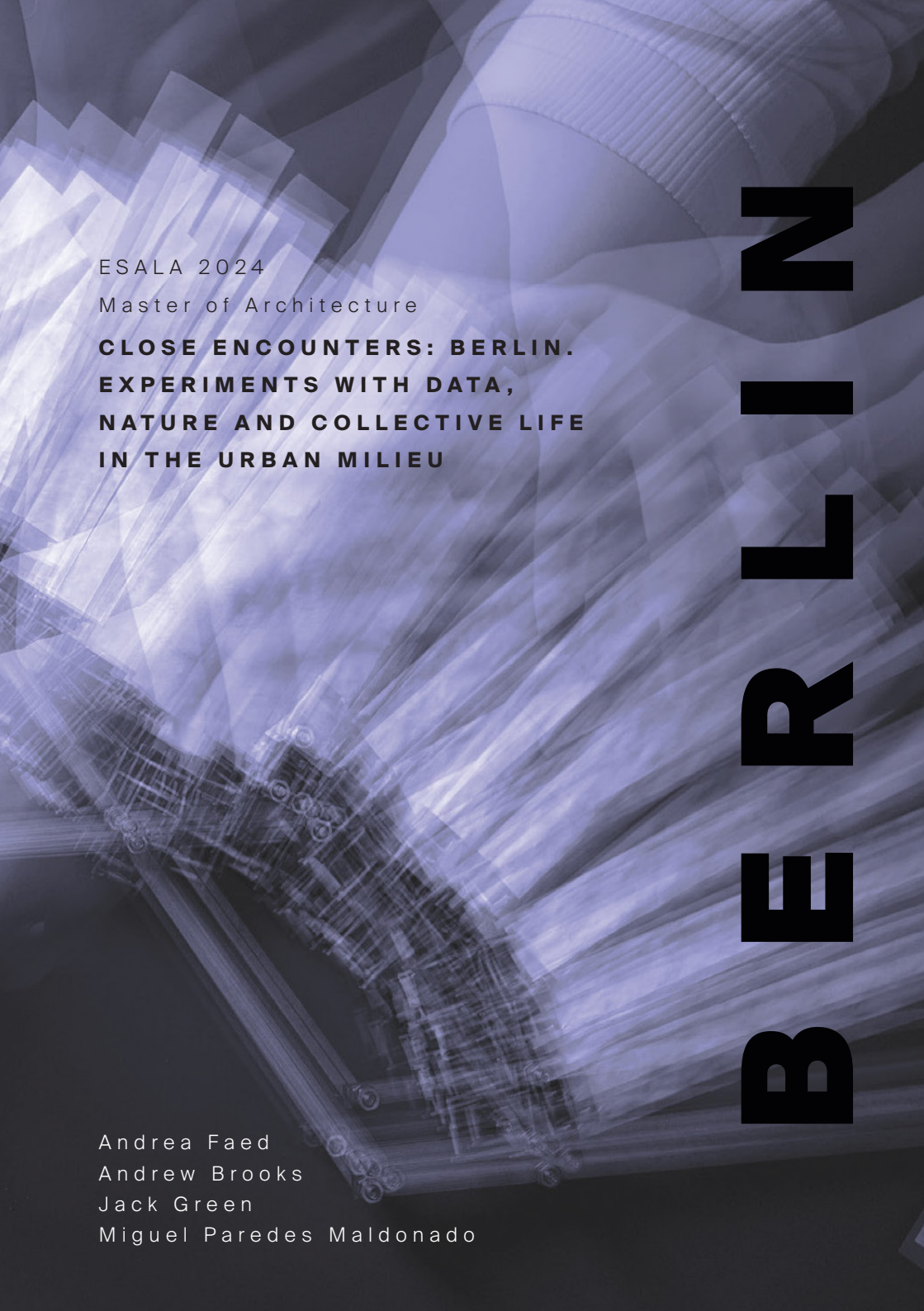

ESALA 2024

Master of Architecture

CLOSE ENCOUNTERS: BERLIN. EXPERIMENTS WITH DATA, NATURE AND COLLECTIVE LIFE IN THE URBAN MILIEU

BERLIN

Andrea Faed
Andrew Brooks
Jack Green
Miguel Paredes Maldonado

UP
DOWN

This catalogue is part of a collection published by the Edinburgh School of Architecture and Landscape Architecture (ESALA), Edinburgh College of Art, University of Edinburgh. It documents student design work produced in the Master of Architecture (MArch) programme in 2023-24. Each catalogue describes one of the following six design studios in the MArch programme. The full collection is available to view online at issuu.com/eca.march.

Catalogues 2023-24:
Architecture as Support Structure.
Close Encounters: Berlin.
Crossing Tangier.
Daire's Airc.
Grounding Naples Vol. 2
Radical Harvest: Earth/Care/Reuse.

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CLOSE ENCOUNTERS: BERLIN

EXPERIMENTS WITH DATA, NATURE AND COLLECTIVE LIFE IN THE URBAN MILIEU

> *"Not to find one's way around a city does not mean much. But to lose one's way in a city, as one loses one's way in a forest, requires some schooling. "*[1]
>
> Walter Benjamin

INFRASTRUCTURES AND TECHNOSTRUCTURES

In his collection of essays on the phenomenon of technification, philosopher Gernot Böhme argued that technology has historically held the power to transform the nature of society at a fundamental level. By way of an example, the invention of novel optical apparatuses—such as the telescope, the microscope or the photographic camera—led on each occasion to a radical transformation of our collective culture of vision. Likewise, aural cultures were also remodelled by successive waves of technification. For instance, the invention of telephone communications in the late 19th century radically altered our collective understanding of the act of 'conversation.'[2]

Böhme also explained how both technology and its attendant technical modes of knowledge had become the chief infrastructural platforms that shape both our social field and our cultural landscape, forming what he referred to as the 'technostructure of society.' Building on Böhme's ideas, the close encounters: Berlin studio investigated a key contemporary component of this technostructure: the ubiquitous layer of data-driven technologies and computational processes that nowadays shape our built environment across all scales. As Böhme noted, 'the greater the amount of

1 Walter Benjamin, 'Tiergarten', in Berlin Childhood Around 1900 (Cambridge: Harvard University Press, 2006), 53.
2 Gernot Böhme, Invasive Technification: Critical Essays in the Philosophy of Technology (Bloomsbury, 2012), 49.

social regulation that takes place via data management and data processing, the more people and things only count as part of society to the extent that they can be defined in terms of data.'

The studio was framed around a series of critical questions pertaining to contemporary urban technification: What novel modalities of urban knowledge can be unpacked by tapping into data-driven technostructures? How are contemporary urban cultures transformed by pervasive computational platforms? How can designers meaningfully tap into these technical layers to better articulate the spaces of collectivity in the city?

CRITICAL ZONES / CONTACT ZONES

This enquiry into urban technification was used as a vehicle for the studio to address what is, arguably, the most pressing issue of our times: The planetary-scale climate emergency, and our increased collective awareness of the entangled fragility of our earthly ecosystem.

As a key contribution to recent intellectual debates on this matter, the studio paid special attention to Bruno Latour's narrative of the 'Critical Zone.' Originally coined within the scientific disciplinary realm, the term highlights the fact that all forms of life on Earth (human and nonhuman alike) coexist within a comparatively thin layer of the planet's atmosphere—the area near the surface of the Earth where life can be sustained. Latour elaborated on the implications of such a 'tight' coexistence, noting that human and nonhuman organisms are intimately enmeshed and co-dependent within this shared 'zone'—their living environments are co-generated and interrelated, and thus cannot be extricated from one another. Critically, Latour foregrounded that such environments—encompassing ecosystems such as forests and lakes but also urban neighbourhoods and brownfields—are not static: they emerge from the interactions of many different living beings over time, eventually making it impossible to draw a line between a particular organism and the biotope that surrounds it.[3]

Latour's Critical Zone narrative entails a radical change of perspective in regards to what constitutes 'collective life' in an urban ecosystem, running contrary to well-established anthropocentric readings of the city as an entirely human construction. For the close encounters: Berlin studio, it seems

3 Bruno Latour, After Lockdown: A Metamorphosis (Polity, 2021), 13, 47, 124.

clear that human and nonhuman beings are equally deserving agents in the making of this collectivity, inasmuch as they are inextricably entangled and must coexist productively to build their joint urban environment together.

