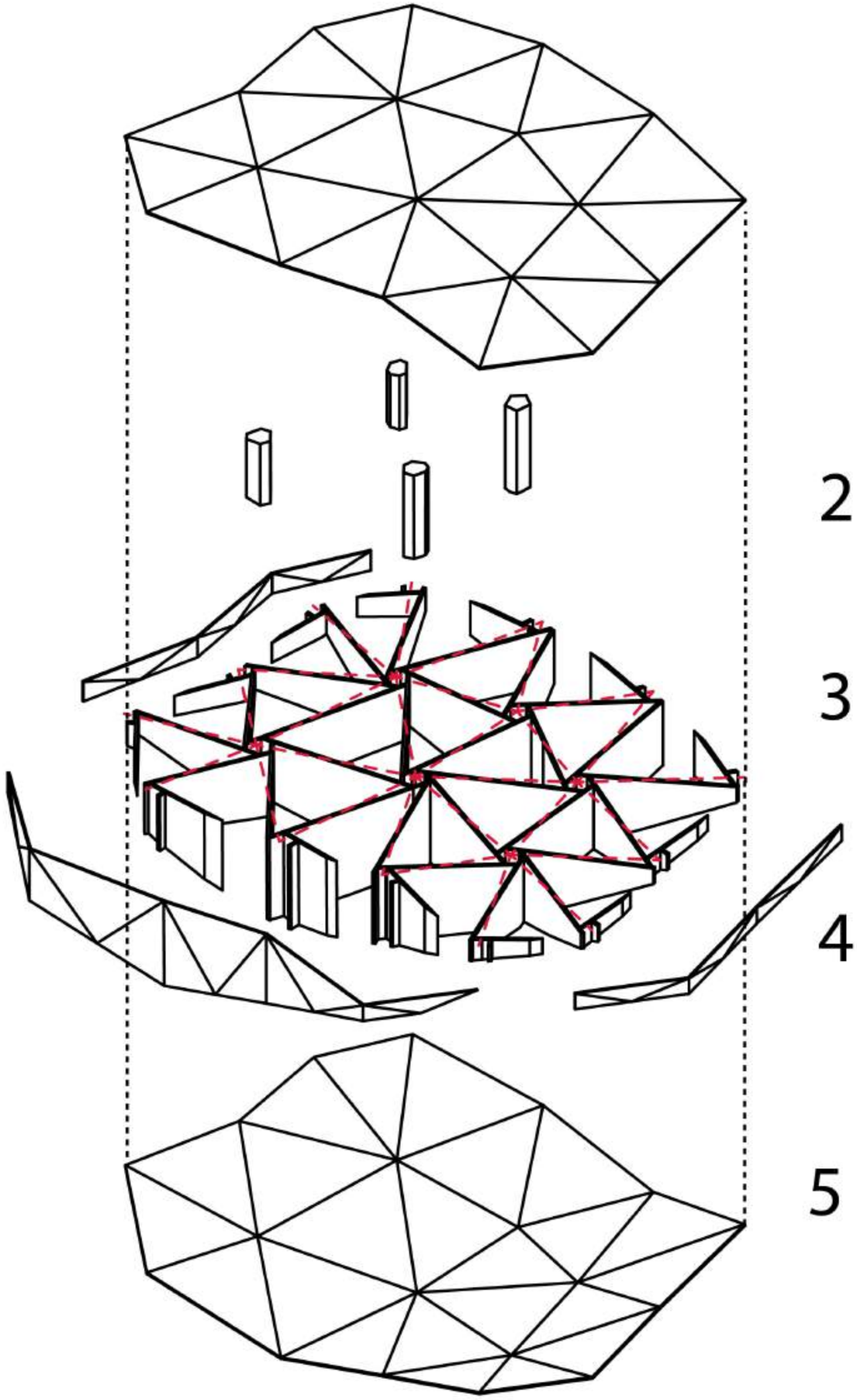


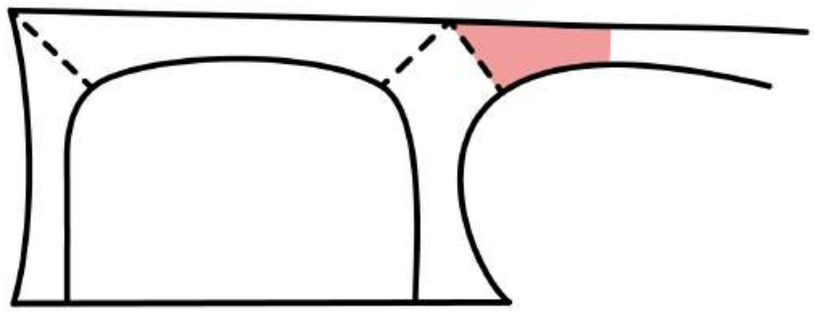






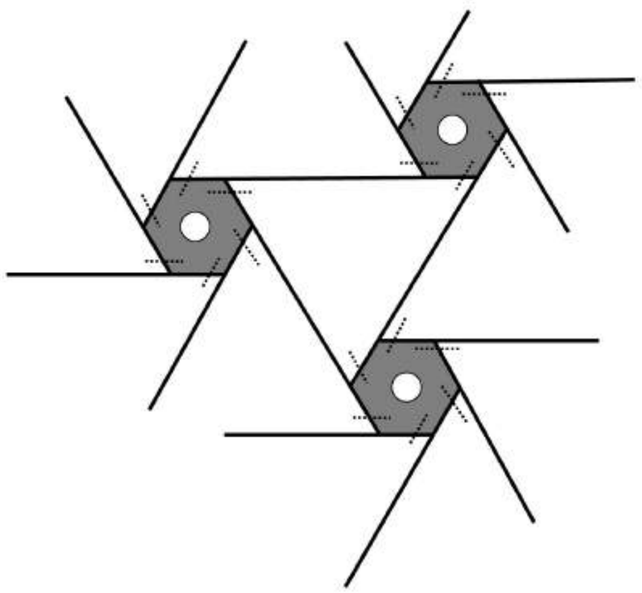




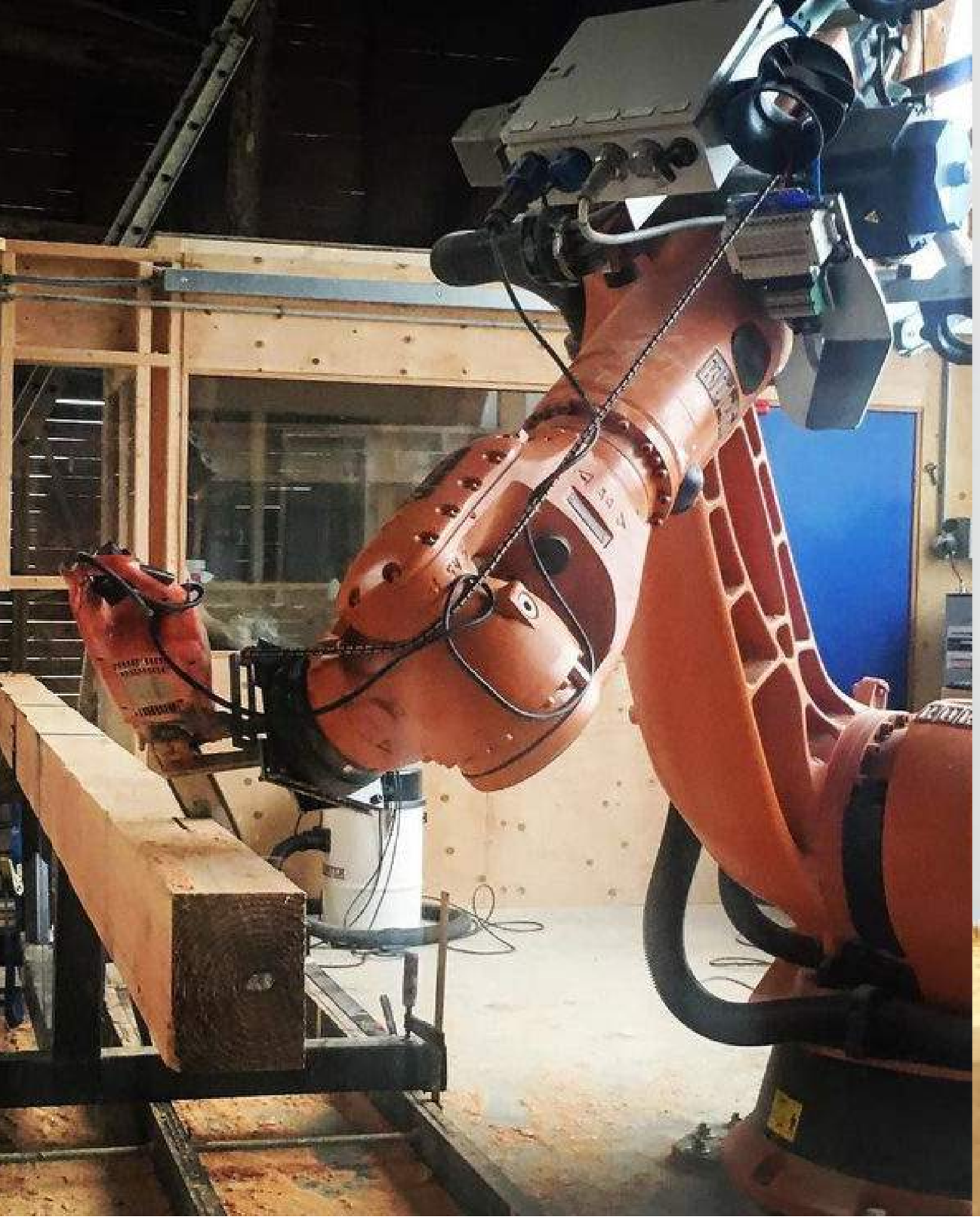


PREFAB ELEMENTS

1 TOP SURFACE PLYWOOD
2 TIMBER COLUMNS
