SITE ANALYSIS 01

The site is on the side of a large and highly populated tourist and residential street. Its sits on a north-east facing hillside in close proximity to the river in the very center of Porto. High tourism around the site has increasing value of any architectural projects geared toward hospitality, leisure, or any public and mixed-use developments. The location is also in close proximity with UNESCO world heritage.

However the site has quite a high noise pollution and air pollution from exhaust emission. And as the area is a tourist attraction this increases the danger of pick pockets and other crimes.

Points Of General Interest

VIEW TWO

This view is a showing the view from the top of the rocks on site and the potential of incorporating this and opportunities of the height and views on site.

VIEW ONE

This shows th most challenging this on th site that is th existing, but abandoned building on the north most point of site.

DETAIL ONE

The image shows the junction of the rocks to the ground on site.

VIEW THREE

This is showing the residential building behind the rocks on the wend sidn of the site. And This view is showing the increase in hillside topography facing south from inside the site.

SITE ANALYSIS 02

PORTO CITY RELEVANCE

GALERIA DA BIODIVERSIDADE

The first branch of the Science Museum of the University of Porto, in the former home of Sophia de Mello Breyner Andresen and Botanical Garden.

REDE DE BIOSPOTS DO PORTO

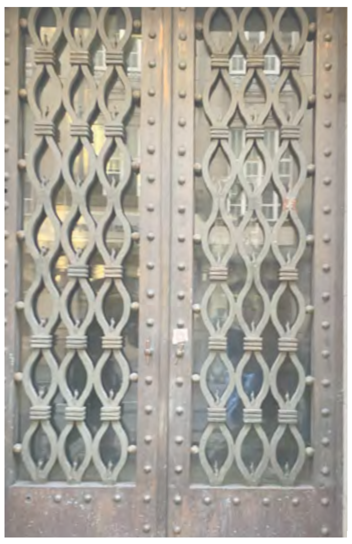
A partnership of the Municipality with Infraestruturas de Portugal, a network of urban forest areas predominantly autochthonous for the reforestation.

INSIDE BOLHÃO MARKET

Built in 1914, sitting in the middle of the Baixa district. It is situated on a sloped block and has a gate along each side of its rectangular footprint. The main entrance on the southern side opens to the fresh produce market on the ground floor.

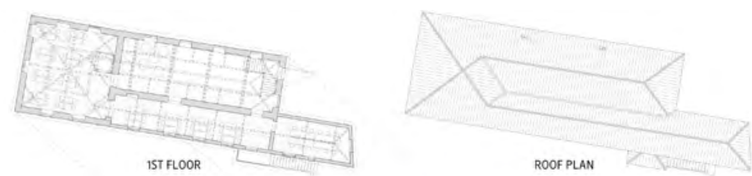
MERCADO MUNICIPAL DE MATOSINHOS

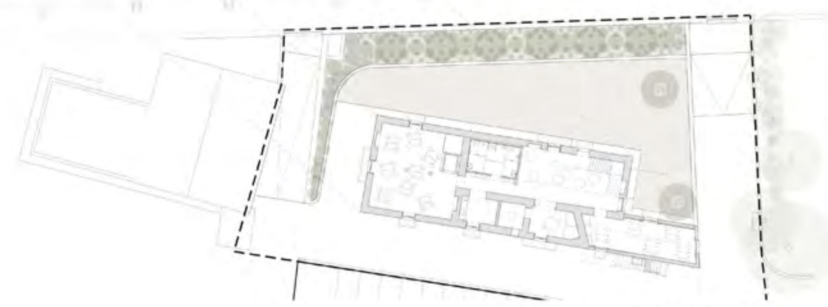
Built from the demolition of a block and was inaugurated 27 May 1952. Designed by the group – Architects. The north facade is decorated with ceramic panels by Américo Soares Braga.

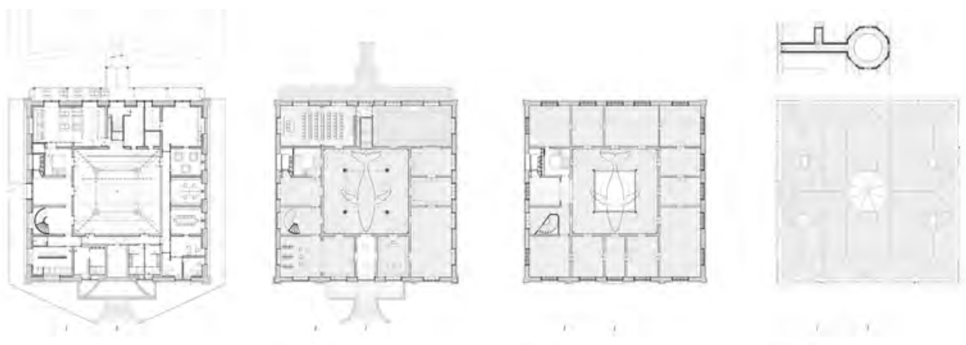


Route between original and proposed site

TRANS LOCATION/ EXPANSION OF THE GALLERY OF BIODIVERSITY: AUDIT

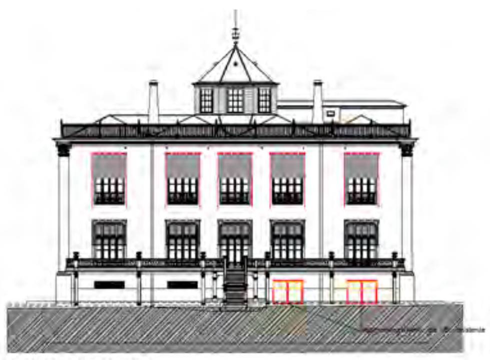




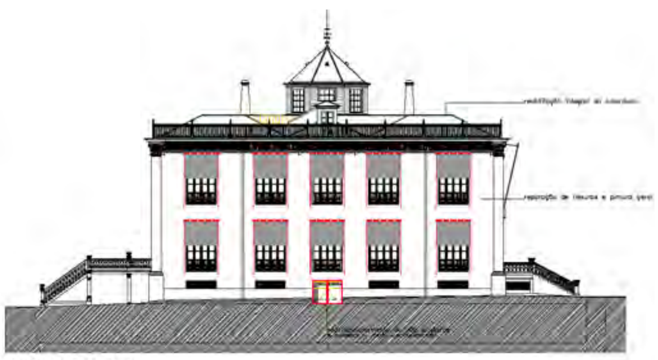


) PORTO

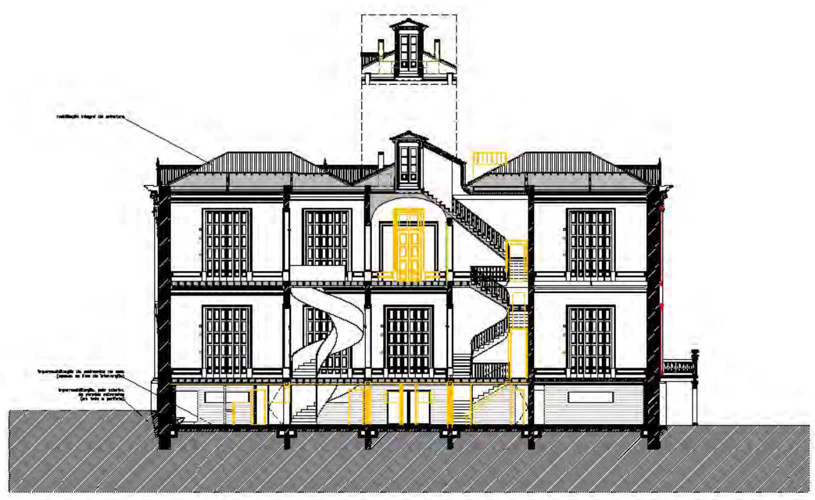
JARDIM BOTÂNICO DO PORTO
Casa Andresen



SOUTH ELEVATION



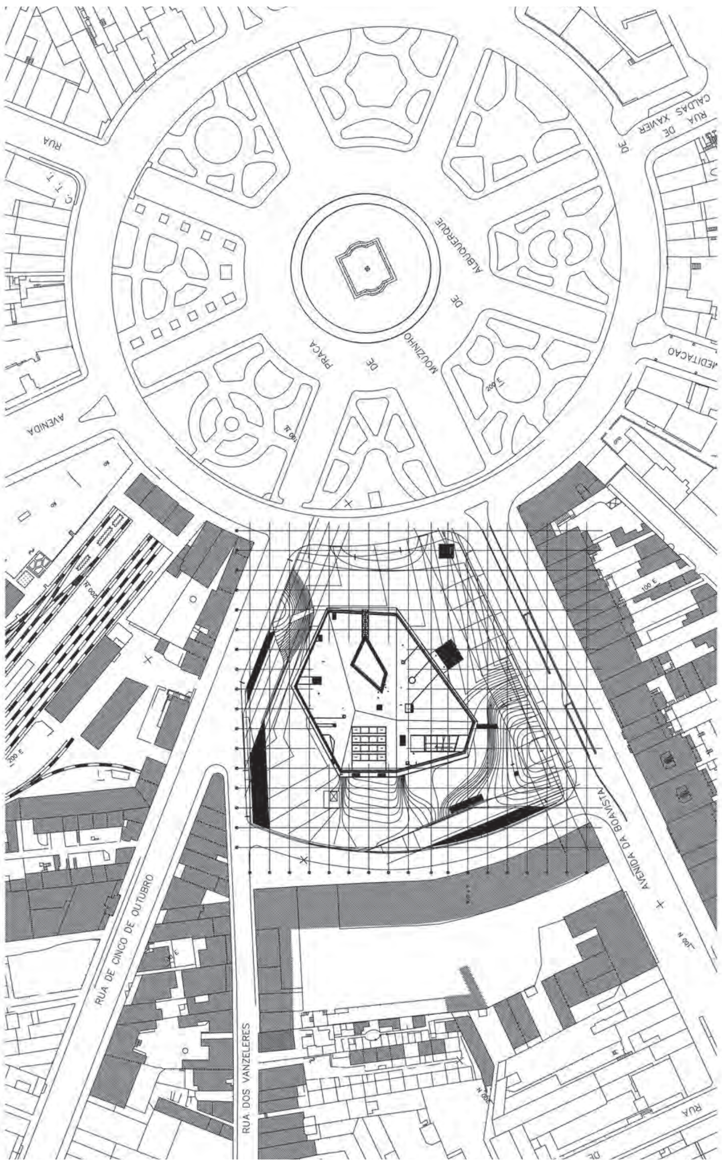
EAST ELEVATION



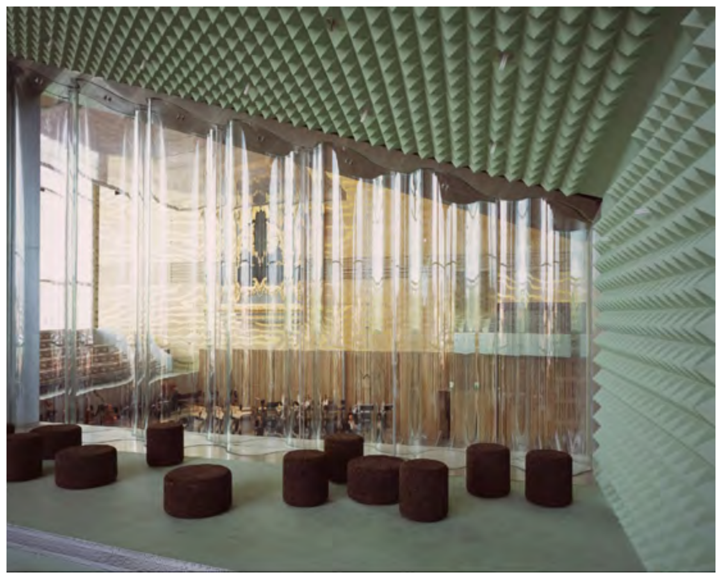
CROSS SECTION

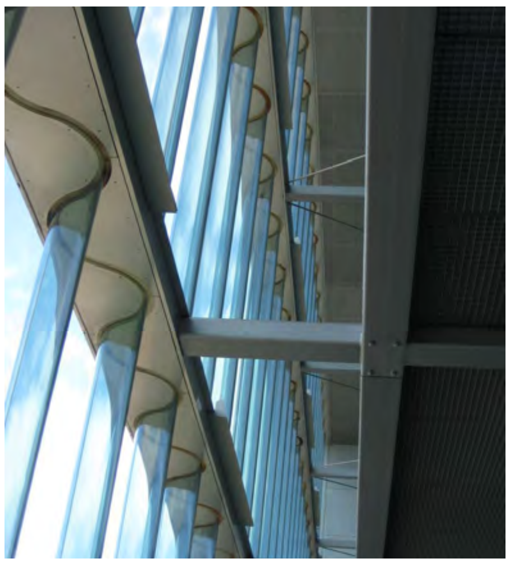
The expansion of the Gallery of Biodiversity enhances the indoor exhibition experience while allowing the existing gallery to develop into a garden-centric space. By relocating the internal museum exhibits to a purpose-built structure, the limitations of the original building are avoided, enabling a design tailored for immersive and interactive experiences that showcase native species in controlled environments. The existing gallery will turn into a landscape conservation, outdoor learning, and ecological immersion which is cohesive with the architecture of the existing gallery building.

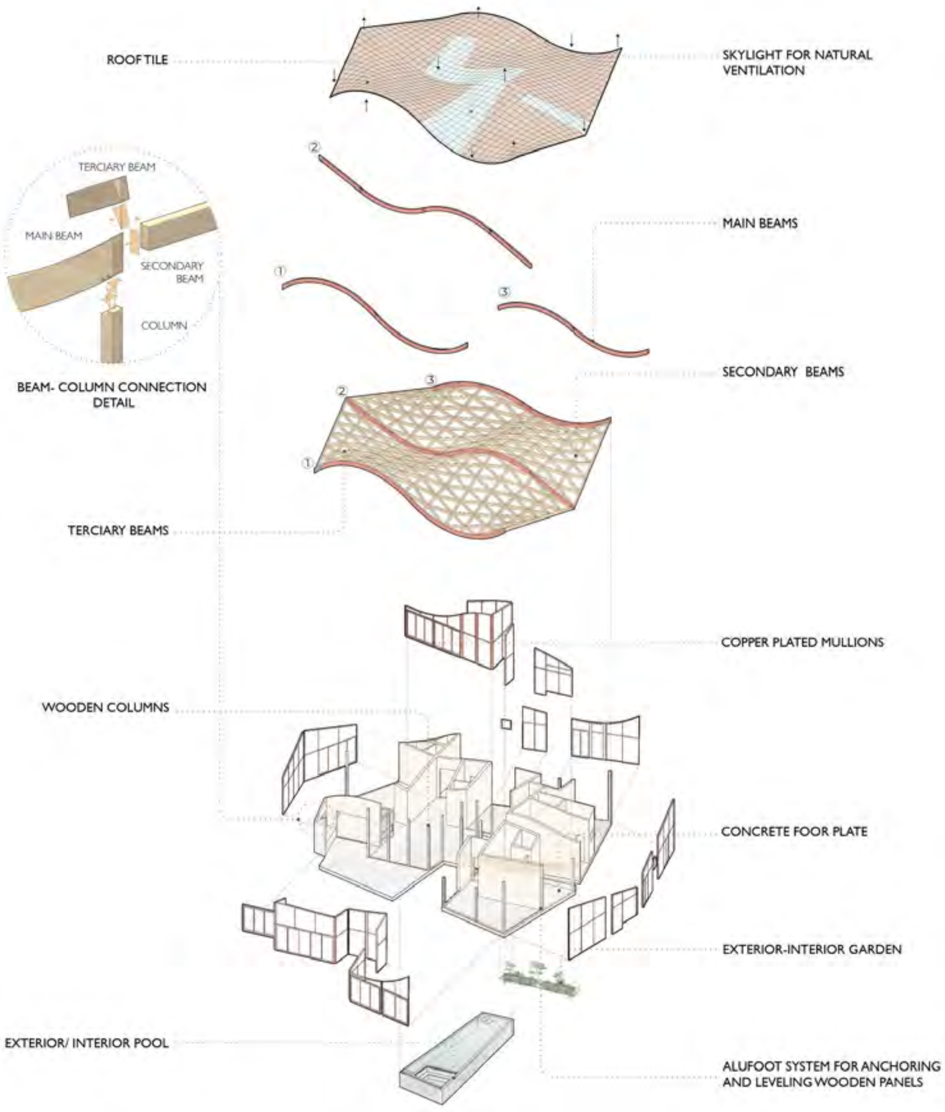
PRECEDENT STUDY ON THE ARCHITECTURAL STRATEGIES FOR LIGHT ENTRY AND DIFFUSION WITHIN MUSEUM SPACES



The casa de musica's Auditorium's two large glass facades allow natural light to illuminate the space. Each glass facade is approximately 23.2 meters wide and 14 meters high, consisting of three stacked "S"-curved glass panels. The upper two panels are suspended from the roof, while the lower panel rests on the base. This corrugated form enhances the glass's structural capacity, allowing it to withstand wind loads with minimal additional support. Horizontal trusses at the upper and lower thirds of the glass walls provide further stability, ensuring the facades can endure environmental forces effectively.







The roof of the Selva Alegre Residence in Los Chillos, Ecuador, designed by Leppanen Anker Arquitectura, takes inspiration from the nearby Andes Mountains to integrate with the landscape.

The roof's structure is made from European spruce timber, chosen for its strength and sustainability. It's three large curved beams, each between 20-24 meters long. The roof components were prefabricated in Europe using CNC technology, then shipped to Ecuador and assembled in just six weeks. The triangulated wood system gives the roof stability and allows for easy transport and construction.

The roof combines local clay tiles, glass panels, and exposed wood. The glass areas bring in daylight, reducing the need for artificial lighting. Structurally, the design allows for natural ventilation through the "chimney effect," which improves airflow and reduces energy use. Timber, as a low-carbon material, also helps make the building more sustainable.