Leveraging this new perspectival scenario, where encounters between humans and nonhumans open up new potentials for the production of urban space, the studio framed its design outputs as extensions of what Donna Haraway referred to as 'Contact Zones.' For Haraway, these are boundaries between domains inhabited by different subjects—usually from different species. Contact Zones are not just spatial boundaries, but also encompass the new relationships and forms of communication that may emerge between the subjects at stake. In building Contact Zones, all participating subjects develop adaptations and predispositions, raising opportunities for mutual encounter. As Haraway noted, Contact Zones manifest the interdependence between species and their ability to shape one another over time, as well as the role of technology as both an agent of mediation in this relational framework and a subject on its own merit.[4]

You want me to land on Earth? Why?— Because you're hanging in midair, heading for a crash.—How is it down there?—Pretty tense.—A war zone?—Close: A Critical Zone, a few kilometres thick, where everything happens.—Is it habitable?—Depends on your chosen science.—Will I survive down there?—Depends on your politics. [5]

Bruno Latour and Peter Weibel

DIGITAL SENSING, URBAN HACKING AND CRITICAL MAKING

During the first semester, the studio worked with the vast public urban landscapes of Berlin as testing grounds to explore the intertwining of social life and natural life in the city. From a methodological perspective, this exploration was framed through a particular subset of the contemporary urban technostructure: the computational processes and platforms of Digital Urban Sensing. This refers to the collective, distributed and systematic collection of data pertaining to social, infrastructural and environmental conditions in the city, and the insights that can be unpacked from the resulting repositories of digital urban knowledge.

4 Donna Haraway, When Species Meet (University of Minnesota Press, 2007), 218–20
5 Bruno Latour and Peter Weibel, eds., Critical Zones: The Science and Politics of Landing on Earth (MIT Press, 2020).

Contrary to the prevalent, top-down narratives of urban sensing (exemplified, for instance, by the managerial problem-solving structures of the Smart City paradigm) data-driven sensing practices in the studio sought to highlight 'coexistence' rather than 'performance,' thus seeking 'knowledge' rather than 'optimisation.' To that extent, investigations into digitally mediated sensing drew from the theories of Urban Hacking (the creative use of digital media to 'open up urban institutions and infrastructures to systemic change in the public interest')[6] and Critical Making (a pragmatic pursuit of critical thinking through actions of goal-based physical making).[7]

In practice, this entailed deploying the Arduino digital prototyping platform to build six portable fieldwork instruments: DIY urban sensing devices capable of digitally capturing and recording a range of sensory and environmental data during the Semester 1 studio trip to Berlin. Conceptualised as hybrid digital-analogue mechanisms engineered as adaptations to the urban landscapes in which they operate, the physical architecture of the instruments helped filter, focus or extend their range of digital sensing. The orientation of sensors, the configuration of their envelopes, the articulation of different components and the mechanisms for placing or mounting the instruments on site was as important as their digital sensing capabilities.

Working with these DIY devices, students surveyed the fringes of small natural spaces in the city of Berlin, tuning-in to the non-human entities that inhabit its urban milieu by capturing visual, sonic and environmental data streams outside the ranges of human attention and perception. Upon return to Edinburgh, the task shifted to synthesising and translating the body of data-driven field work into contextual visual and sonic installations in the space of the studio. In so doing, data was articulated as a form of urban infrastructure, capable of acting as an interface between human and nonhuman domains in the city. This, in turn, outlined potential avenues for transformation in the natural public spaces of Berlin, paving the way for the development of a series of distributed interventions that constituted the

6 Cristina Ampatzidou et al., The Hackable City: A Research Manifesto and Design Toolkit (Amsterdam: Amsterdam Creative Industries Publishing, 2015).
7 Carl DiSalvo, "Critical Making as Materializing the Politics of Design," The Information Society 30, no. 2 (March 1, 2014): 96–105, https://doi.org/10.1080/01972243.2014.875770.

final outputs of the first semester. Conceptualised as 'Urban Field Stations,' these interventions were small architectural devices that tapped into the digital infrastructural platform of the city to build productive interactions with urban ecosystems in the public realm.

THE COMPETITION: SPECULATIVE FUTURES

(…) But to really understand the strange limbo that is the outskirts, the city limits, the land that's 'just waiting', I'd suggest taking the route covered by the tram, and its environs. In this problematic zone, the transition between city and countryside is rarely as gradual as in a village or small town. [8]

Franz Hessel, 1929

The studio started the second semester by participating in the AIV Schinkel-Preis 2024, an international architectural competition titled the day after tomorrow. Students were able to freely chose a 'neighbourhood' in Berlin to modify, either an empty plot or existing buildings with the aim to create a 'liveable city'. Embracing the fast-paced rhythm imposed by the competition deadline, students were prompted to draw from the designs, insights and strategies produced during the first semester - investigating the public parks in Berlin - and extrapolate them to the new challenges posed by the competition brief and of the built urban environment. A broad view of collective urban life was pursued - one that encompasses both human and nonhuman entities as equally deserving agents of this collectivity. Projects have meaningful conversations between inhabiting, both publicly and privately, buildings and the spaces between to engender a sustainable community, socially and environmentally.

Working on an open architectural competition within an academic context provided a means to cultivate a critical, reflective engagement with contemporary professional practice. Running counter to calls for academic education to 'train' students to work in professional practice, the studio leveraged the competition format as an opportunity to develop hands-on, investigative, collective design reflections that could translate their critical value to the realm of the profession. This approach appeared to gain validation through the outcome of the AIV Schinkel-Preis competition:

8 Franz Hessel, *Walking in Berlin: A Flaneur in the Capital* (Brunswick, Victoria: Scribe Publications, 2016), 112–13

one entry produced in the studio was awarded second prize and one entry was ranked as a finalist by the judging panel.[9]

HYBRID URBAN ASSEMBLIES

The eight competition submissions (each produced by a range of team sizes from three to singular students) were carried into the final stage of the studio sequence for further investigative, poetic, theoretically informed development. Projects deal in a critical way with issues and questions of contemporary relevance, responding to the themes of inhabitation, coexistence, and hybridization in the urban field. This required addressing the social, cultural, infrastructural, and environmental conditions that were collectively identified throughout the year, mobilizing them to activate complex architectural assemblages that opened up new opportunities for the intertwining of social life and natural life in the Berlin neighbourhoods.

In line with the overarching thematic preoccupations of the close encounters: Berlin studio, key vectors of enquiry during this final stage included the coexistence of human and nonhuman forms of life in the city, the integration of natural life and social life in the urban public realm, and the opportunities (and risks) afforded by the technification of our built environment across all scales—exemplified by our extended engagement with both physical and digital urban infrastructures. On a more general level, the final stages of the studio explicitly sought to address the question of contemporary urban inhabitation: In a context of planetary environmental crisis, how can we establish meaningful forms of collective life in a large European metropolis such as Berlin?

Responses ranged from rethinking future living that predominantly centred around humans to imagining a harmonious coexistence between human and non-human beings, creating an 'Embassy of Non-Human Beings' within the Diplomatic Quarter, where non-humans take centre stage ambassadors; a vision that allows the urban green courtyards of Bülowstraße to be accessible to all and activated with a series of sport and music facilities, and lending libraries; transforming an industrial site into a rewilded and residential enclave; re-imagining the territory of Landwehrkanal as a multi-species landscape addressing concerns of

9 See: https://www.aiv-berlin-brandenburg.de/dokumentation-aiv-schinkel-wettbewerb-2024-uebermorgen/

affordable housing and ecological habitats; establishing a green corridor of social interaction across the city, connecting Nature Park Sudgelande to the Tiergarten; repairing green infrastructures with a residential block that bridges and reconnects islands of natural wild spaces that were severed by Südkreutz station; an Inhabited Embankment along the railway line at Park am Gleisdreieck allowing safe passage for animals and acoustic baffling for humans for a co-living urban landscape; and a 'journey' from Tiergarten to a Flea Market, around Ludwig Leo's Umlauftank building, under and over the rail line and ending at the zoo, to disconnect and thicken the human critical zone.

SOME NOTES ON BERLIN

The prevalent socio-political commentary on the city of Berlin, championed by contemporary philosophers such as Peter Sloterdijk and Jürgen Habermas (who published the aptly titled collection of essays 'A Berlin Republic' in 1997)[10] often revolves around the construction and the identity of the modern German state in relation to the historical events of 20th Century Europe. These narratives tend to highlight how Berlin carries both the symbolic and the physical marks of its convoluted recent past, whilst gradually consolidating itself as the locus of political and economic power in the European Union. To a large extent, public discourse appears dominated by different takes on the same question: How does history move forward for Berlin, and by extension, for Germany?