3 STRUCTURE PLYWOOD
4 SIDE COVER PLYWOOD
5 BOTTOM SURFACE PLYWOOD

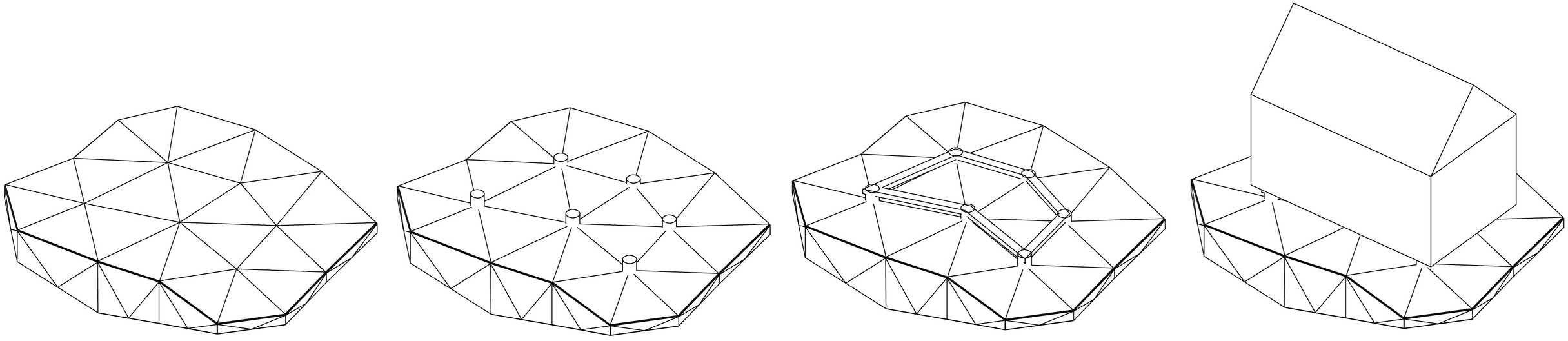


TRANSFERING LOADS



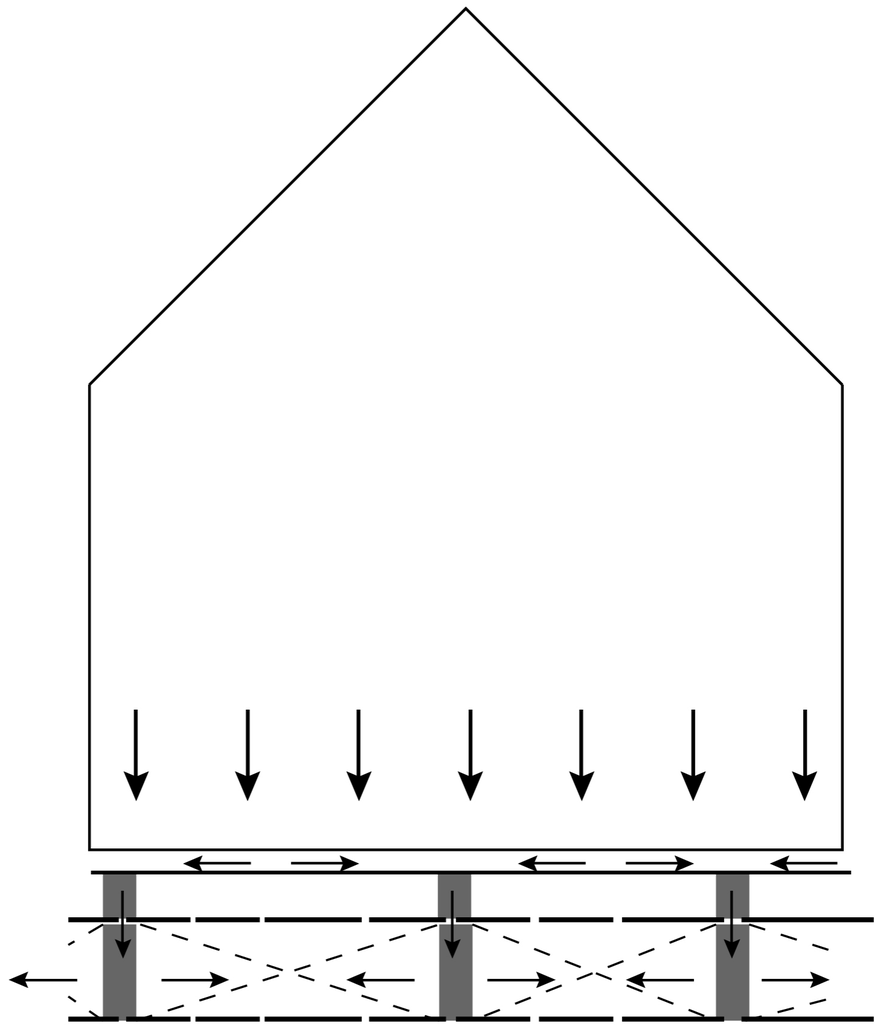
CNC ROBOTIC FABRICATION

MOVIE

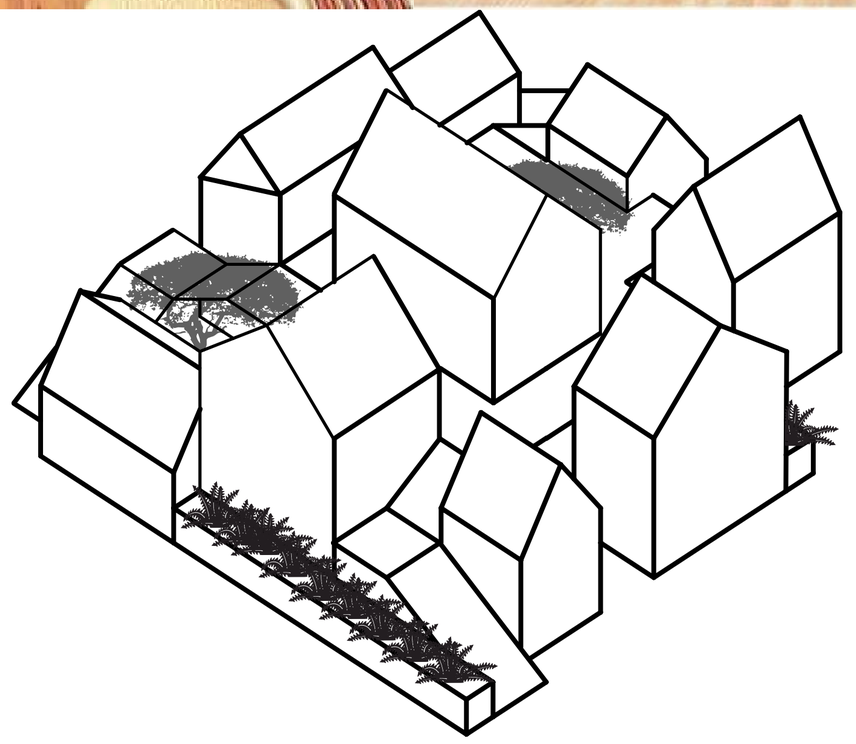