ORIGINAL SITE EXPLORATION

Trees and Srubs

Am - Acer monspessulanum L / Montpellier maple
Ap - Acer pseudoplatanus L / Sycamore maple
Ag - Alnus glutnosa (L.) Gaertn / Common alder
Au - Arbutus unedo L / Strawberry tree
Bp - Betula pubescens Ehrh / Common white birch
Bs - Buxus sempervirens L / Common box
Cs - Ceratonia siliqua L / Carob
Ch - Chamaerops humilis L / Dwarf fan palm
Cal - Cistus albidus L / White-leaved rock rose
Cp - Cistus populifolius L / Poplar-leaved cistus
Cl - Cistus ladanifer L / Gum rockrose
Ca - Corylus avellana L / Common hazel
Cm - Crataegus monogyna Jacq / May blossom
Ea - Erica arborea L / Briar root
Ec - Erica cinerea L / Bell heather
Fa - Frangula alnus Mill / Alder buckthorn
Ia - Ilex aquifolium L / Holly
Jo - Juniperus oxycedrus L / Brown-berried juniper
Ln - Laurus nobilis L / Bay tree
Lm - Lavandula multfida L / Egyp an lavender
Ls - Lavandula stoechas L / French lavender
Mc - Myrtus communis L / Common myrtle
Oe - Olea europaea L / Olive tree
Or - Osmunda regalis L / Royal fern
Pi - Persea indica (L.) Spreng / Canary wood
Paz - Picconia azorica (Tu n) Knobl / Azorean Picconia
Ppi - Pinus pinaster Aiton / Mari me pine
Pp - Pinus pinea L / Stone pine
Ps - Pinus sylvestris L / Scots pine
Pt - Pistacia terebinthus L / Terebinth tree
Pa - Prunus avium L / Cherry tree
Pl - Prunus lusitanica L / Portugal laurel
Qc - Quercus canariensis Willd / Algerian oak
Qcc - Quercus coccifera L / Kermes oak
Qf - Quercus faginea Lam / Portuguese oak
Ql - Quercus lusitanica Lam / Gall oak
Qp - Quercus pubescens Willd / Nepal oak
Qpy - Quercus pyrenaica Willd / Pyrenean oak
Qr - Quercus robur L / English oak
Qro - Quercus rotundifolia Lam / Holm oak
Qs - Quercus suber L / Cork oak
Ra - Rhamnus alaternus L / Italian buckthorn
Rp - Rhododendron pontcum L / Pon ca rhododendron
Ra - Ruscus aculeatus L / Butcher's broom
Sa - Salix atrocinerea Brot / Rusty Sallow
Tb - Taxus baccata L / Irish yew
Ue - Ulex europaeus L / Common gorse
Vo - Viburnum opulus L / Guelder rose
Vt - Viburnum tnus L / Laurus nus
Wr - Woodwardia radicans L / European chain fern

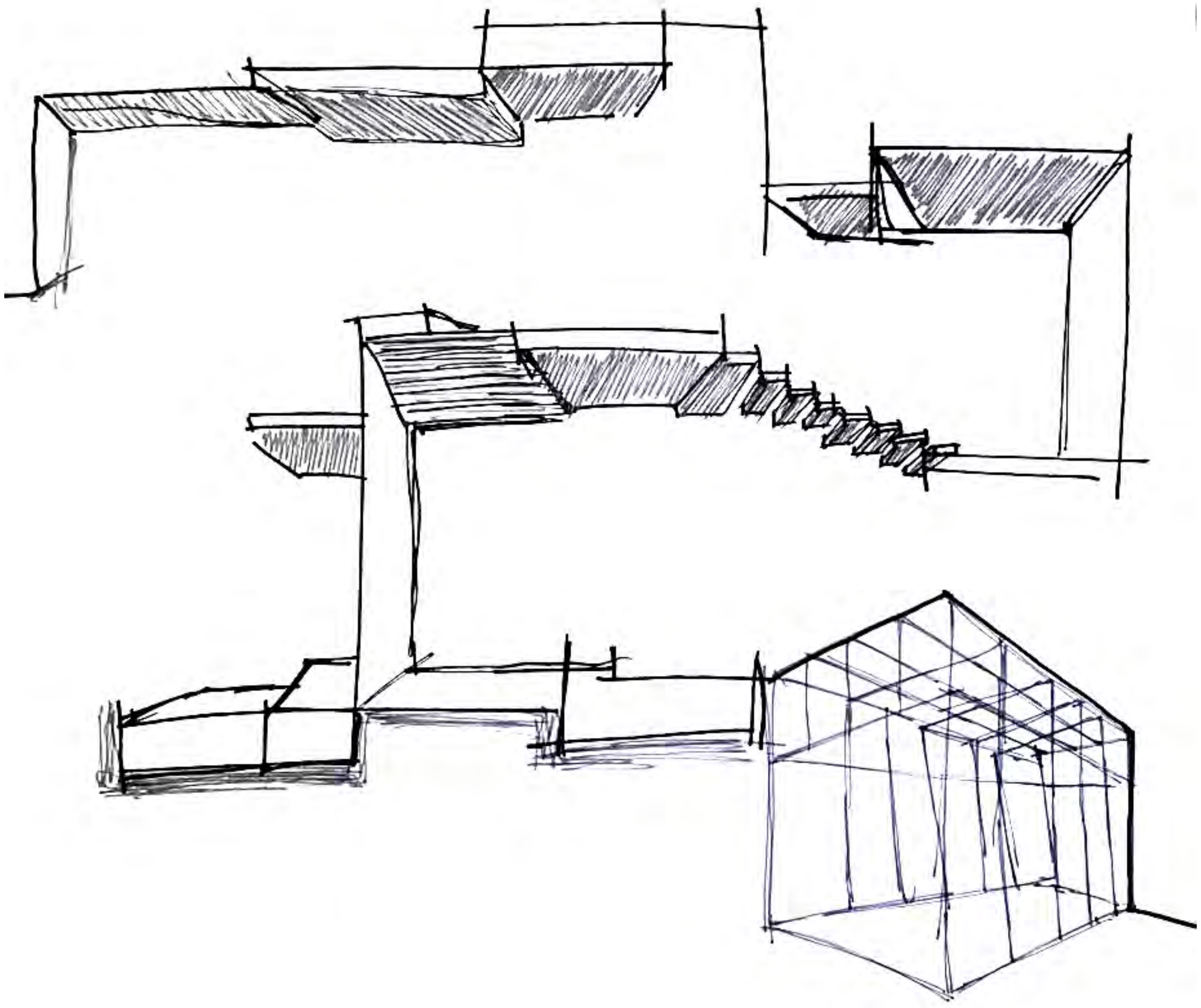
Camellia japonica Diversity:

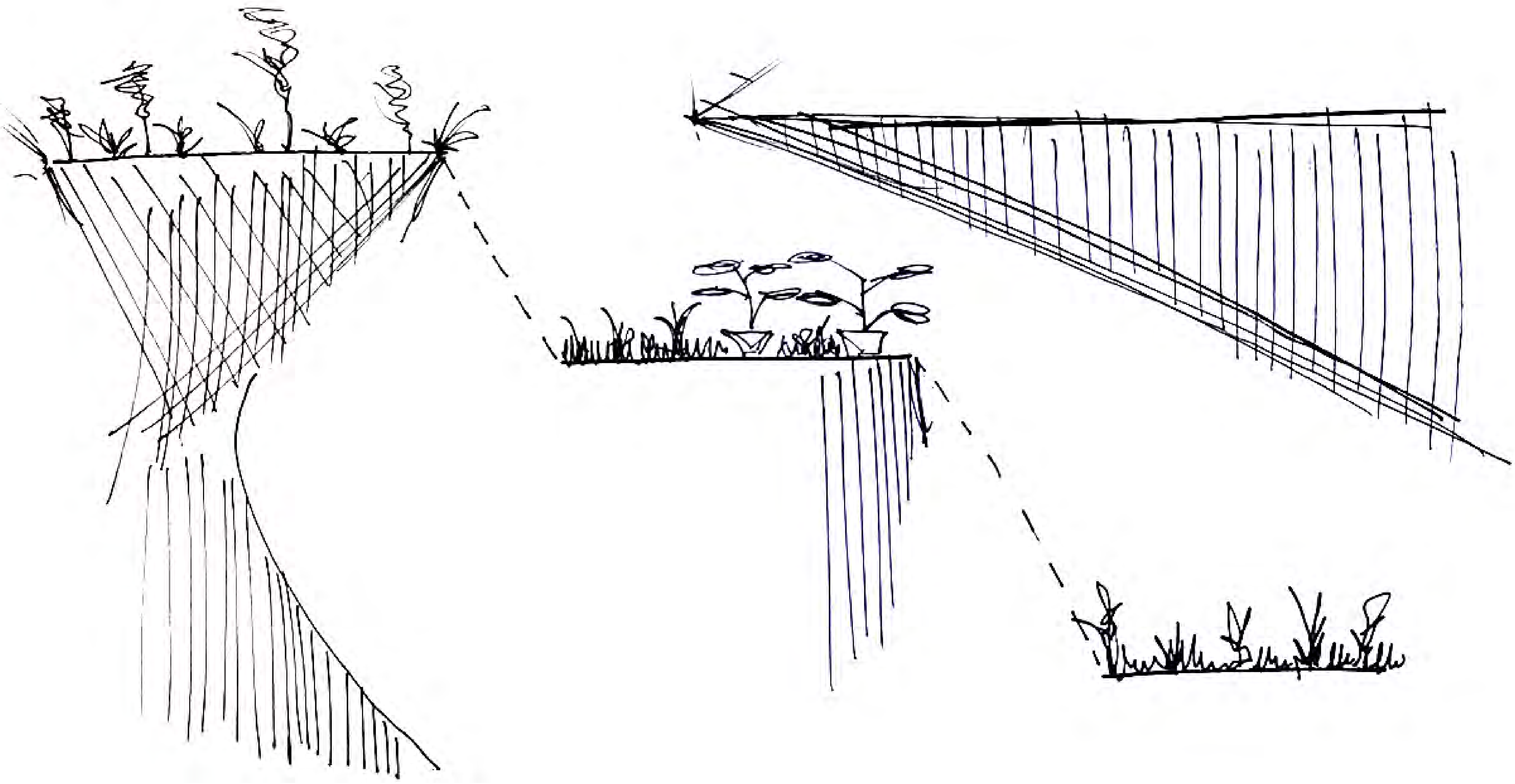
1 - Camellia japonica ‘Alba Mínima’
2 - Camellia japonica ‘Alberto Allen’
3 - Camellia japonica ‘Alberto Barbosa’
4 - Camellia japonica ‘Alberto Borralho’
5 - Camellia japonica ‘Alegria de Albar’
6 - Camellia japonica ‘Alexandre Herculano’
7 - Camellia japonica ‘Anagua do Pedro’
8 - Camellia japonica ‘Anémona Cadente’
9 - Camellia japonica ‘Anémona Rosea Portuensis’
10 - Camellia japonica ‘Anémona Variegata Portuensis’
11 - Camellia japonica ‘Angelina Vieira’
12 - Camellia japonica ‘António Bernardo Ferreira’
13 - Camellia japonica ‘Augusto Leal de Gouveia Pinto’
14 - Camellia japonica ‘Autonomia dos Açores’
15 - Camellia japonica ‘Barão de Mogofres’
16 - Camellia japonica ‘Baroneza de Villar’
17 - Camellia japonica ‘Bella de Fiães’
18 - Camellia japonica ‘Bella Infanta’
19 - Camellia japonica ‘Bella Portuense’
20 - Camellia japonica ‘Belleza Peregrina’
21 - Camellia japonica ‘Bracarensis’
22 - Camellia japonica ‘Brachariana’
23 - Camellia japonica ‘Brotero’
24 - Camellia japonica ‘Calliope (Fiães)’
25 - Camellia japonica ‘Camões’
26 - Camellia japonica ‘Carlos Van-Zeller’
27 - Camellia japonica ‘Carneria’
28 - Camellia japonica ‘Chris ano Van-Zeller’
29 - Camellia japonica ‘Conde da Torre’
30 - Camellia japonica ‘Conde de Bomfim’
31 - Camellia japonica ‘Condessa da Torre’
32 - Camellia japonica ‘D. Herzília de Freitas Magalhães’
33 - Camellia japonica ‘D. Jane Andresen’
34 - Camellia japonica ‘D. Maria Helena Van-Zeller’
35 - Camellia japonica ‘D. Pedro II, Imperador do Brazil’
36 - Camellia japonica ‘D. Pedro V, Rei de Portugal’
37 - Camellia japonica ‘Dama do Paço’
38 - Camellia japonica ‘D. Carlos Fernando’
39 - Camellia japonica ‘D. Adelaide Paula’
40 - Camellia japonica ‘D. Carlota de Barros Van-Zeller’
41 - Camellia japonica ‘D. Inês’
42 - Camellia japonica ‘D. Leonor Sá’
43 - Camellia japonica ‘Duarte de Oliveira’
44 - Camellia japonica ‘Duque de Bragança’
45 - Camellia japonica ‘Duque do Porto’
46 - Camellia japonica ‘Duriensis’
47 - Camellia japonica ‘Egas Moniz’
48 - Camellia japonica ‘Endymião’
49 - Camellia japonica ‘Exímia Alba’
50 - Camellia japonica ‘Fada do Mirante’
51 - Camellia japonica ‘Felícia Pimentel’
52 - Camellia japonica ‘Formosa’
52 - Camellia japonica ‘Formosa’
53 - Camellia japonica ‘Frei Luiz de Sousa’
54 - Camellia japonica ‘Gigante de Fiães’
55 - Camellia japonica ‘Gran Vasco’
56 - Camellia japonica ‘Imperial Lusitanica’
57 - Camellia japonica ‘Infanta D. Maria Anna’
58 - Camellia japonica ‘Infante D. Fernando’
59 - Camellia japonica ‘Jáo António’
60 - Camellia japonica ‘Jeronymo Monteiro da Costa’
61 - Camellia japonica ‘José Marques Loureiro’
62 - Camellia japonica ‘Manoelinho d’Évora’
63 - Camellia japonica ‘Maria do Sameiro’
64 - Camellia japonica ‘Maria Irene’
65 - Camellia japonica ‘Marquêz da Fronteira’
66 - Camellia japonica ‘Moura Encantada’
67 - Camellia japonica ’Myr folia Lusitana’
68 - Camellia japonica ‘Nympha de Fiães’
69 - Camellia japonica ‘Paço de Santo António’
70 - Camellia japonica ‘Padre Manoel dos Santos’
71 - Camellia japonica ‘Peonia Superba’
72 - Camellia japonica ‘Perfeição de Villar’
73 - Camellia japonica ‘Pomponia Alba’
74 - Camellia japonica ‘Pomponia Alba Monstruosa’
75 - Camellia japonica ‘Pomponia Alba Odorata’
76 - Camellia japonica ‘Pomponia Dilecta’
77 - Camellia japonica ‘Pomponia Estriata Portuensis’
78 - Camellia japonica ‘Pomponia Luctea’
79 - Camellia japonica ‘Pomponia Pedro a’
80 - Camellia japonica ‘Primeiro de Fevereiro’
81 - Camellia japonica ‘Princeza Real’
82 - Camellia japonica ‘Quita’
83 - Camellia japonica ‘Rainha Santa Isabel’
84 - Camellia japonica ‘Rei Ar sta’
85 - Camellia japonica ‘Saudade de Mar ns Branco’
86 - Camellia japonica ‘Silvestria’
87 - Camellia japonica ‘Stellata Estrelinha’
88 - Camellia japonica ‘Surpreza de J. Marques Loureiro’
89 - Camellia japonica ‘Tedinia’
90 - Camellia japonica ‘Terpsicore’
91 - Camellia japonica ‘Três Corações’
92 - Camellia japonica ‘Vanzelleria’
93 - Camellia japonica ‘Variegata Superba’
94 - Camellia japonica ‘Villar d’Allen’
95 - Camellia japonica ‘Viriato’
96 - Camellia japonica ‘Visconde dÁlmeida Garre
97 - Camellia japonica ‘Visconde D’Alvellos’
98 - Camellia japonica ‘Viscondessa de Loureiro’
99 - Camellia sasanqua ‘Barão de Soutelinho’