In approaching this question, the studio took the opportunity to investigate how the focus of urban debate appears to have gradually shifted from the Cold War and Post-Wall narratives of the city to contemporary environmental concerns and their attendant effects on urban societies. In 21st century Germany, such concerns appear to crystallise as a strong aspiration to develop socially and ecologically sustainable forms of collective life. As Henri Lefebvre prefigured in his 1967 book 'Le Droit à la ville' (The Right to the City) for the citizens of Berlin this aspiration is nowadays materialising through the pursuit of social and environmental justice in the urban field.

Berlin is both a major, fast-growing European capital and one of Europe's most biodiverse metropolises, making it a highly tensioned urban scenario

10 Jürgen Habermas, A Berlin Republic: Writings on Germany (Cambridge: Polity Press, 1998).

with pressing issues that strongly influence its urban housing question: immigration, gentrification, marketization, and collective aspirations for social justice. In this sense, Berlin exemplifies the urgency to redefine contemporary urbanity in an age of environmental crisis, the value of adaptation and reuse as an architectural ethos, the pursuit of meaningful conversations with history and heritage, and the ethical imperative to foster social integration and multiculturalism through design.

CLOSE ENCOUNTERS

Throughout the arc of the academic year, the close encounters: Berlin studio sought to operate at the intersection of pressing technological, infrastructural and environmental concerns in the contemporary city: pervasive digitalisation, algorithmic governance, threatened biodiversity and the major transformations to both urban mobility and urban material cultures brought about by an unavoidable post-carbon future.

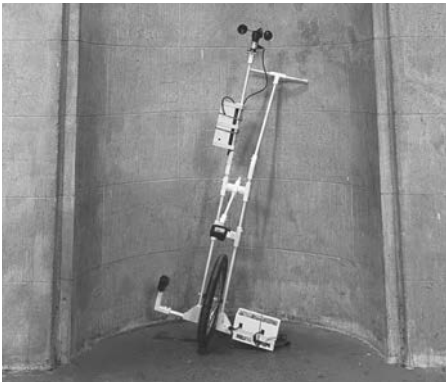
This posited important challenges: First, identifying where such an intersection of concerns may lie, and how it might be framed in the studio context. Second, imagining how it could be meaningfully manifested in order to foster productive design conversations around it. Third, rehearsing how the productive paradigms emerging from this process of enquiry could be mobilised through the tools and spatial ambitions of the architectural discipline.

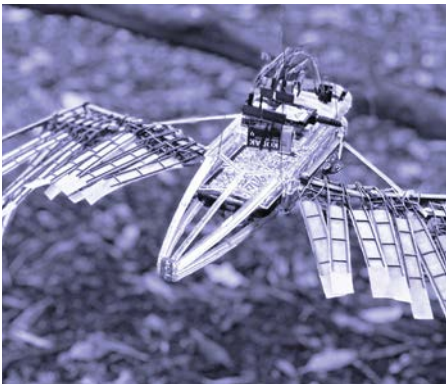
In light of this overarching framework, it is not surprising that the body of work produced throughout the year tended to privilege a strategic approach to design questions. Encouraged by both the studio briefs and the studio tutors, most projects appealed to systematic rather than formal means to articulate and resolve architectural problems. At the core of all of them is a drive to formulate novel forms of collective existence, which make amends with the city of yesteryear whilst preparing us for a forthcoming post-carbon world. In so doing, they draw a (no longer utopian) future for a radically upturned urban field, ripe for fostering and mediating 'close encounters' between a multiplicity of species, objects and entities—human and non-human alike.

Andrea Faed, Miguel Paredes Maldonado, Andrew Brooks and Jack Green

SENSING INSTRUMENTS

1. Wandering Environmental Sensor - Andong Guo, Bolun Hua, Shiyu Zhang
2. Sounding the Ground - Folahan Adelakun, Carl Harris, Oliver Maxwell
3. Bird Device - Terry Feng, Kim Lee, Bingzhi Li
4. Vertical Observer - Inka Eismar, Jodie Horsburgh, Eilidh McKenna
5. Schienenmaus - Wulfric Clackson, Georgia Tucker, Adam Mitchell
6. Tripod Sensor - Raj Kachare, Simy Puthenveedu Abraham, Zeyu Wang

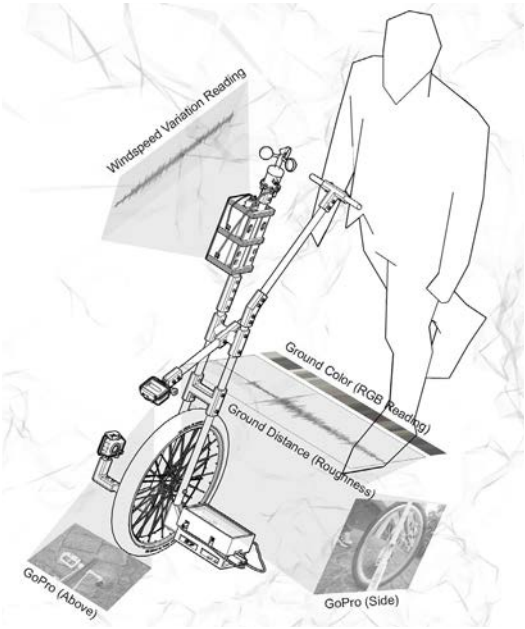


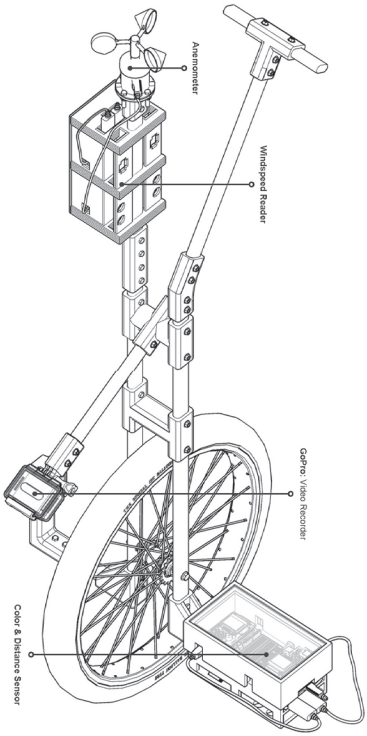


WANDERING ENVIRONMENTAL SENSOR

ANDONG GUO
BOLUN HUA
SHIYU ZHANG

Interactive installation device adaptation (above left)
Device on site (above right)
Device axonometrics (below)
In use survey video stills (adjacent)

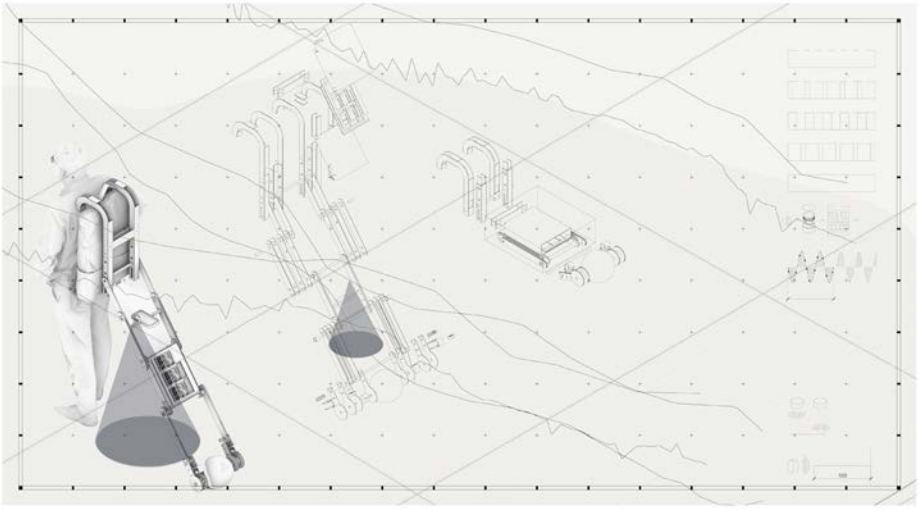


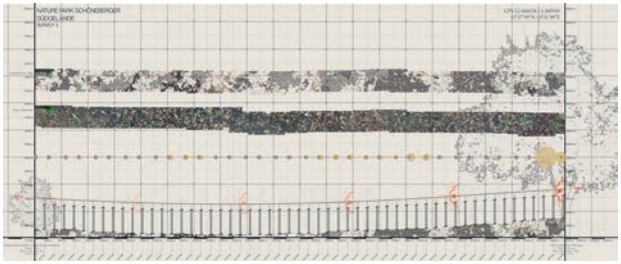


SOUNDING THE GROUND

FOLAHAN ADELAKUN
CARL HARRIS
OLIVER MAXWELL

Interactive installation device adaptation (above)
Device axonometric and data tracings (below)
Tiergarten Survey with data tracking overlaid (adjacent)