1 2 3 4

1 MAIN STRUCTURE
2 NODES TRANSFERING FORCES ON COLUMNS
3 HORIZONAL TIMBER TO TRANSFER ON NODES
4 FUNCTION FREELY PLACED ON BEAMS

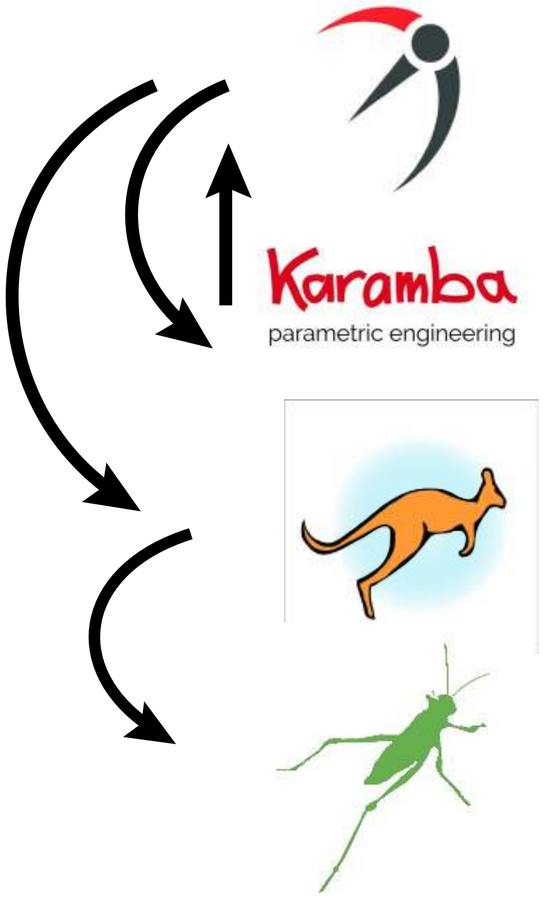


TOP & BOTTOM SURFACE STABALIZING STRUCTURE



Group Studenthousing
16x private space 12m2
collective space 30m2
collective bathroom 18m2

INTERIOR



1. DESIGN CONTINUES SPACE
T-SPLINES

2. STRUCTURAL ANALYSIS
KARAMBA

3. TRIANGULISE SHAPE
KANGAROO

4. GENERATE DETAILED STRUCTURE FOR FABRICATION
GRASSHOPPER

ROOF

1. DESIGN CONTINUES SPACE
T-SPLINES

2. STRUCTURAL ANALYSIS
KARAMBA

3. TRIANGULISE SHAPE
KANGAROO & LADYBUG

4. GENERATE DETAILED STRUCTURE FOR FABRICA-
TION
GRASSHOPPER