Greenhouse
Fountain
Water Tank
Pond
Pergola

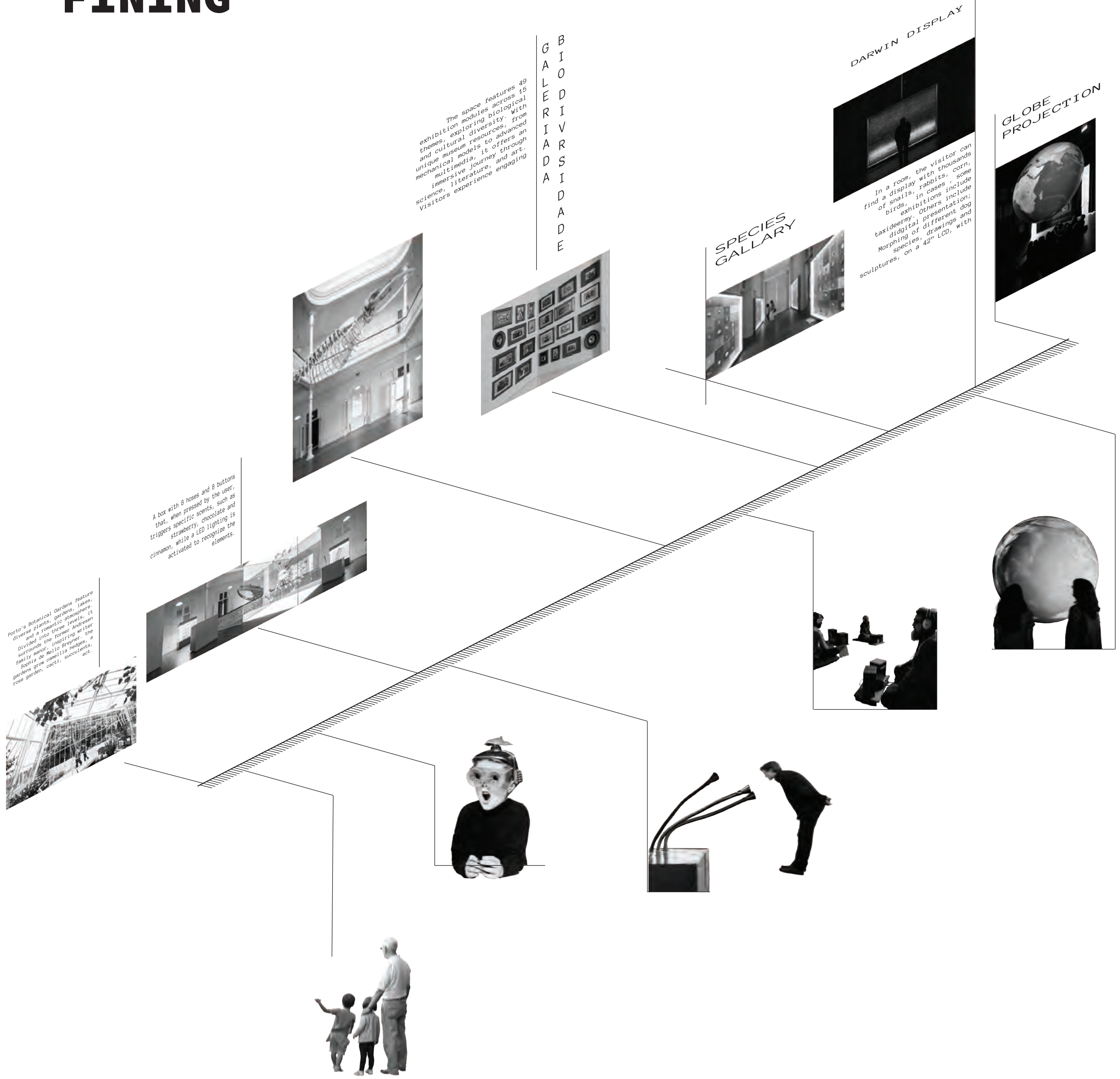
DENSE GREENERY WITH LOW SPECIES VARIETY

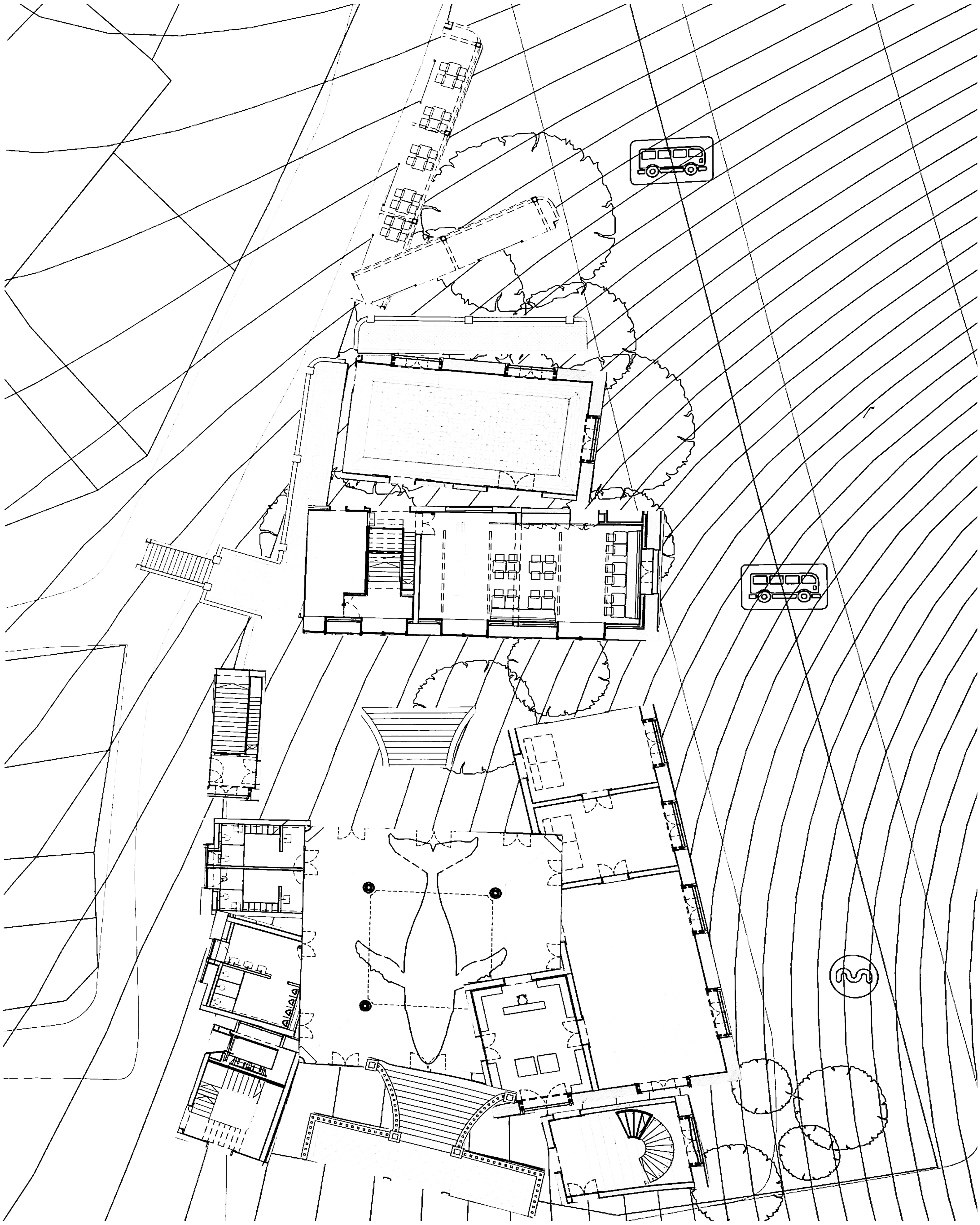
INITIAL TOPOGRAPHY ADAPTATION EXPLORATION





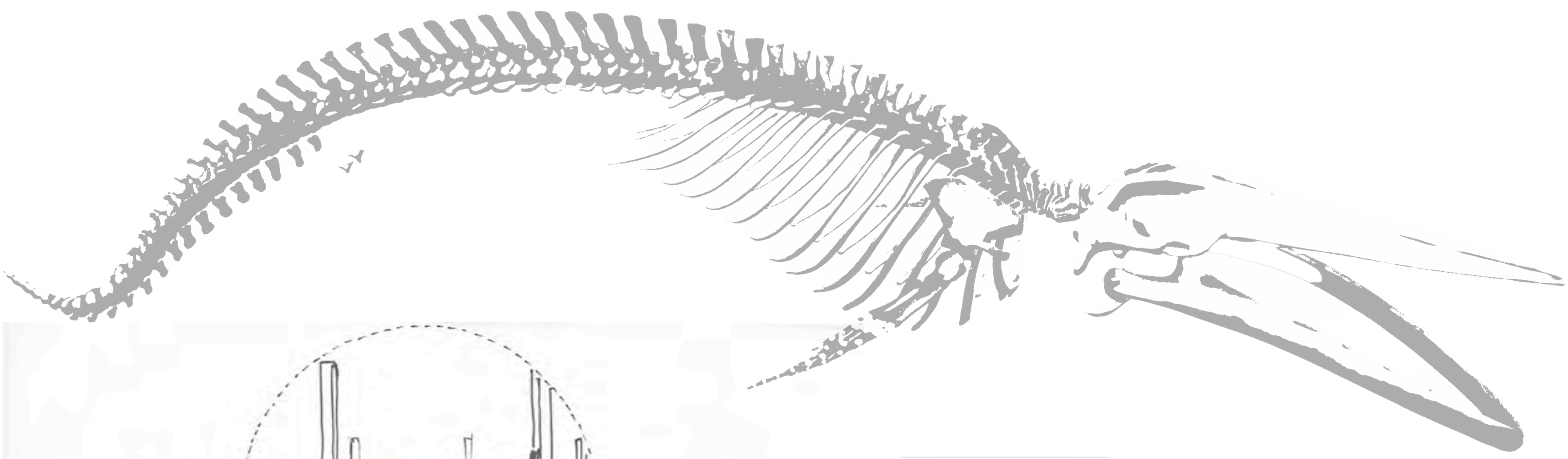
ORIGINAL SITE PROGRAM-MING ORGANISING AND RE-FINING

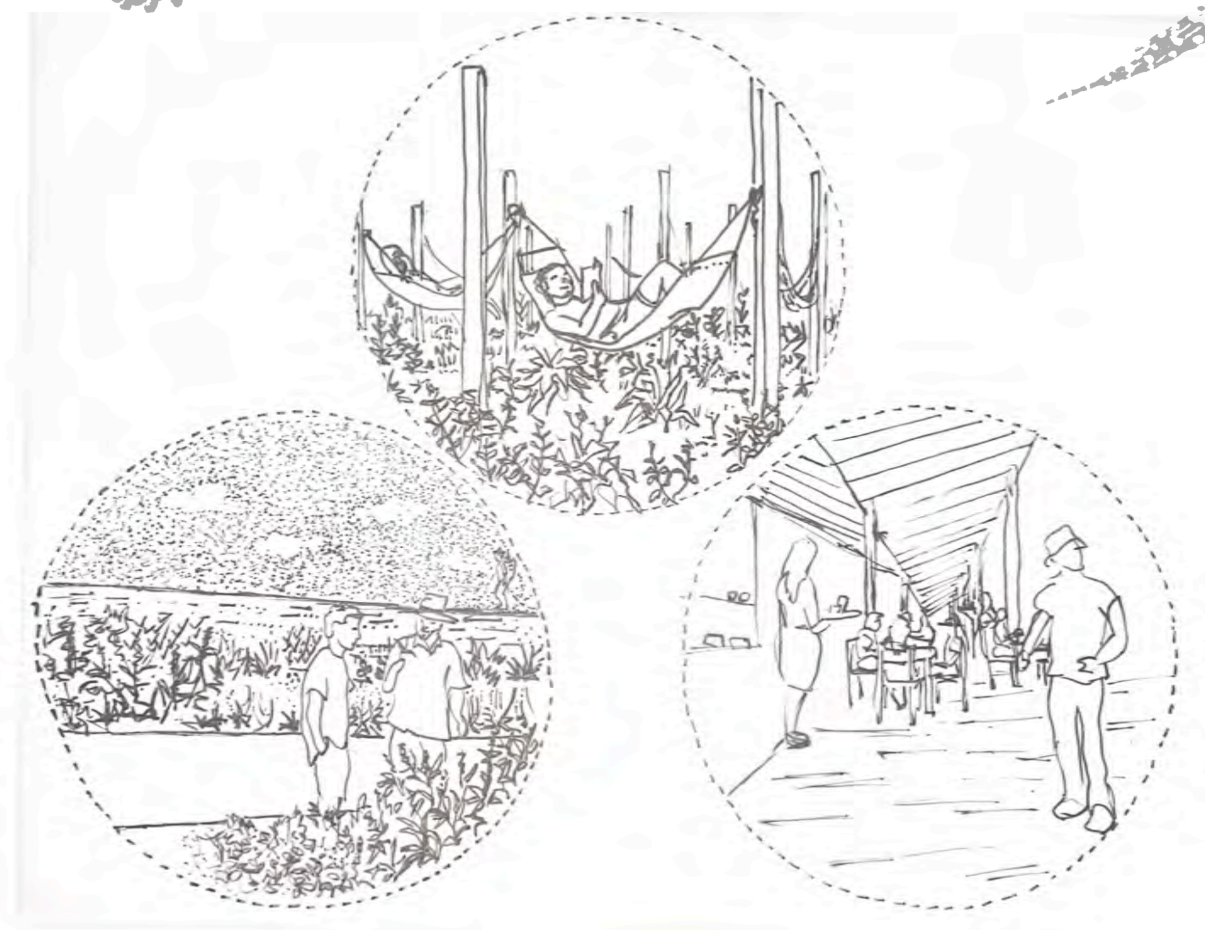


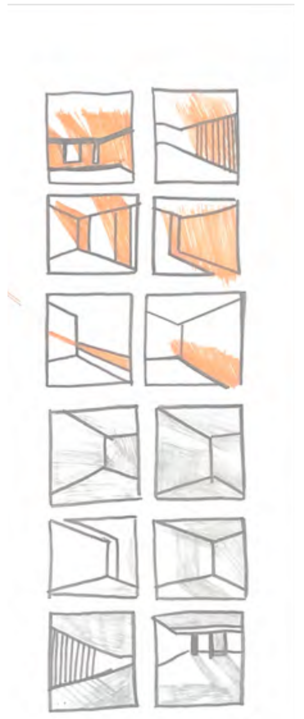


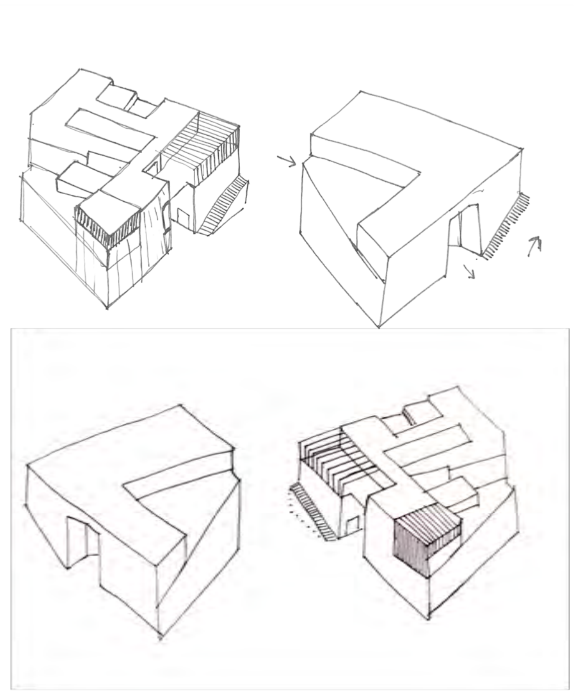
GREEN HOUSE AND PAMELAS OF THE ORIGINAL
GALLERY OF BIODIVERSITY

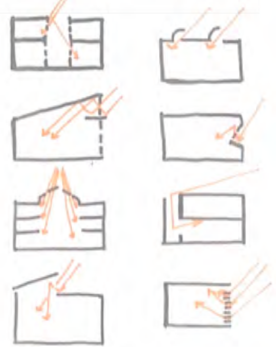
LANDSCAPING DEVELOPMENT

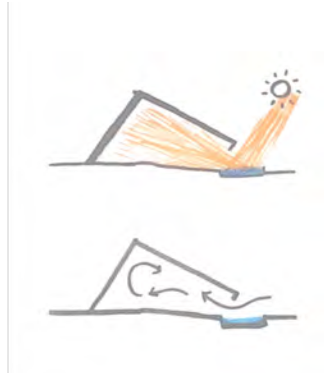




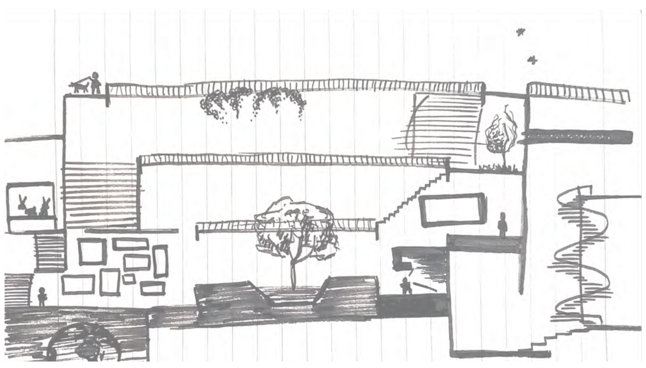


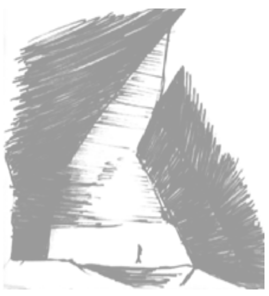


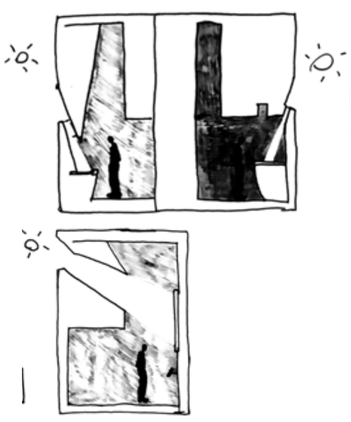


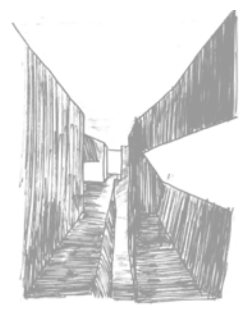


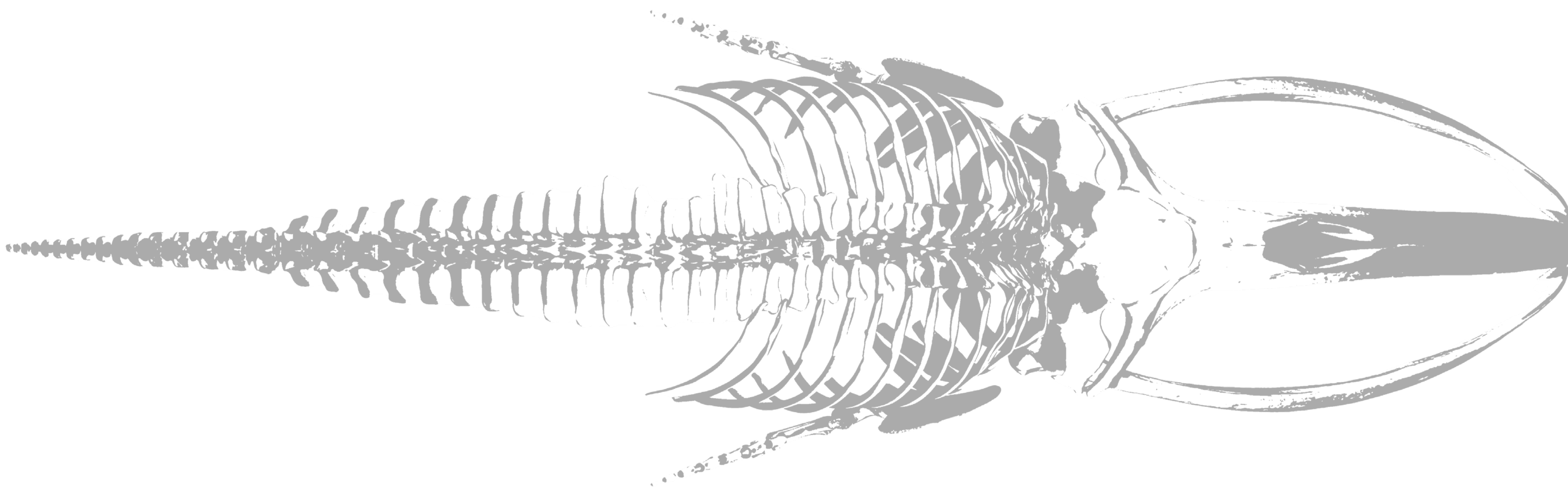
SKETCHES AND EXPLORATORY DRAWING RELEVANT TO THE PROJECTS DEVELOPMENT





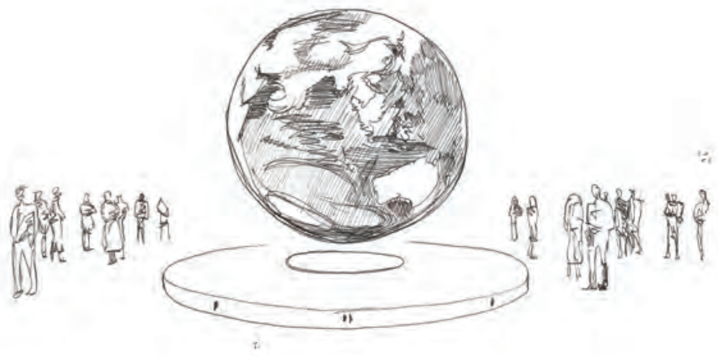






PROGRAMMING AND SPATIAL ORGANIZATION OF THE PROPOSED BIODIVERSITY GALLERY, DEVELOPED IN REFERENCE TO THE ORIGINAL GALLERY’S FUNCTIONAL AND CONCEPTUAL STRUCTURE