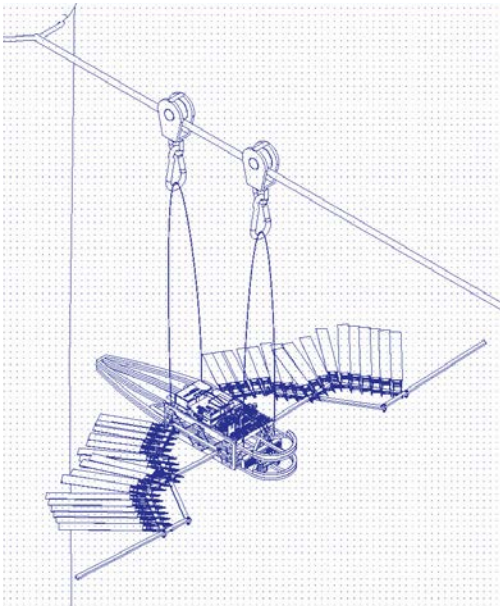


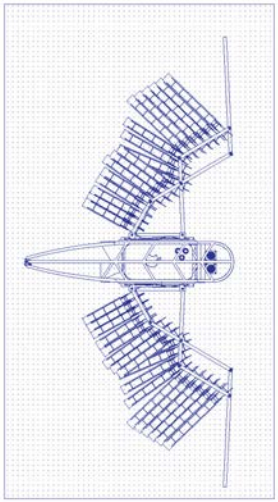


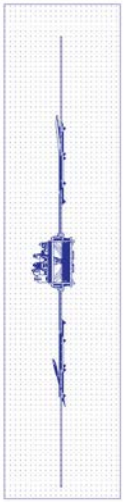
BIRD DEVICE

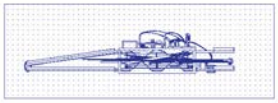
TERRY FENG
KIM LEE
BINGZHI LI

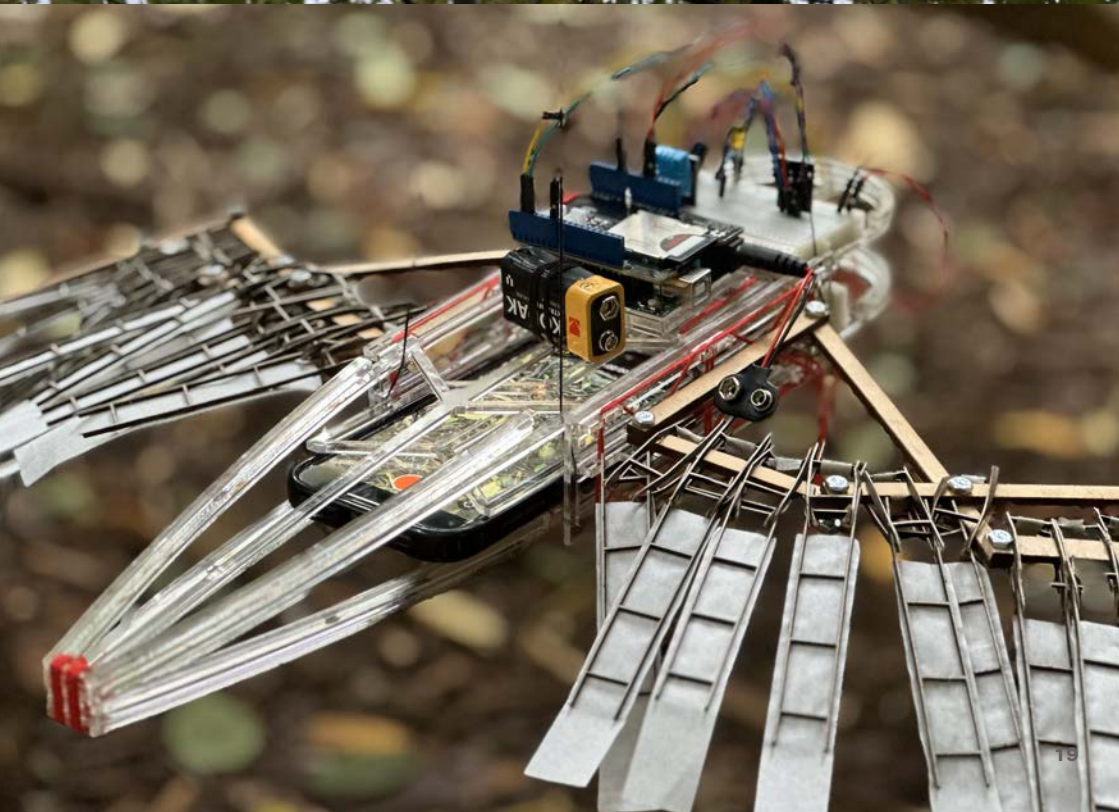
Survey mapping (above)
Bird device - axonometric, plan section and elevation (below)
In-use survey photos (adjacent)

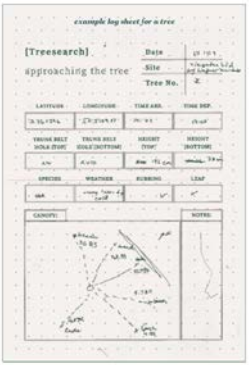








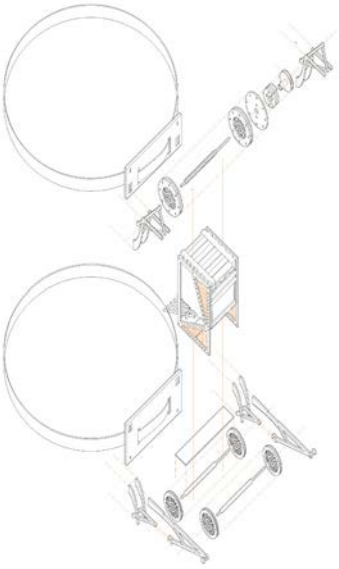




VERTICAL OBSERVER

INKA EISMAR
JODIE HORSBURGH
EILIDH MCKENNA

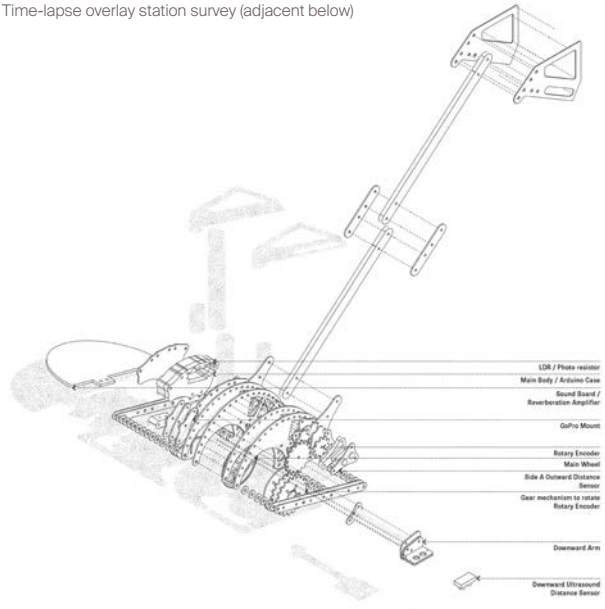
Tree log sheet (above right)
Device axonometric (below left)
Device elements and parts taxonomy (below middle & right)
Time-lapse overlay survey photo (adjacent)



SCHIENENMAUS

WULFRIC CLACKSON
GEORGIA TUCKER
ADAM MITCHELL

Track survey front view (above)
Schienenmaus exploded axonometric (below left)
Photographic parts elevations (below right)
Line of Berlin Wall survey (adjacent above)
Time-lapse overlay station survey (adjacent below)



BERLINER MAUER 1961 - 1989

TRIPOD SENSOR

RAJ KACHARE
SIMY PUTHENVEEDU ABRAHAM
ZEYU WANG

Collected site artefacts - photo (above)
Device maquette on Berlin mapping (below left)
Tiergarten Survey (below right)
Sensing device elevation drawing - stick and tripod iterations (adjacent)

Motion Sensing Device

Traffic Sound
Sensing Device

Radio Waves
Sensing Device

3000MM

2790MM

2500MM

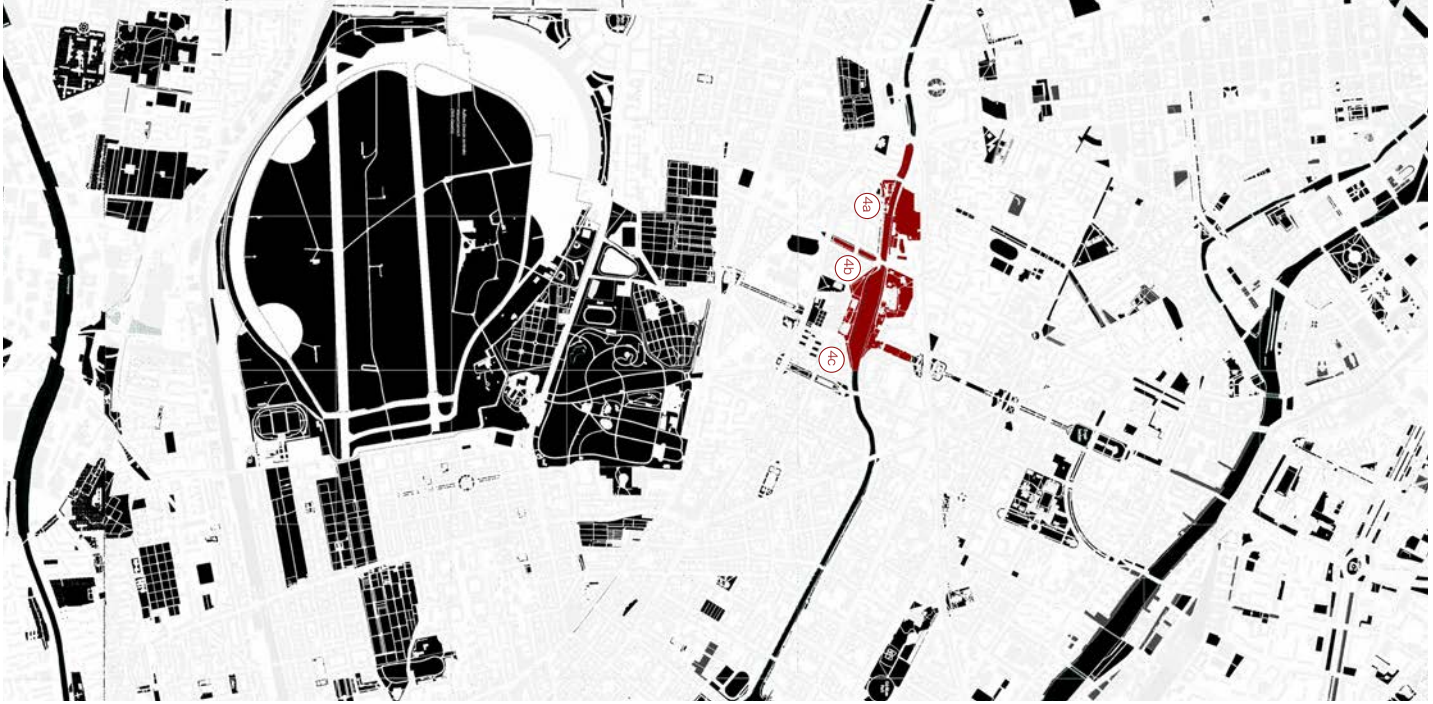
2000MM

1500MM

1000MM

500MM

8a
8b
1
2
5b
7
5a
6
3



1 **EMBASSY OF NON-HUMAN BEINGS -** ANDONG GUO + BOLUN HUA + SHIYU ZHANG

2 **URBAN POROSITY -** FOLAHAN ADELAKUN + CARL HARRIS + OLIVER MAXWELL

3 **BERLIN'S BLOCKS TO REWILDING PLOTS -** TERRY FENG + KIM LEE + BINGZHI LI

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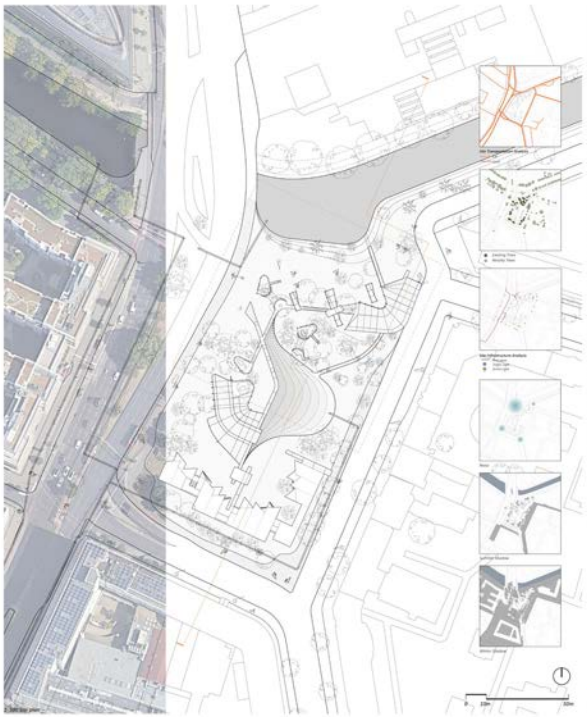
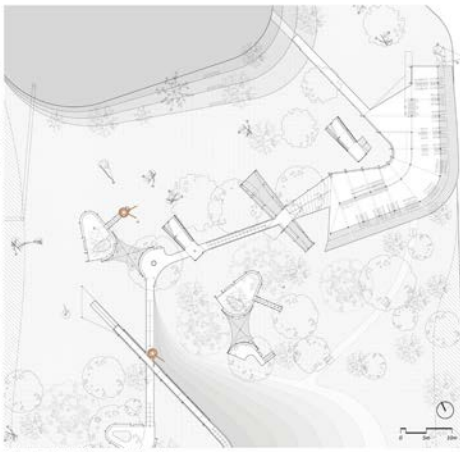
6 **REPAIRING GREEN INFRASTRUCTURES -** WULFRIC CLACKSON

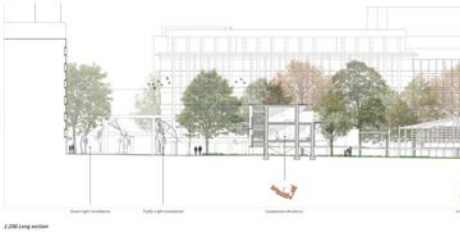
7 **SONIC INFRASTRUCTURES OF BERLIN -** ADAM MITCHELL

8a **SCIENCE OF NATURE: URBAN-AIR -** ZEYU WANG
8b **URBAN EPIPHYTE -** RAJ KACHARE

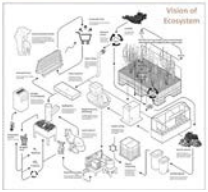




1 : 200 Plan Showing Insect Shelter, Organic Restaurant and Canal Lower



1:200 Long section



EMBASSY OF NON-HUMAN BEINGS

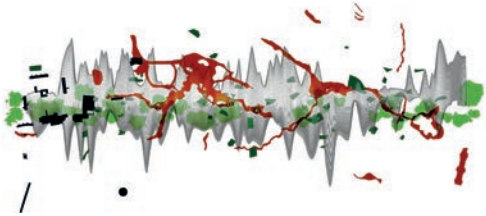
Inspired by the interface, an ensemble of buildings set amidst generously-sized green spaces, our project begins with Field Stations to monitor soil & wildlife activities within Tiergarten. As an alternative approach to living in nature our architectural proposal at Lützowplatz, envisions a harmonious coexistence between human & non-humans within an 'Embassy of Non-Human Beings'. The key to this coexistence lies in utilizing rainwater to create a marshy ground, which offers a biodiverse habitat. Human dwellings are positioned around the edge while non-humans take the centre stage as ambassadors of this novel coexistence. The lighting installation replaces conventional street & traffic lights to encourage this biodiverse habitat. Trees are retained, & together with newly planted lines they form a shaded, humid environment. Animals' droppings are collected & used as fertilizers, nurturing on site farming initiatives. In essence, our vision for Lützowplatz transcends the conventional - weaving together the threads of history, innovation, and environmental stewardship - it seeks to redefine urban spaces as dynamic ecosystems, fostering a profound connection between humanity & the natural world - an embassy where both the seen & the unseen coalesce in a vibrant tapestry of mutual thriving & cohabitation.