ROOFTOP GARDEN INSPIRED BY THE PAGINAS IN THE GALLERY OF BIODIVERSITY



GLOBAL PROJECTION EXHIBITION FROM THE ORIGINAL GALLERY OF BIODIVERSITY

VISION DIVERSITY EXHIBITION FROM THE ORIGINAL GALLERY OF BIODIVERSITY

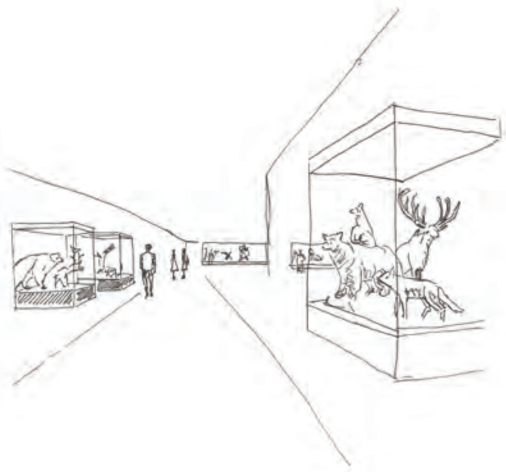
DARWIN ADAPTION VIDEOS

FOSSIL AND ANTHROPOID EXHIBITION

AUDITORY EXHIBITION DIVERSITY OF HEARTBEATS FROM THE ORIGINAL GALLERY OF BIODIVERSITY

ADAPTIONS AND EVOLUTION ON SCREEN

SKELETON EXHIBITION

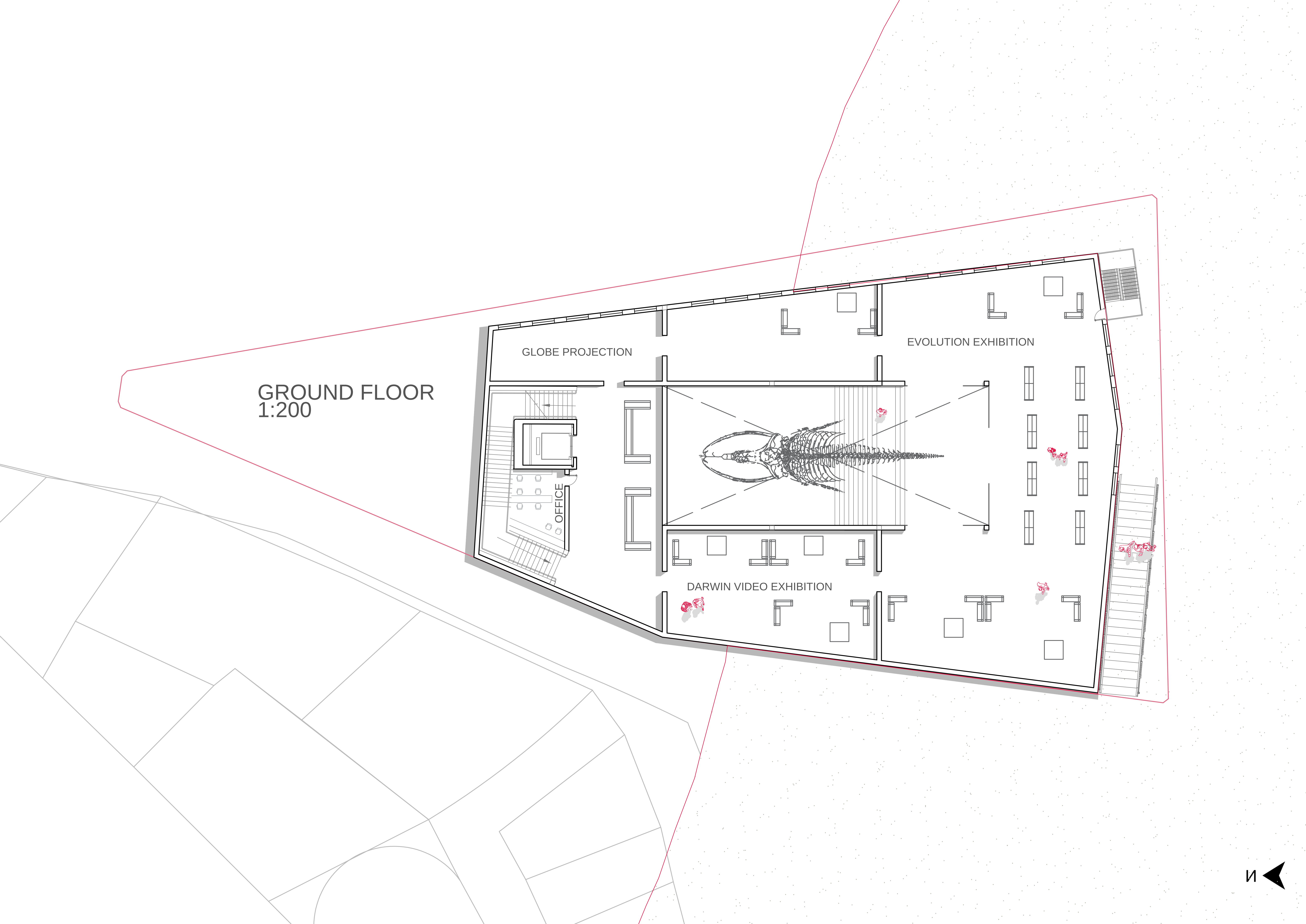


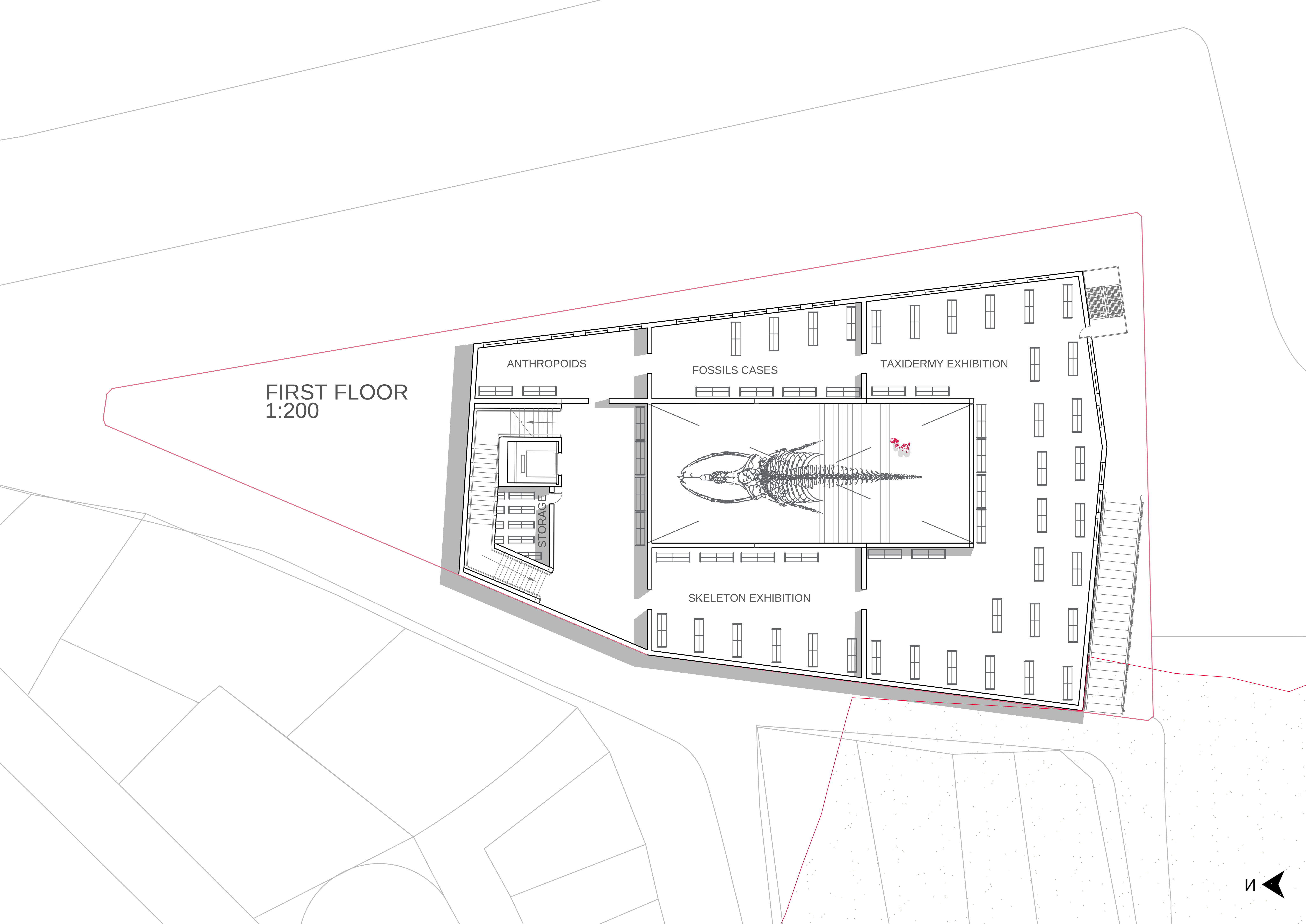
TAXIDERMY EXHIBITION

BOTANICAL GARDENS INSPIRED BY PORTO’S GARDENS OF BIODIVERSITY

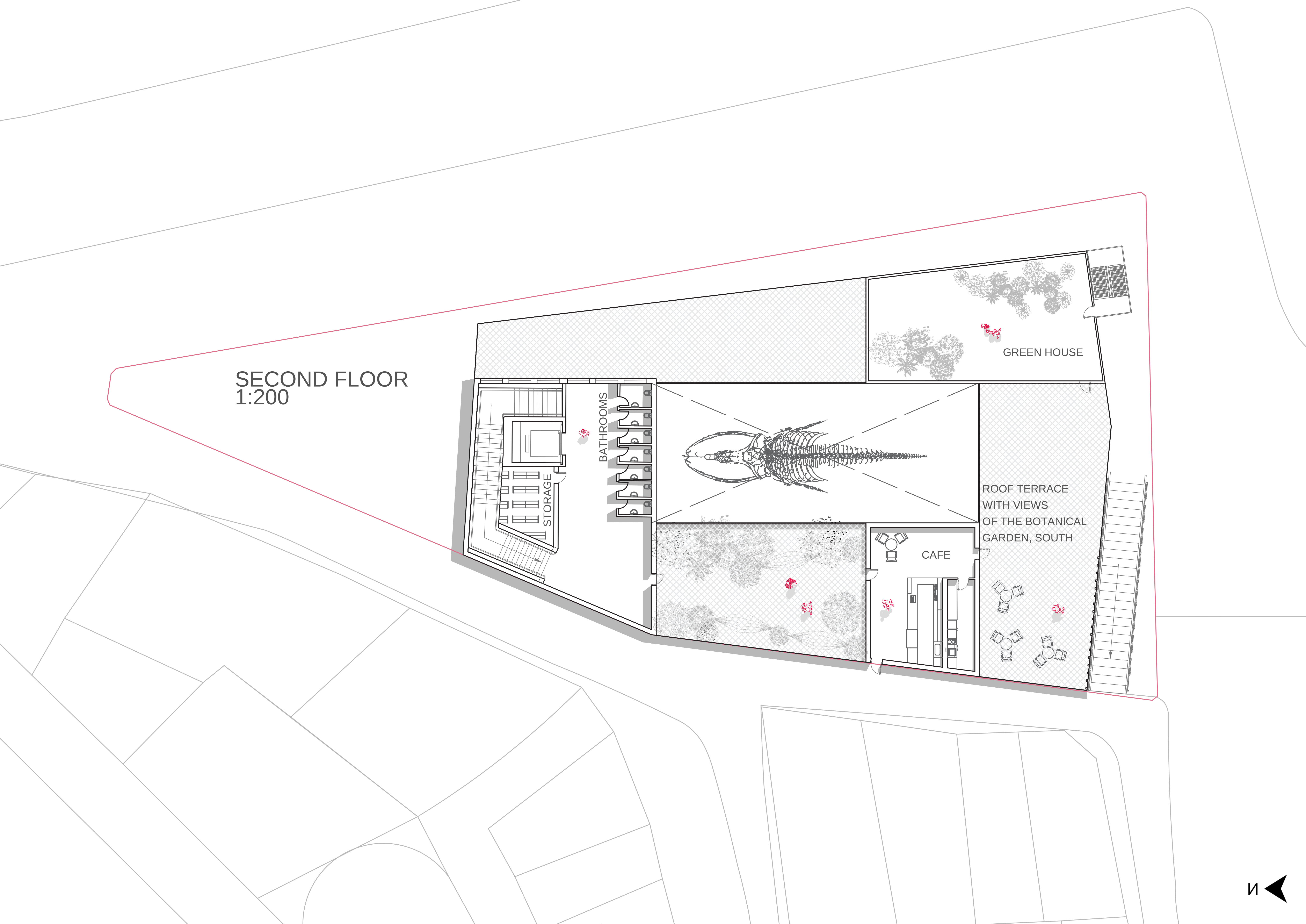
ORIGINAL MUSEUM OF BIODIVERSITY: MAP OF EXISTING TREE AND SHRUB PLANTINGS (DENSE GREENERY WITH LOW SPECIES VARIETY)

LOWER GROUND FLOOR
1:200


GROUND FLOOR
1:200
GLOBE PROJECTION
OFFICE
EVOLUTION EXHIBITION
DARWIN VIDEO EXHIBITION
N

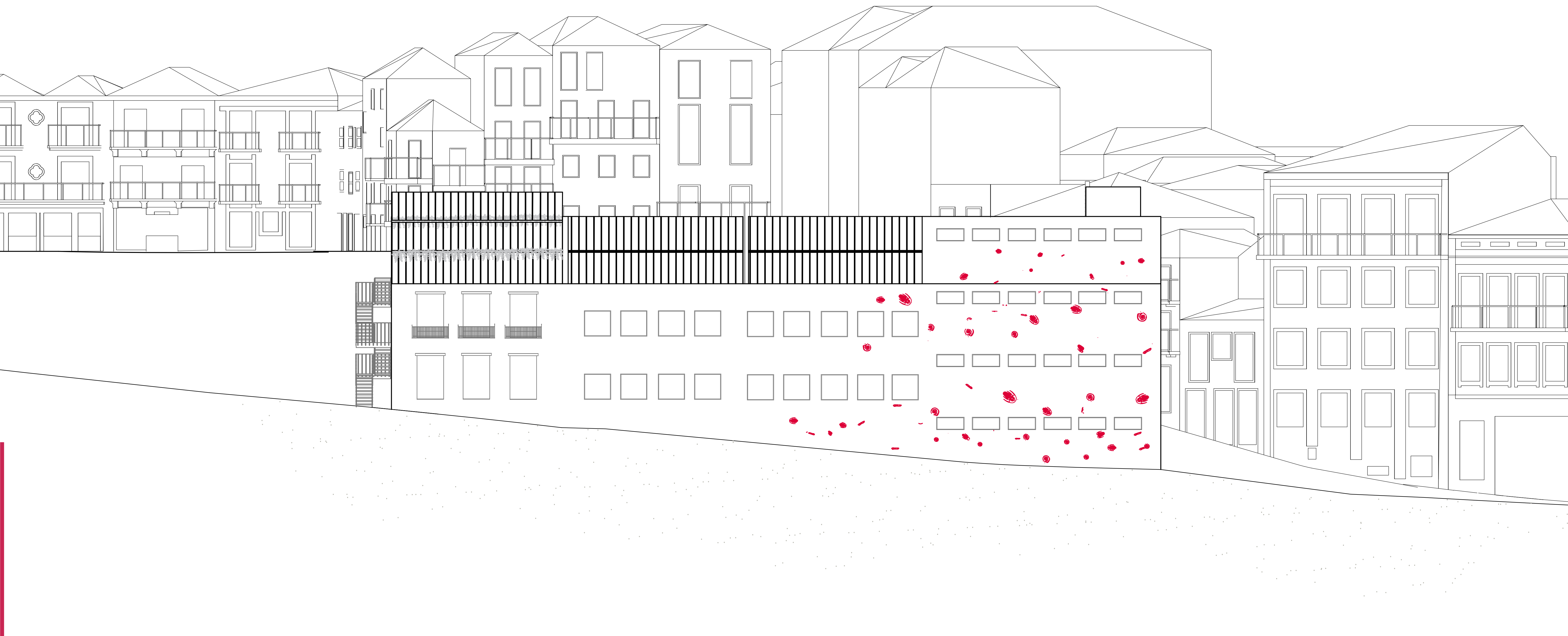


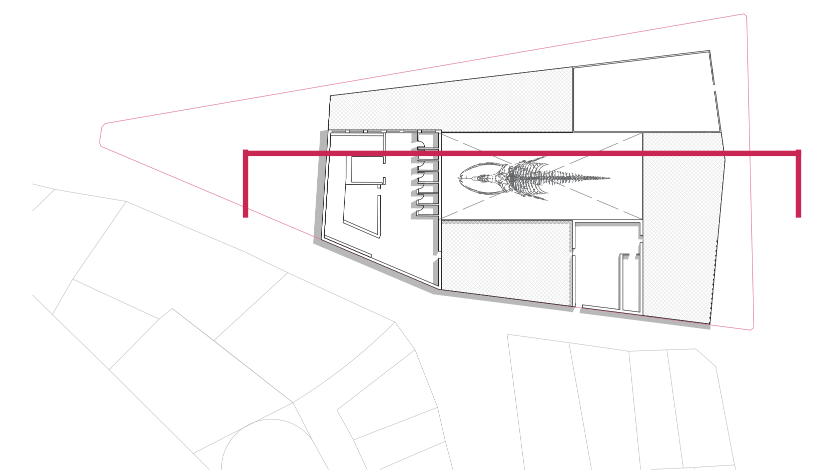
FIRST FLOOR
1:200
ANTHROPOIDS
FOSSILS CASES
TAXIDERMY EXHIBITION
STORAGE
SKELETON EXHIBITION
N