Render Showing Insect Shelter and Lamp

Render Showing Rain Garden and Urban Farm

1:50 Detail Section of Coexistence Residence

ANDONG GUO + BOLUN HUA + SHIYU ZHANG | COMPETITION - EMBASSY OF NON-HUMAN BEINGS



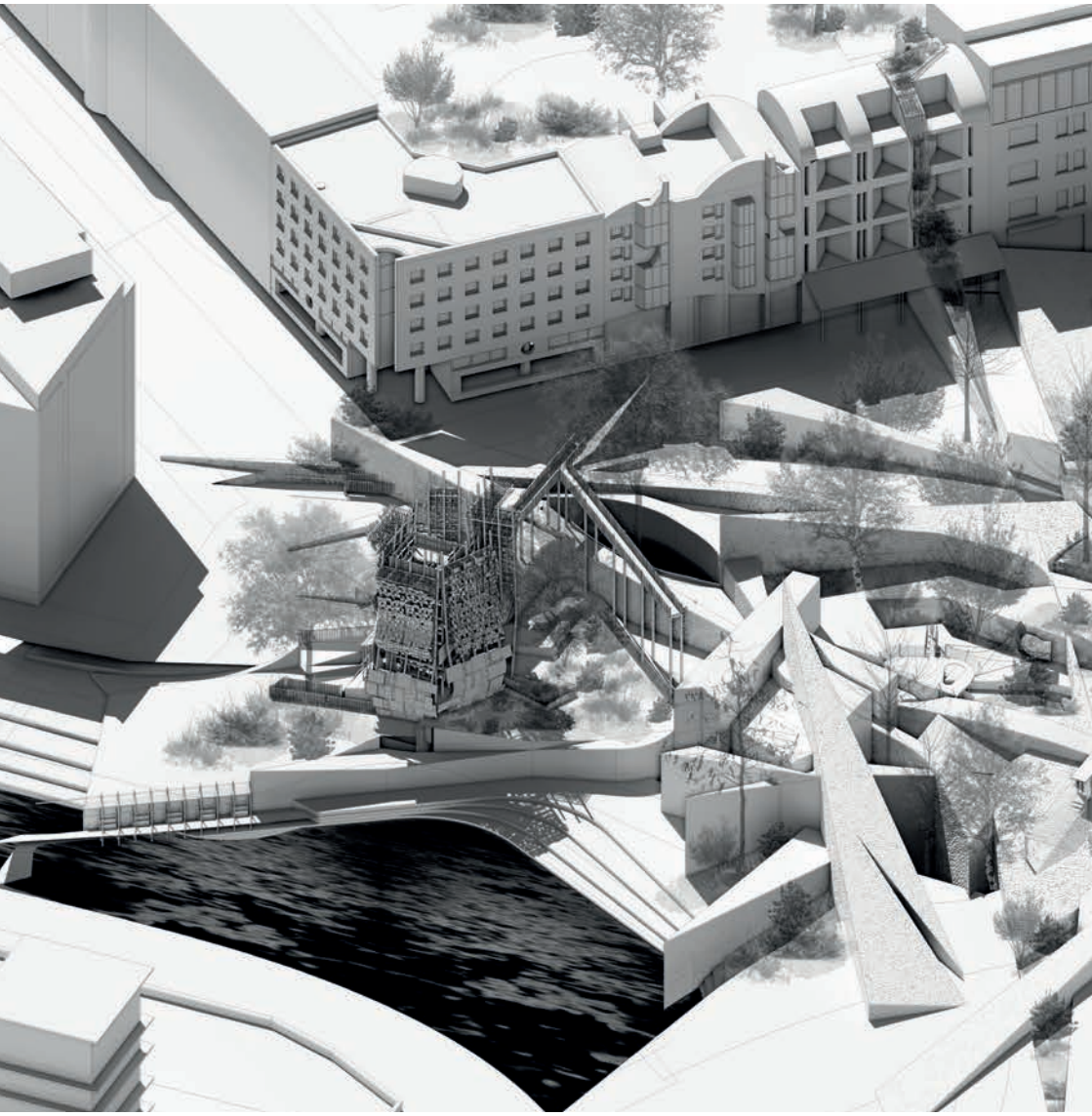
01

HYBRID NETWORKS

EMBASSY OF NON-HUMAN BEINGS

ANDONG GUO
BOLUN HUA
SHIYU ZHANG

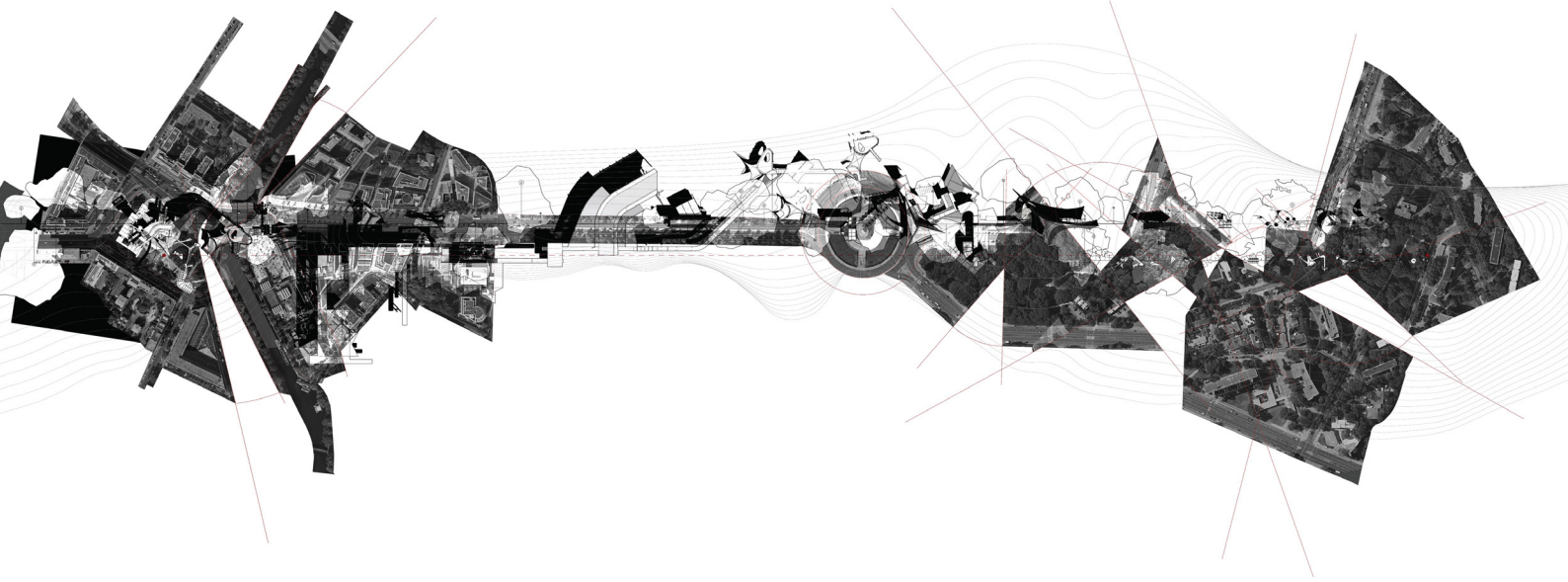
This project aims to create a space dedicated to animate non-humans within Tiergarten area. Situated within the south axis of Tiergarten, an undeveloped green space within the Diplomatic Quarter becomes a home for animate beings in Berlin. Adapting the concept of Bruno Latour's Actors Network Theory, an Embassy for the Non-Human Beings is proposed to empower the voiceless with same rights as human beings. This embassy invites small mammals, birds, insects and vegetation into the Lützowplatz Park for sanctuary and habitation while scientists offer support and monitor their activities. A nature-dominated landscape is interwoven within the urban tapestry which blurs the boundary of 'building' and 'park', a hybrid network for both to interact. The bird tower in the north demonstrates a close relationship between site and Landwehr Canal, providing habitats and nesting spaces at various heights. The greenhouse in the west doubles as a research lab, housing vertical ecology systems. Surface water in pipes is utilized as a water source, ensuring sustainability and resilience. The coexisting residence aims to achieve equality between all inhabitants with spacious sheltered areas and compact living spaces for humans, while ha-ha walls minimize human disturbance. The project trajectory spans 20 years, envisioning the establishment of similar embassies across Germany. Hybrid Networks aims to foster biodiversity and create a thriving environment for a wide range of species. This project seeks to redefine the relationship between urban environments and the natural world, offering a beacon of hope for coexistence and ecological harmony in the heart of Berlin.

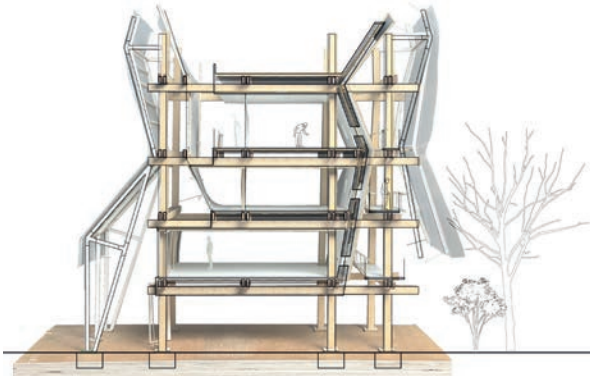


Remapping 'Tokens' onto a digital landscape - multiple scales (previous thumbnail)
Plan iteration (previous right)
Final Proposal Axonometric from North West (above)

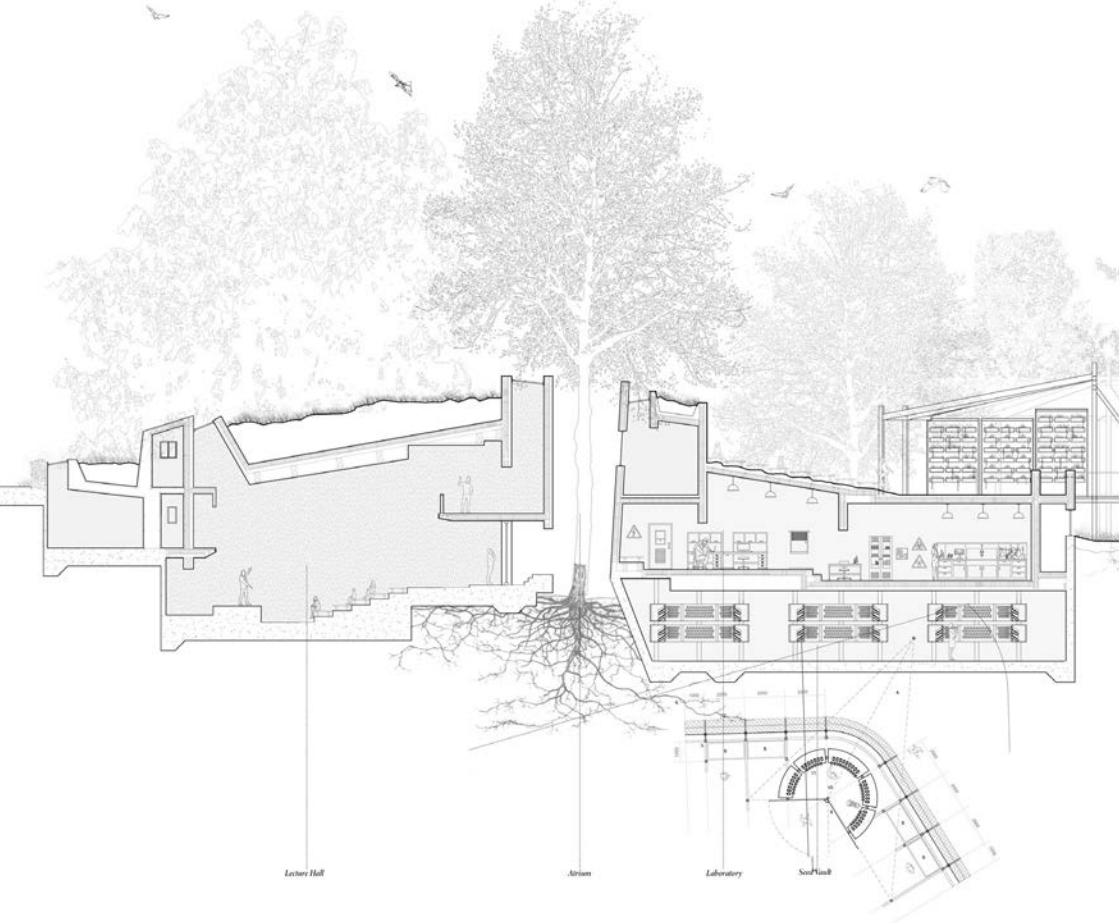
ANDONG GUO + BOLUN HUA + SHIYU ZHANG | **EMBASSY OF NON-HUMAN BEINGS**

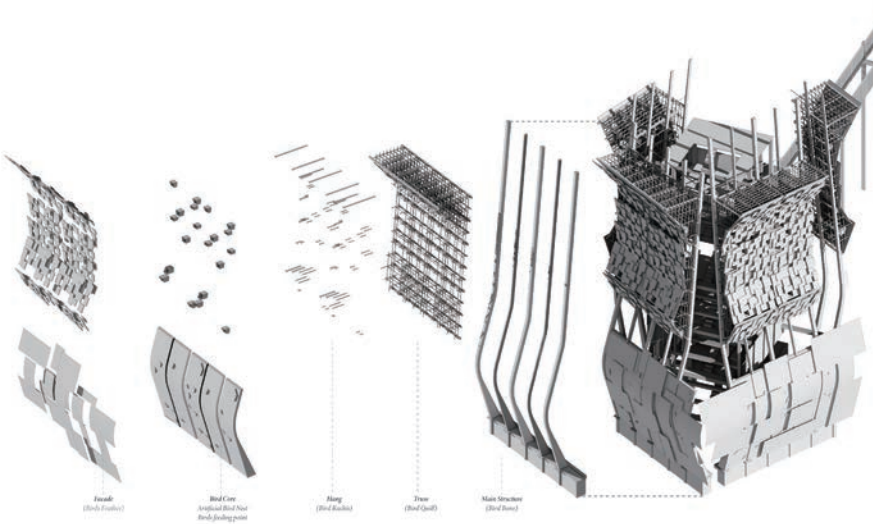
1:2000 Urban Scale model iteration detail (left inset)
1:2000 Urban Scale model in exhibition (above)
Juxtaposed journey - Tiergarten - Lutzoplatz (adjacent right)

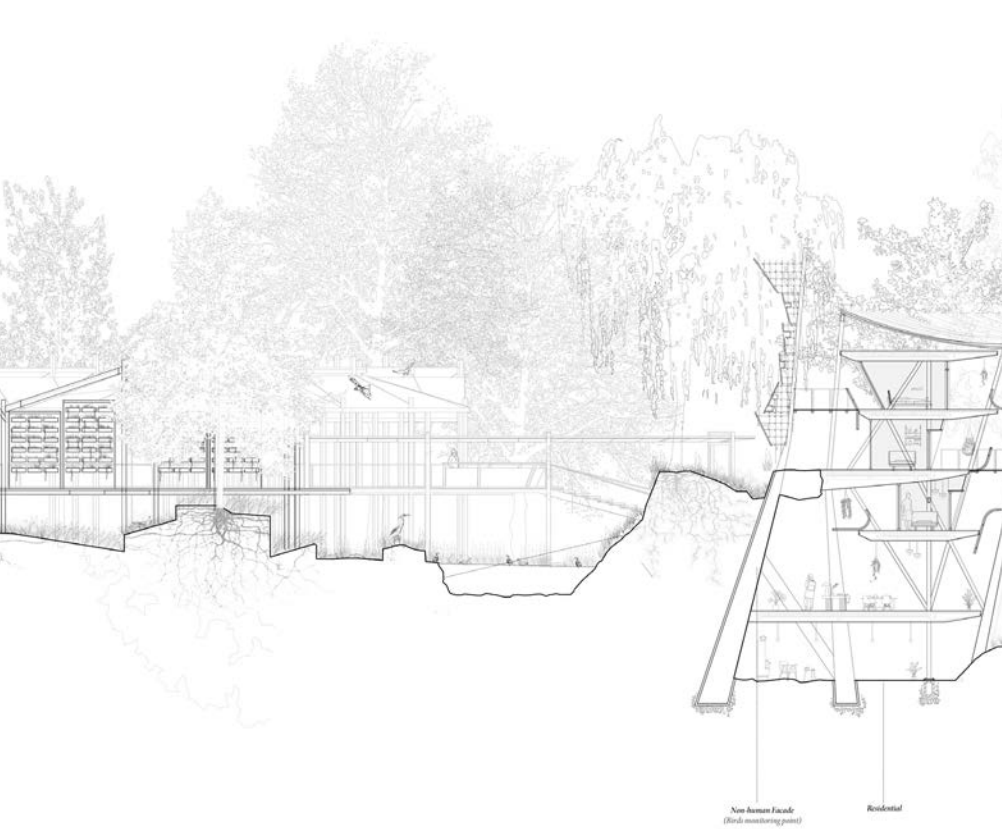




Residence of Co-existence 1:50 model (top left and right)
Bird Observation Tower facade build up (adjacent top)
Ecological Laboratory section (bottom)