SECOND FLOOR
1:200
STORAGE
BATHROOMS
GREEN HOUSE
ROOF TERRACE
WITH VIEWS
OF THE BOTANICAL
GARDEN, SOUTH
CAFE
N

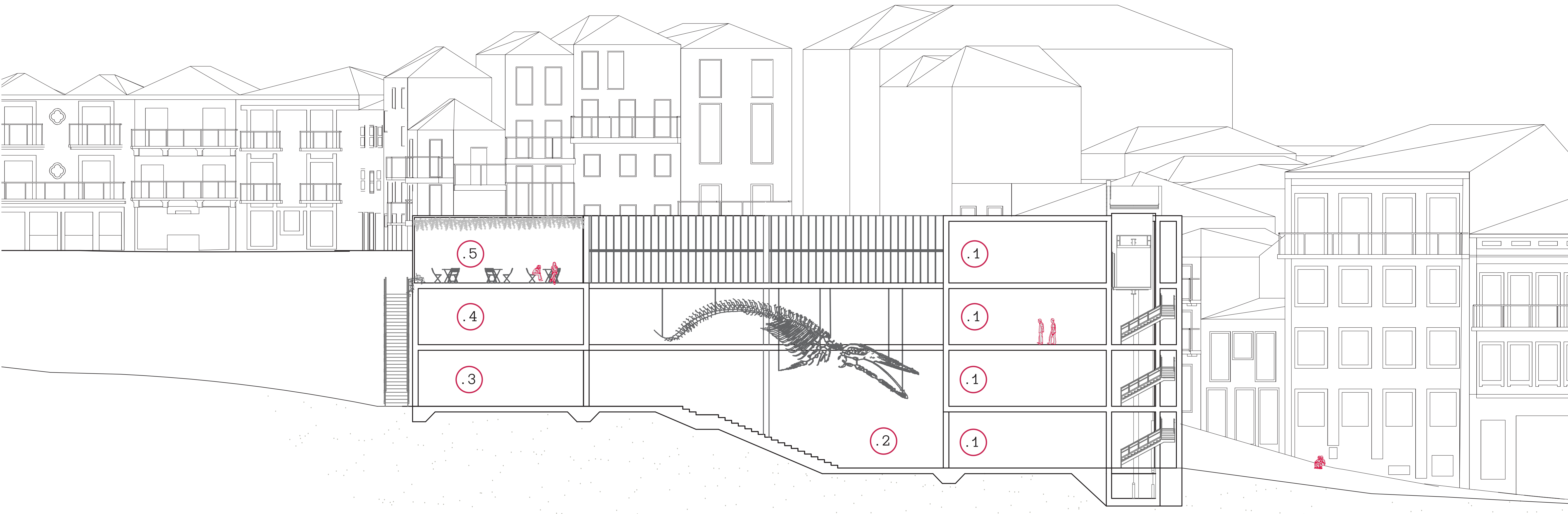
SOUTH FACADE 1:200

EAST FACADE 1:200

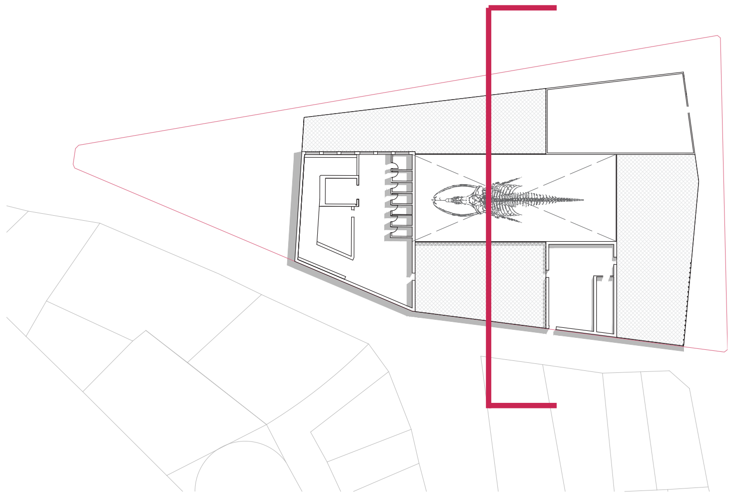




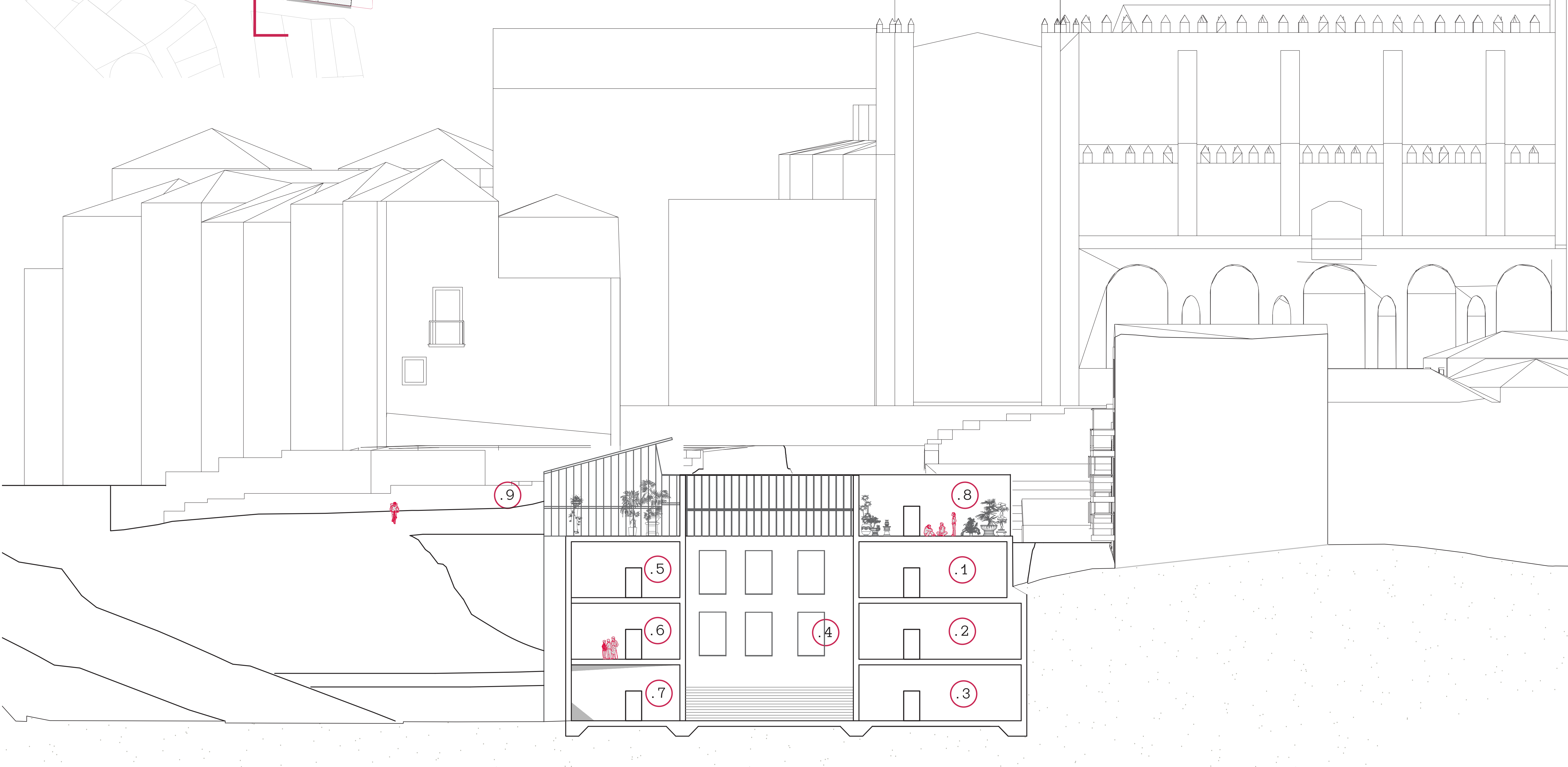
1.FOYER/ OVERFLOW EXHIBI-
TION SPACE
2.ATRIUM
3.EVOLUTION EXHIBITION
4.TAXIDERMY EXHIBITION
5.CAFE ‘GARDEN’



WEST SECTION 1:200



1. FOSSIL GALLERY
2. EVOLUTION EXHIBITION
3. VISION DIVERSITY EXHIBITION
4. ATRIUM/ OVERFLOW EXHIBITION SPACE
5. SKELETON GALLERY
6. DAWIN EXHIBITION
7. HEART-BEAT EXHIBITION
8. INHABITED, HAMMOCK GARDEN
9. UNINHABITED GREEN ROOF

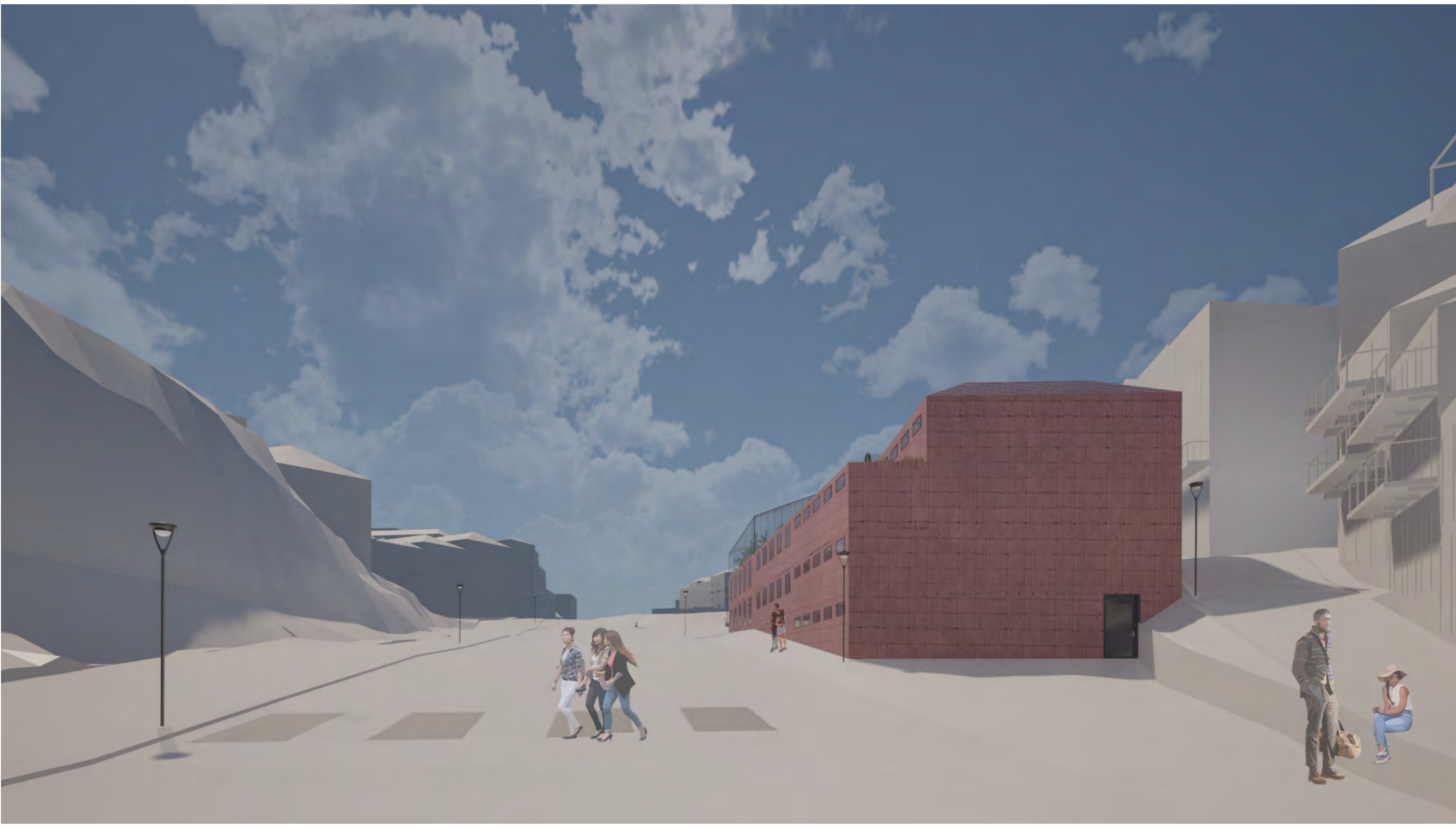


SOUTH SECTION 1:200

SEQUENCE 1: VIEW FROM POPULAR JUNCTION

SEQUENCE 3: ATRIUM VIEW

SEQUENCE 2: VIEW FROM ENTRANCE



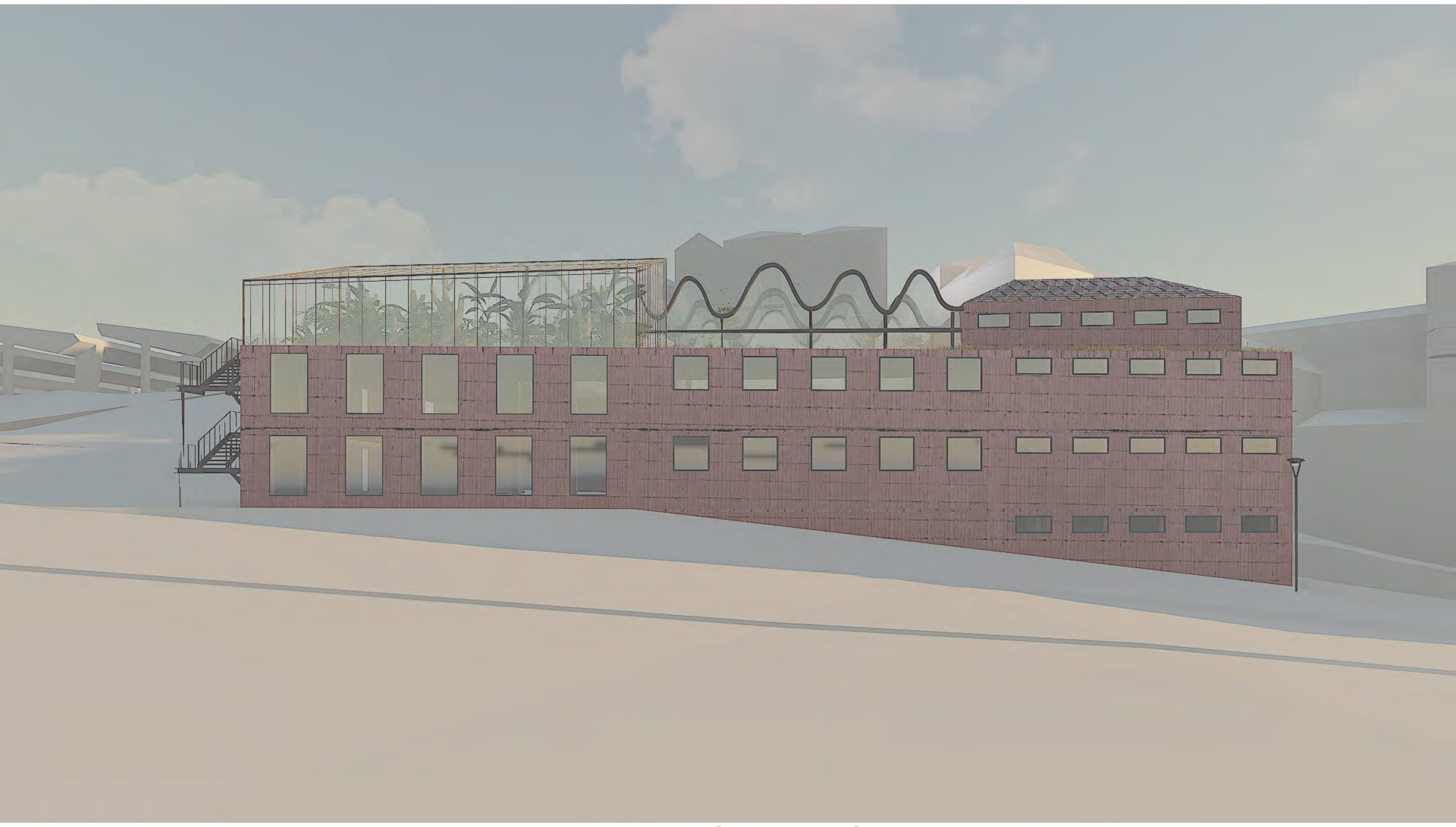
SEQUENCE 4: DARK EXHIBITION VIEW

SEQUENCE 5: VIEW IN DESERT GREEN HOUSE

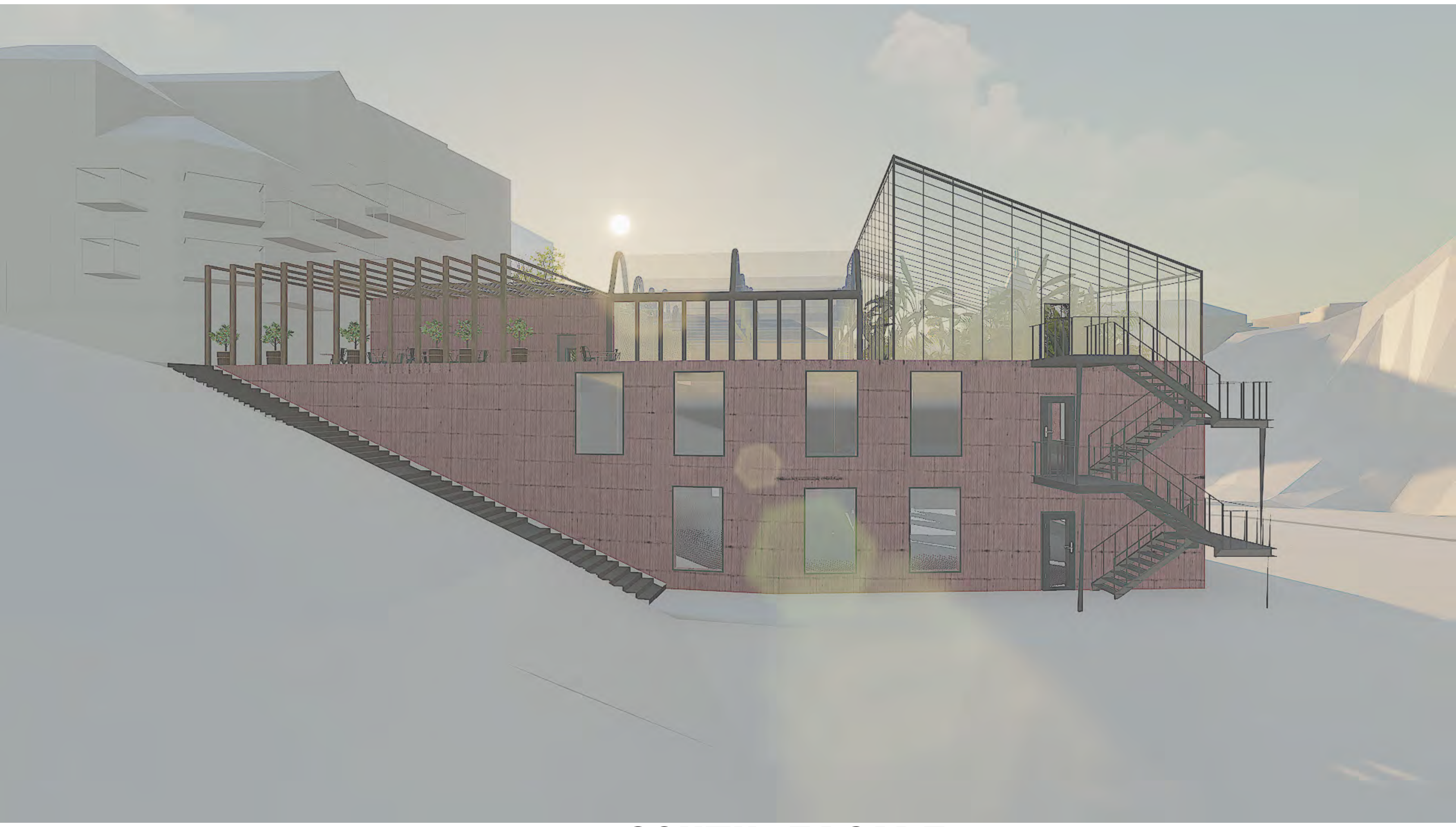
SEQUENCE 7: WEST ROAD VIEW

SEQUENCE 6: VIEW INHABITED GREEN ROOF

SEQUENCE 8: VIEW FROM CAFE AND TERRACE

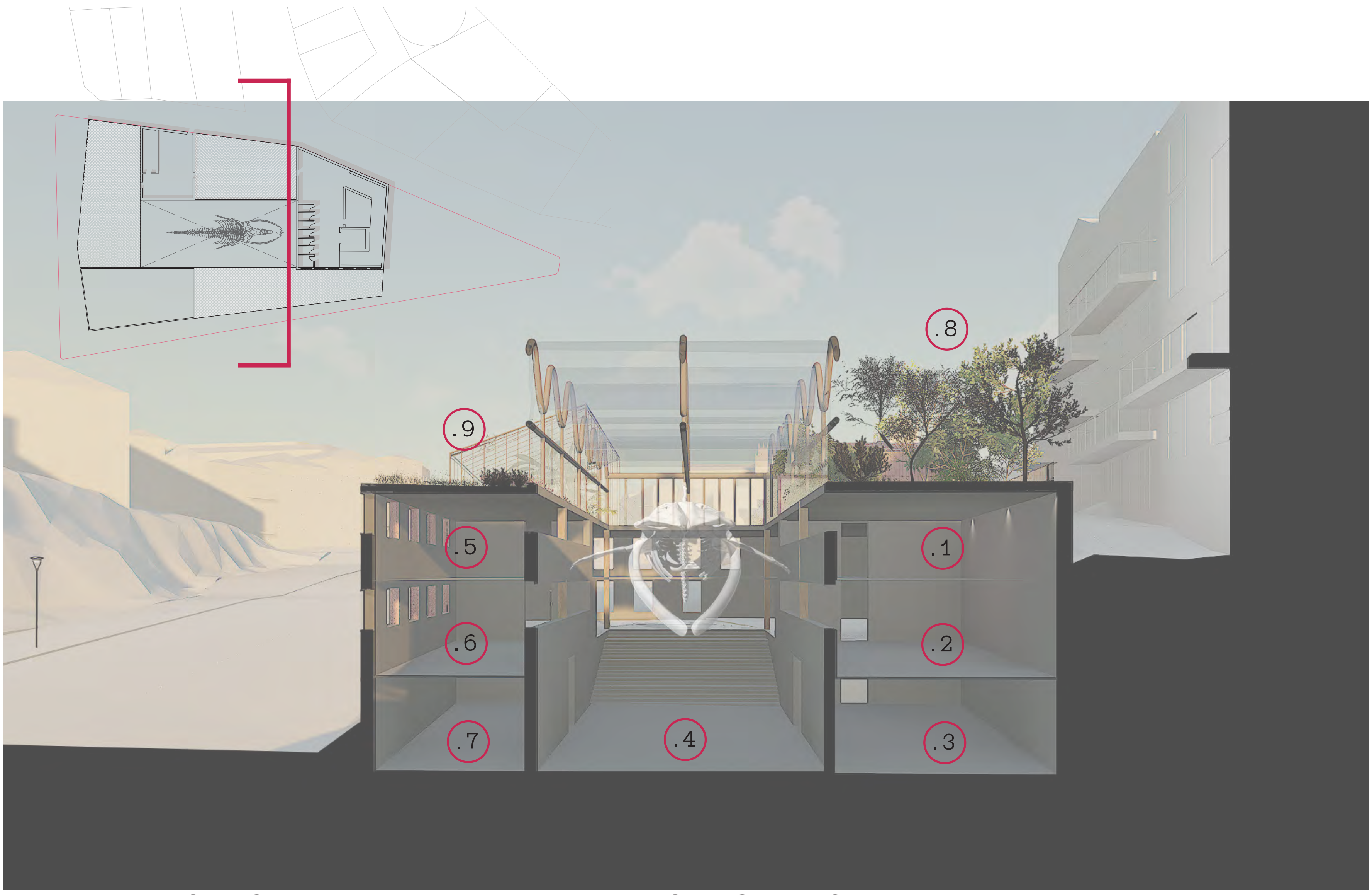


EAST FACADE 1:200 1700



SOUTH FACADE 1:200 1700

SHORT RENDERED SECTION A 1:200 1700



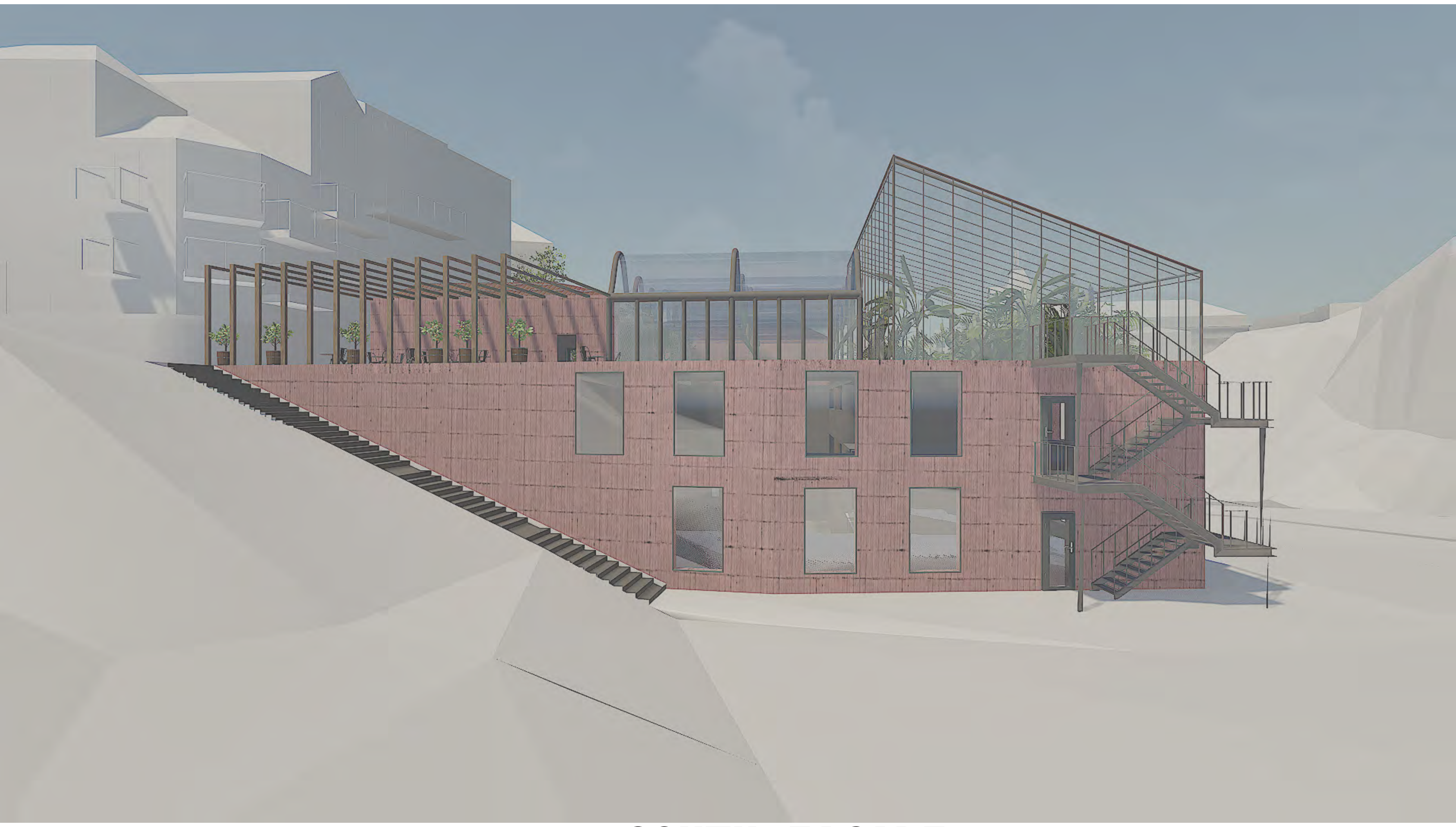
SHORT RENDERED SECTION B 1:200 1700

A. EVOLUTION EXHIBITION
B. TAXIDERMY EXHIBITION
C. DESERT PLANT GREENHOUSE
D. CAFE

1.FOSSIL GALLERY
2.EVOLUTION EXHIBITION
3.VISION DIVERSITY EXHIBITION
4. ATRIUM/ OVERFLOW EXHIBITION SPACE
5. SKELETON GALLERY

6.DAWIN EXHIBITION
7.HEART-BEAT EXHIBITION
8.INHABITED, HAMMOCK GARDEN
9.UNINHABITED GREEN ROOF

EAST FACADE 1:200 0800



0800 SOUTH FACADE 1:200 0800

SHORT RENDERED SECTION A 1:200 0800

SHORT RENDERED SECTION B 1:200 0800

A. EVOLUTION EXHIBITION
B. TAXIDERMY EXHIBITION
C. DESERT PLANT GREENHOUSE
D. CAFE

1.FOSSIL GALLERY
2.EVOLUTION EXHIBITION
3.VISION DIVERSITY EXHIBITION
4. ATRIUM/ OVERFLOW EXHIBITION SPACE
5. SKELETON GALLERY

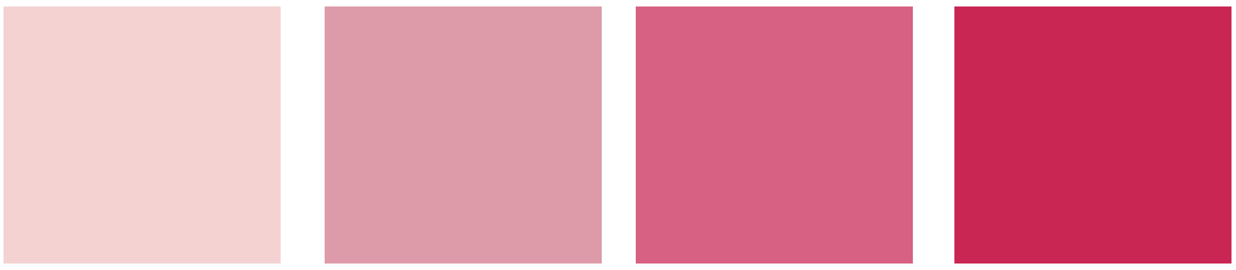
6.DAWIN EXHIBITION
7.HEART-BEAT EXHIBITION
8.INHABITED, HAMMOCK GARDEN
9.UNINHABITED GREEN ROOF

MATERIAL STRATEGY

Exploring Oyster Shell Tiles with Natural Pigmentation

As part of my material explorations, I am recreating a sample tile inspired by oyster shell tiles.

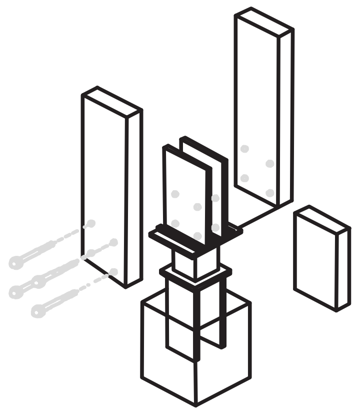
The choice of oyster shells stems from their natural durability, calcium-rich composition, and historical use in coastal construction. Additionally, I have introduced beetroot as a natural pigment to achieve a dusty pink inspired by the original facade of the Gallery of Biodiversity.



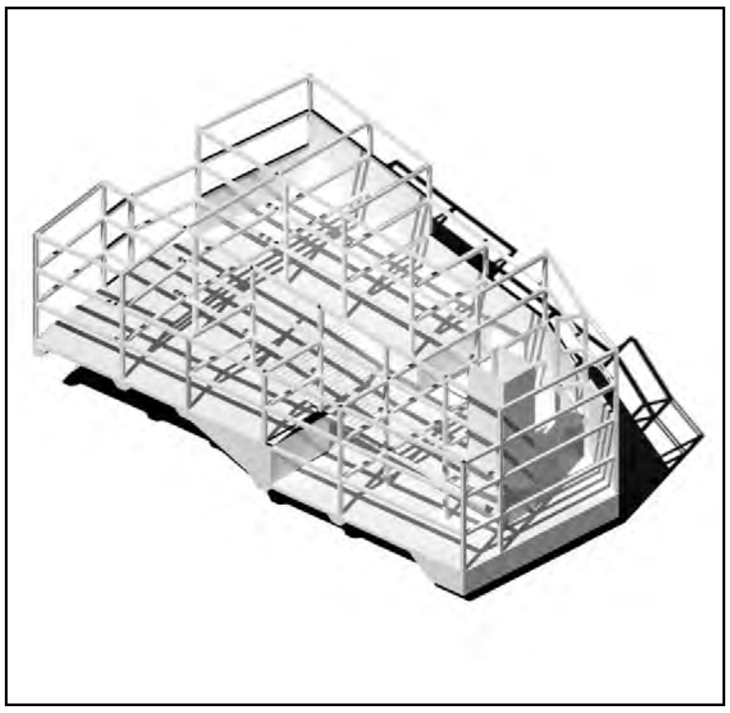
Porto's oyster industry has a deep-rooted history tied to its coastal geography and maritime traditions. In the past, the city's estuarine waters supported a thriving oyster trade, with mollusks harvested from the Douro River and surrounding areas. However, due to environmental changes and overexploitation, local oyster farming has significantly declined. Despite this, the cultural and ecological significance of oysters remains.

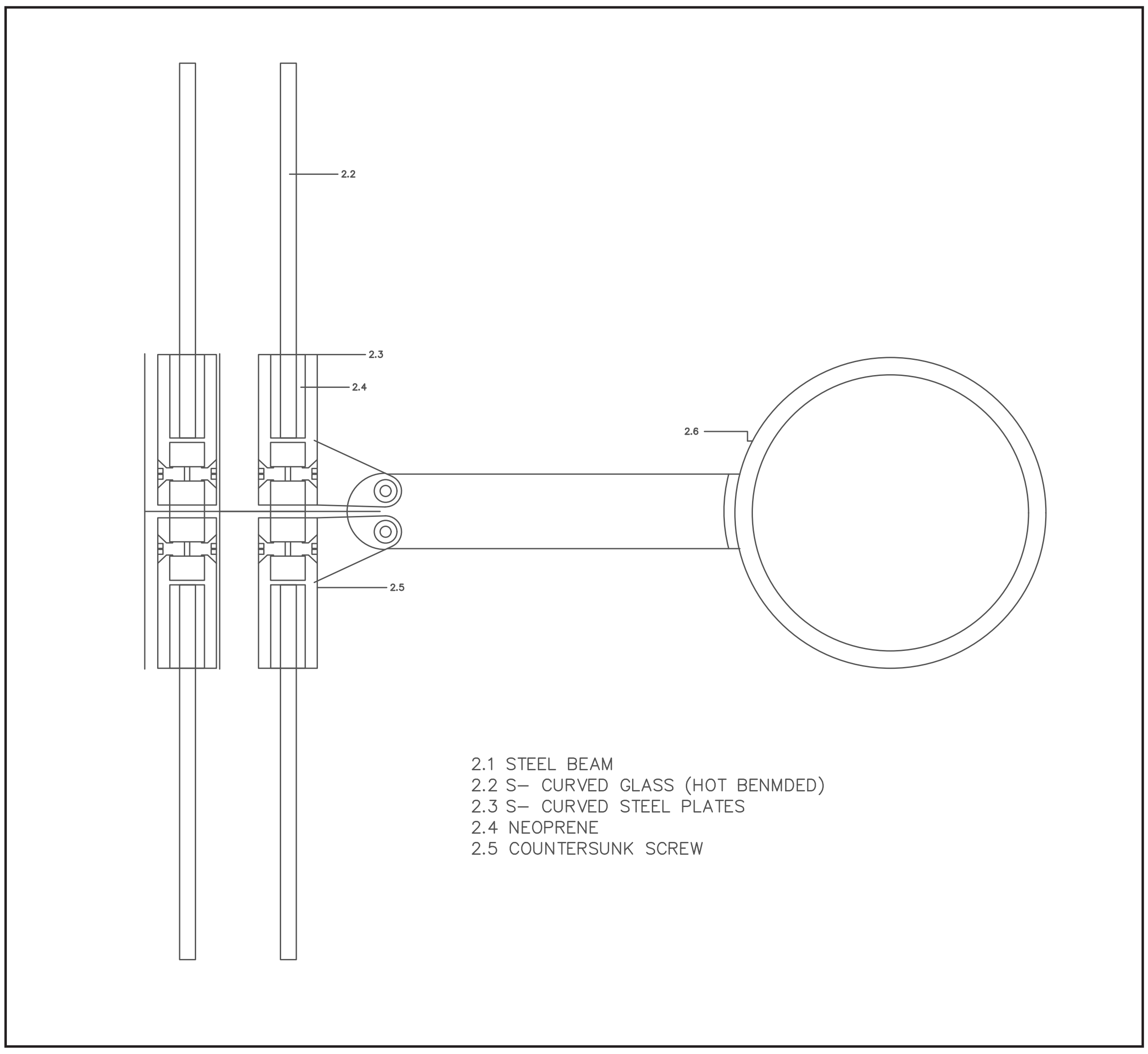
For my experiment, I sourced oyster shells from Whitstable, a historic fishing town in the UK renowned for its oyster farming. This connection between Whitstable's enduring oyster industry and Porto's lost tradition represents the potential of re-purposing waste materials from coastal economies into sustainable architectural elements.

PRIMARY STRUCTURAL STRATEGY

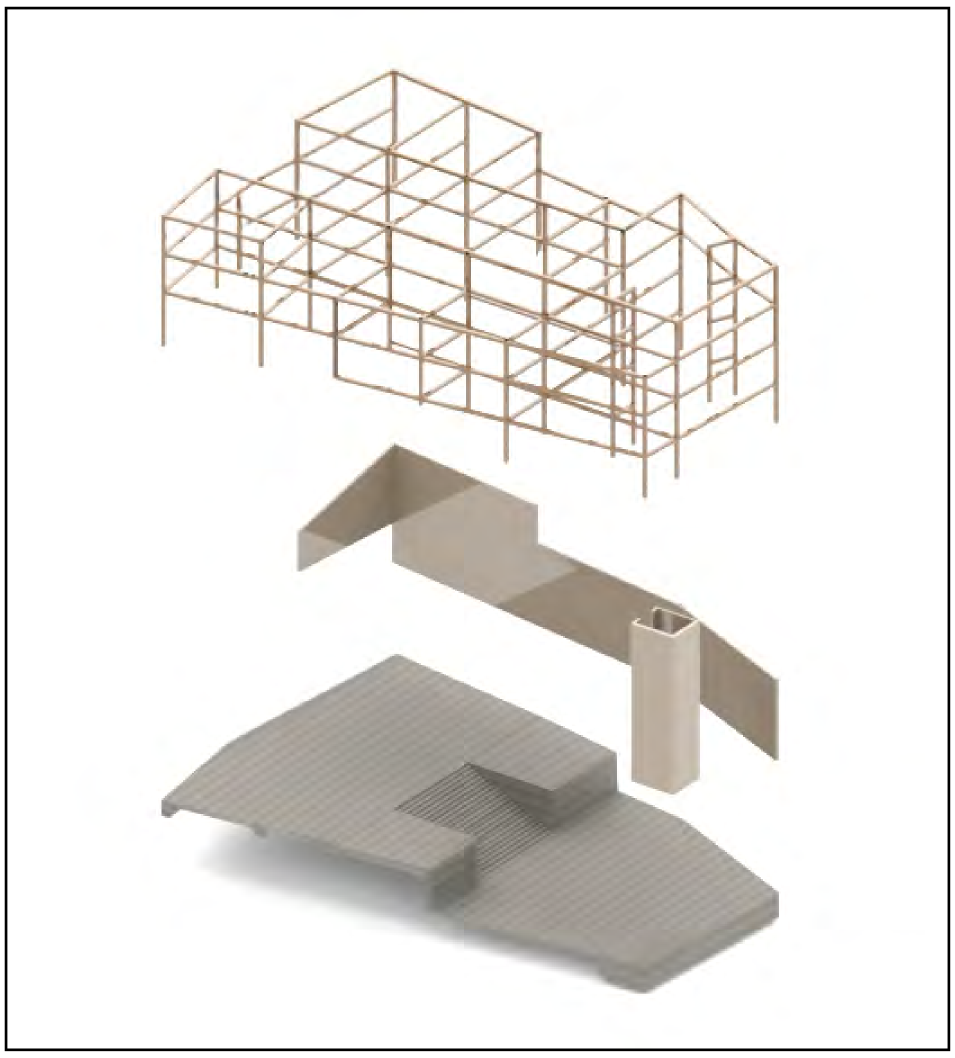


Isometric Column Base Detail with Stainless Steel Plates To Ensure That The Timber Is Kept Out Of Contact With The Groundsman That Each End Of The Gumaman Columns Are Ventilated

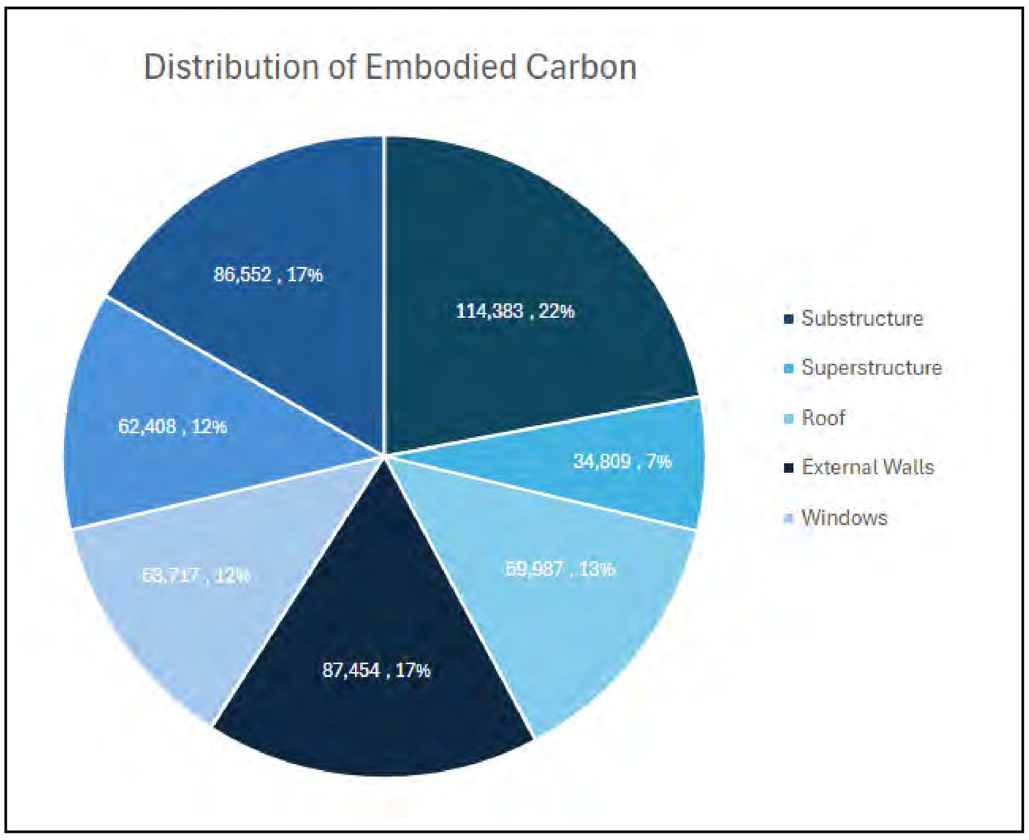




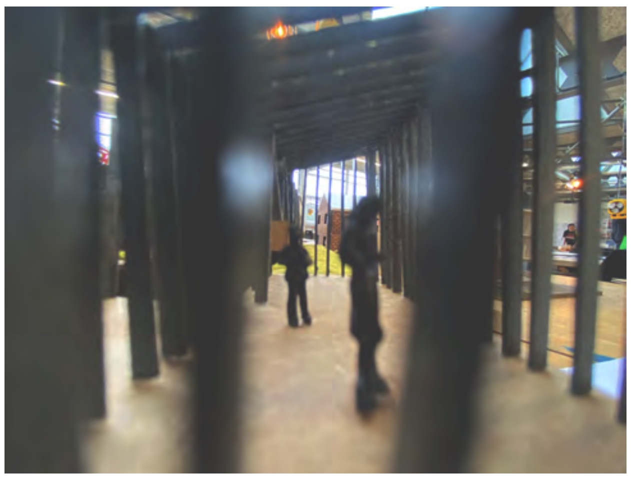
Roof detail of the supporting connection for the wave-like roof design, featuring two 'parallel' panels in a flowing form. Designed to refract and diffuse Portugal's strong sunlight; the roof helps maintain a cooler environment within the atrium.

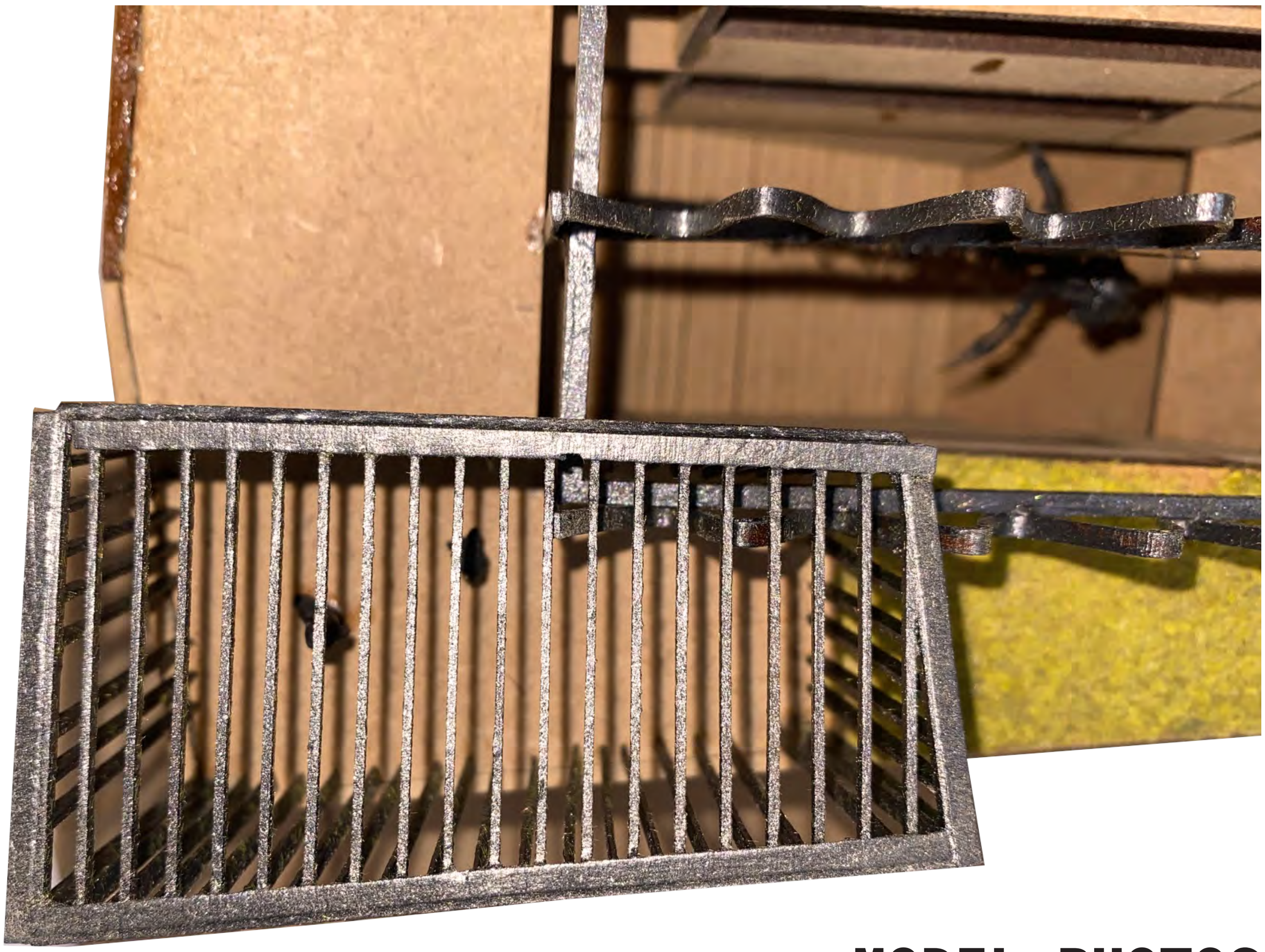


Exploded Perspective View Of The Whole Structural Proposal: Cement Foundation With Stone Retaining Wall And Glulam Timber Frame From The Upper Ground Floor To The Second Floor

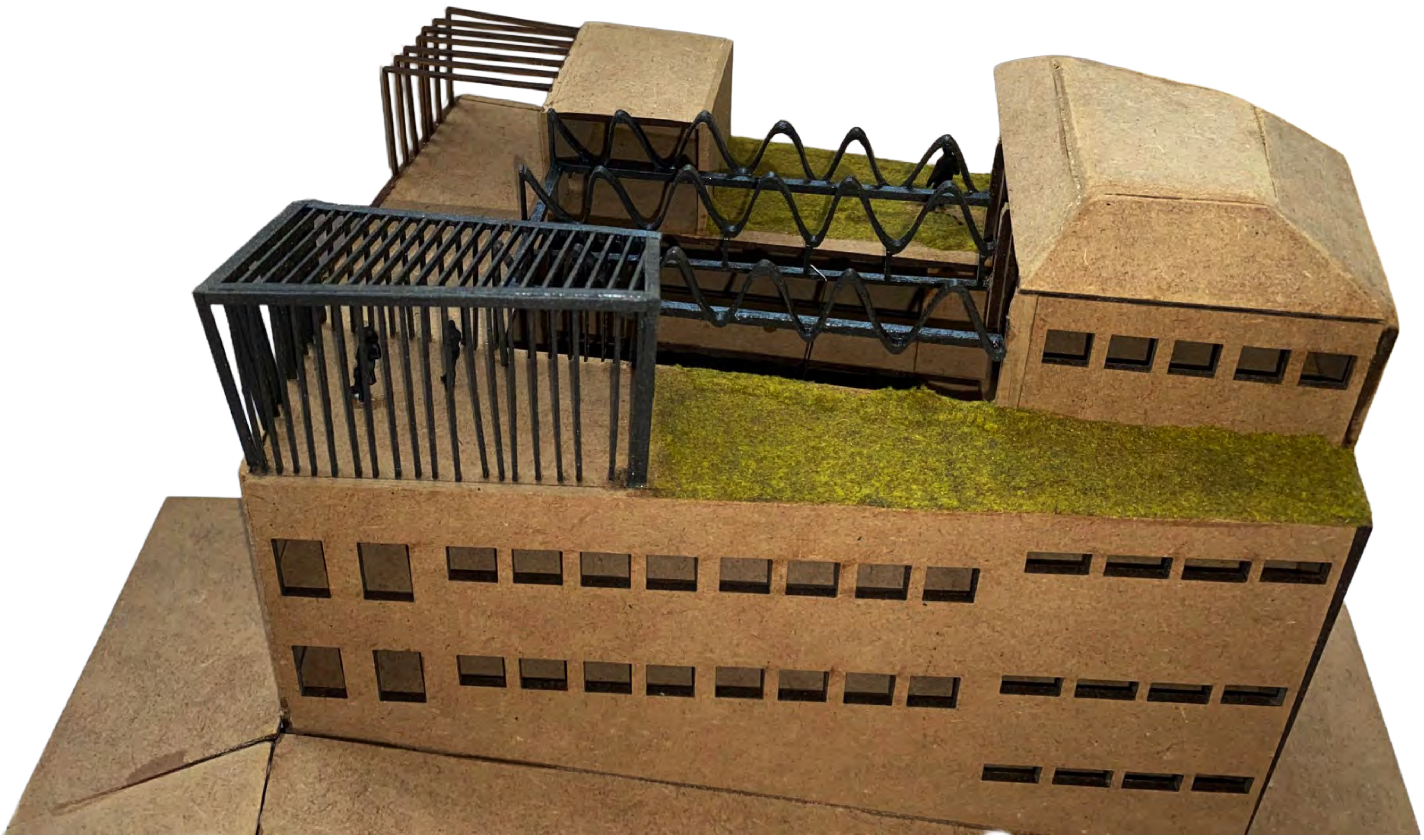


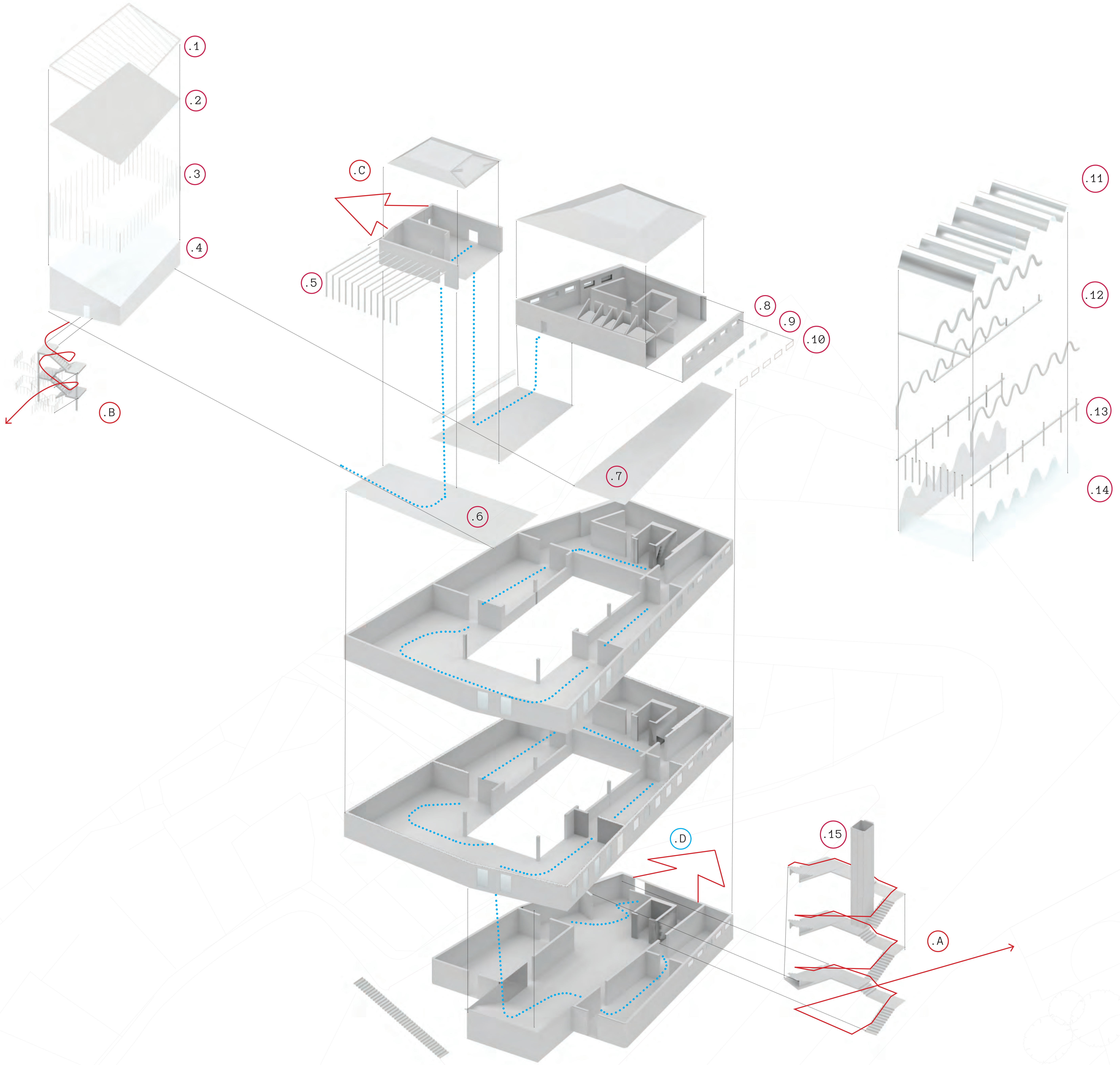
THROUGH THE WINDOWS OF THE PHYSICAL MODEL, WITH A PROGRESSION OF LIGHT





MODEL PHOTOS



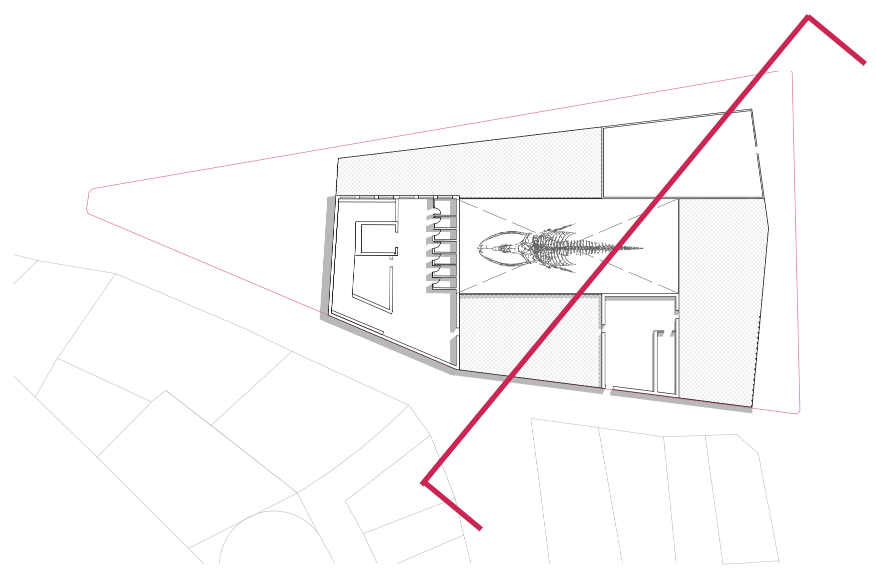


ACCESS AND ESCAPE

1. Greenhouse Roof - Metal Structural Framework.
2. Greenhouse Roof - Glass Panels.
3. Greenhouse Walls - Metal Structural Framework.
4. Greenhouse Walls - Glass Panels.
5. Pergolas.
6. Inhabited Café Terrace.
7. Uninhabited Green Roof.
8. Fourth Floor Exterior Wall
9. Window Glazing (Panes).
10. Exterior Window Frames.
11. Wave-Form Glass Roof Panels (Double Curve).
12. Steel Structural System Supporting The Roof.
13. Wall Steel Structure Holding The Glass Walls Together
14. Glass Wall Panels.
15. Lift Shaft And Interior Main Staircase.

A. Primary Fire Escape Via Main Building Staircases.
B. Secondary Fire Escape Through The Second-Story Green-Roof Leading To The South Site Boundary.
C. Fire Escape Exit To The West Site Boundary, Providing Access To The Residential Care Park.
D. Primary Circulation Route.

ENVIRONMANTAL STRATAGY



Carbon Capture

Sunlight

Ventilation

.A Roof Light Refraction
The undulating form of the roof refracts natural light, creating soft, diffused interior. Inspired by the effect in OMA's Casa da Música, the geometry breaks and scatters direct sunlight, reducing glare and heat intensity

.B Roof Ventilation
Warm air naturally rises and escapes through high-level vents, drawing cooler air in from lower openings–promoting natural air circulation without mechanical systems.

.C Green Roof and Heat Capture
The green roof, integrated into the wave form, captures and retains solar heat, creating a microclimate suitable for botanical species that thrive in high temperatures. It also contributes to insulation, reducing the building's overall energy load and adding to its ecological value.

.D Window Mechanics
Allow for controlled daylighting and cross-ventilation. Openings provide flexibility, enabling adjustments interior comfort levels according to seasonal or daily climatic changes.

.E Oyster Shell and Fishbone Cladding
The buildings cladding of oyster shell and fish bone tiles are rich in calcium carbonate, making them highly durable, reflective, and resistant to corrosion–especially beneficial in the sites coastal,humid and saline environments.the tile also has very low embodied carbon which turns negative when materials are by- products form portos fishing industy. coastal conditions. It is a bio-based cladding system that returns to a dying industry in porto, naturally locks in carbon and reduces th ebuildings overall carbon emmitions.

.F Green Roof(s)
Green roofs layered soil and vegetation makeup improves the building's thermal insulation, reducing energy demand.The uninhabited green roof, though not visible in the diagram, contributes to the environmental performance; managing rainwater runoff, stabilising interior temperatures, and carbon capture throgh native biodiversity.

Bay Study 1:20

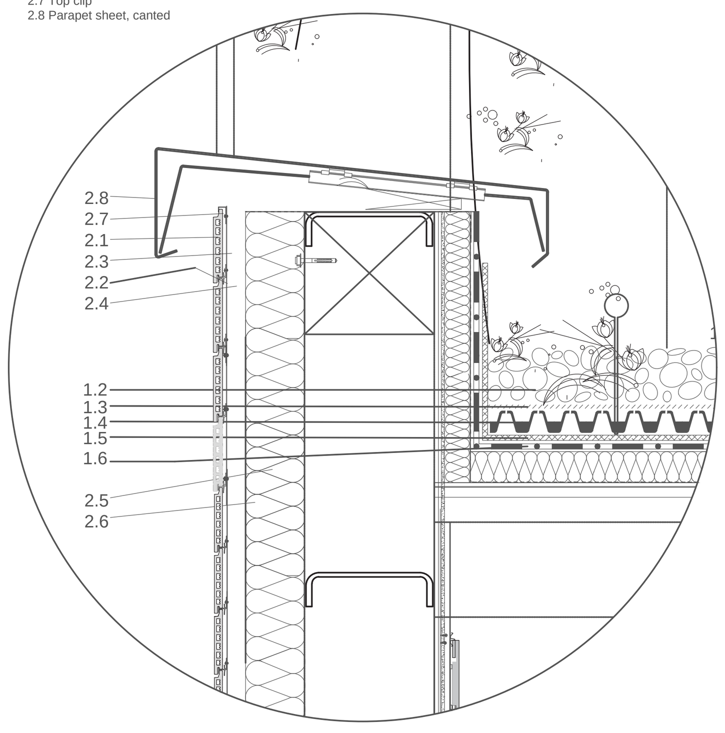
DETAILS 1:10

GREEN ROOF ASSEMNBLY

1.1 Plant community
1.2 Substrate
1.3 Filter Sheet
1.4 Floradrain
1.5 Protection Mat
1.6 Root resistant waterproofing

ROOF ASSEMNBLY

2.1 Argeton tile plate
2.2 Middle clip
2.3 Aluminium profile, vertical
2.4 Aluminium cleat
2.5 Thermal separation
2.6 Insulation
2.7 Top clip
2.8 Parapet sheet, canted

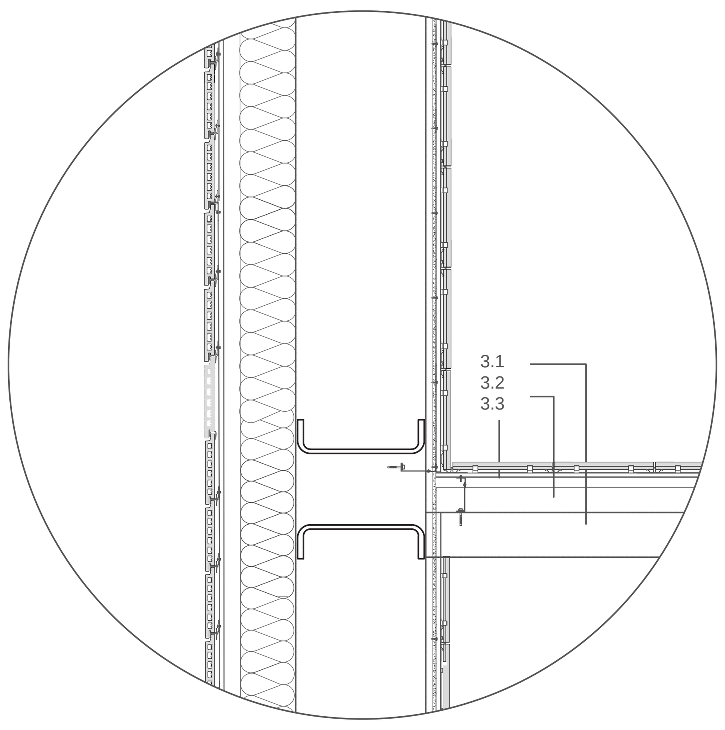


FLOOR ASSEMBLY

3.1 ACOUSTIC-MAT
3.2 HORIZONTAL CLT SECONDARY STRUCTURE
3.3 GLULAM BEAMS [DOTTED]

WALL ASSEMBLY
Exterior to Interior

4.1 FISH BONE AND OYSTER TILE
4.2 AIR GAP
4.3 EXTERIOR SHEATHING TAPE
4.4 CAVITY MEMBRANE INSULATION
4.5 VERTICAL CLT SECONDARY STRUCTURE
4.6 VAPOR MEMBRANE
4.7 WALL BOARD
4.8 SECONDARY STRUCTURE
4.9 SERVICES + GLULAM COLUMN [HIDDEN] + SERVICE GAP

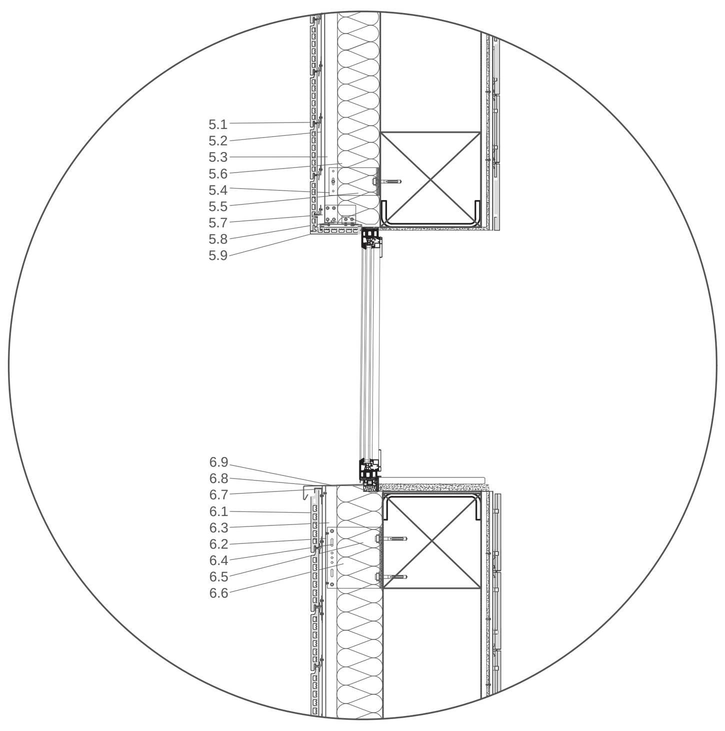


LINTEL ASSEMBLY

5.1 Argeton tile plate
5.2 Middle clip
5.3 Aluminium profile, vertical
5.4 Aluminium cleat
5.5 Thermal separation
5.6 Insulation
5.7 Bottom clip
5.8 Sheet, canted
5.9 Argeton tile plate (lintel)

WINDOWSIL ASSEMBLY

6.1 tile plate
6.2 Middle clip
6.3 Aluminum profile, vertical
6.4 Aluminum cleat
6.5 Thermal separation
6.6 Insulation
6.7 Top clip
6.8 Fixing bracket
6.9 Windowsill



INTERNAL CORNER ASSEMBLY

9.1 TILE PLATE
9.2 CLAMP
9.3 VERTICAL ALUMINUM CARRIER RAIL
9.4 ALUMINUM CLEAT
9.5 THERMAL SEPARATION
9.6 HORIZONTAL CARRIER RAIL
9.7 INSULATION
9.8 JUNCTION PROFILE
9.9 SPRING PROFILE

FOUNDATION WALL ASSEMBLY

8.1 PARGECOAT
8.2 INSULATION
8.3 CONCRETE FOUNDATION WALL

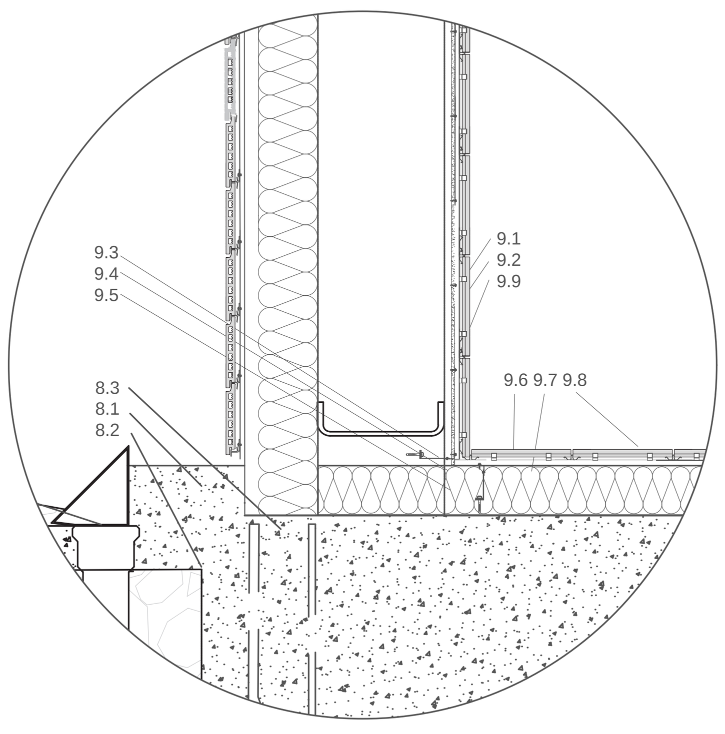
SLAB ASSEMBLY

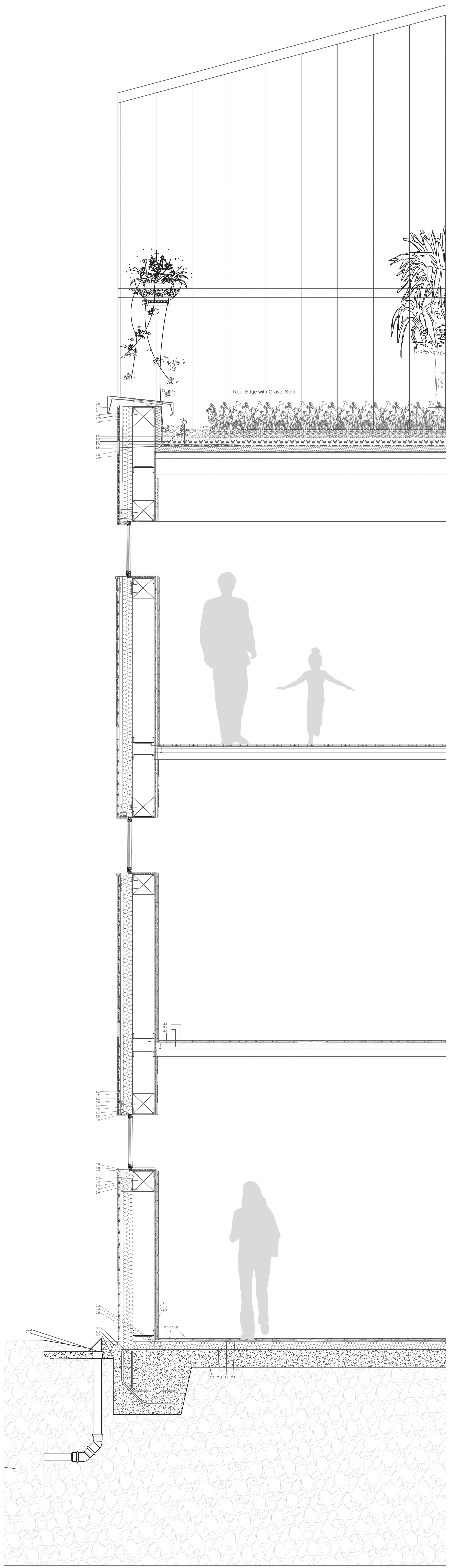
7.1 FLOOR FINISH
7.2 STRUCTURAL CONCRETE SLAB
7.3 INSULATION
7.4 WATERPROOFING LAYER

RAIN WATER DRAINAGE

10.1 WATERPROOFING

10.2 STORM WATER DOWNSPOUT FOR STORM WATER DRAINAGE





INHABITED SECTION 1:50