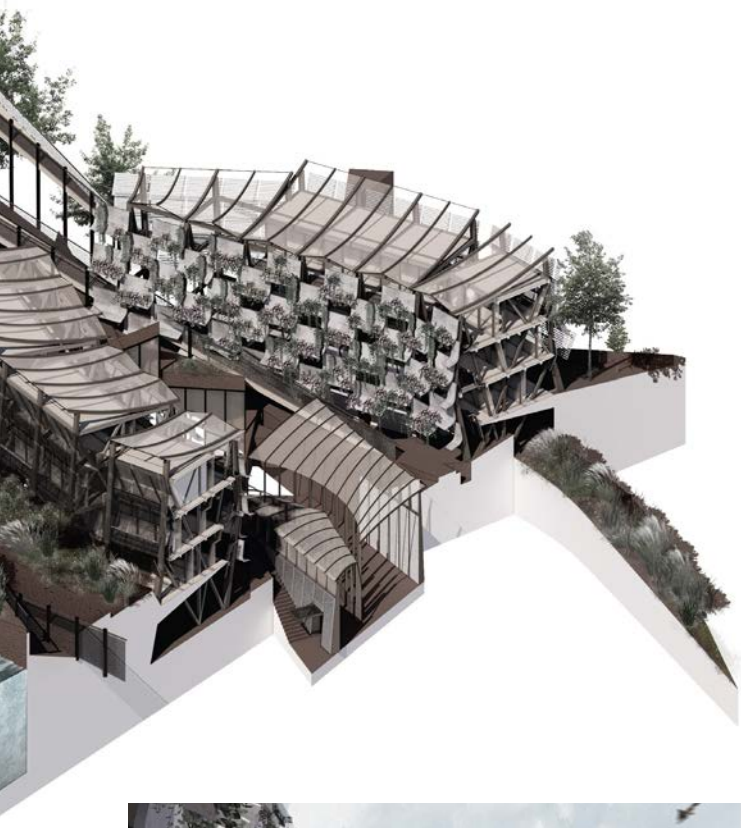



Facade
(Birds Feather)
Bird Core
Artificial Bird Nest
Birds feeding point
Hang
(Bird Rachis)
Truss
(Bird Quill)
Main Structure
(Bird Bone)

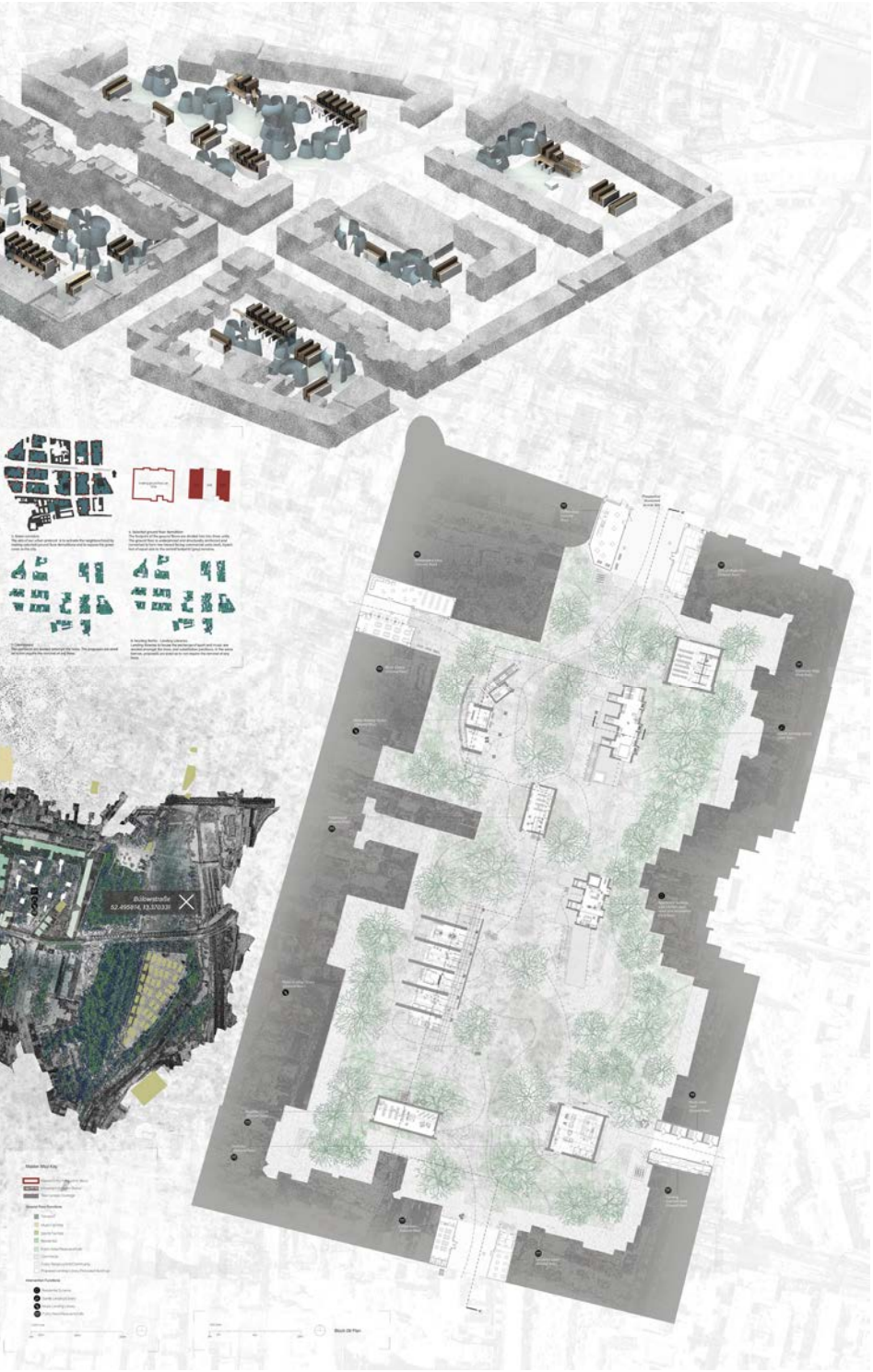

Non-human Facade
(Birds monitoring point)
Residential
Vertical Garden

2
3
5
6
7
8
9
10

Bird Observation Tower rendering (previous left)
Bird Observation Tower perspectives (previous right)
Residence of Co-existence sectional perspectives (middle & bottom left)
Residence of Co-existence courtyard perspective (below)



Lending Libraries for a Permeable City
Unlocking Berlin's Inner Peripheries
Tiergarten
52.5028N, 13.3436W
Tiergarten Typical Detailed Section
Urban Protocol: Inhabiting Urban and Parkland Forests
Tiergarten
Urban Protocol: Interventions in Bülowstraße Urban Neighborhood
Lending Library Detail Section
Week 40 Section



02

URBAN POROSITY

LENDING LIBRARIES FOR INNER CITY URBAN BLOCKS

FOLAHAN ADELAKUN
CARL HARRIS
OLIVER MAXWELL

In and amongst the vibrant pulse of Berlin's urban expanse, the promenade winds its path through the streets of the bustling city. Here, amidst the thrum of urban rhythms, the Bülowstraße bridge stands sentinel, a titan of time – connecting the city of yesterday and tomorrow.

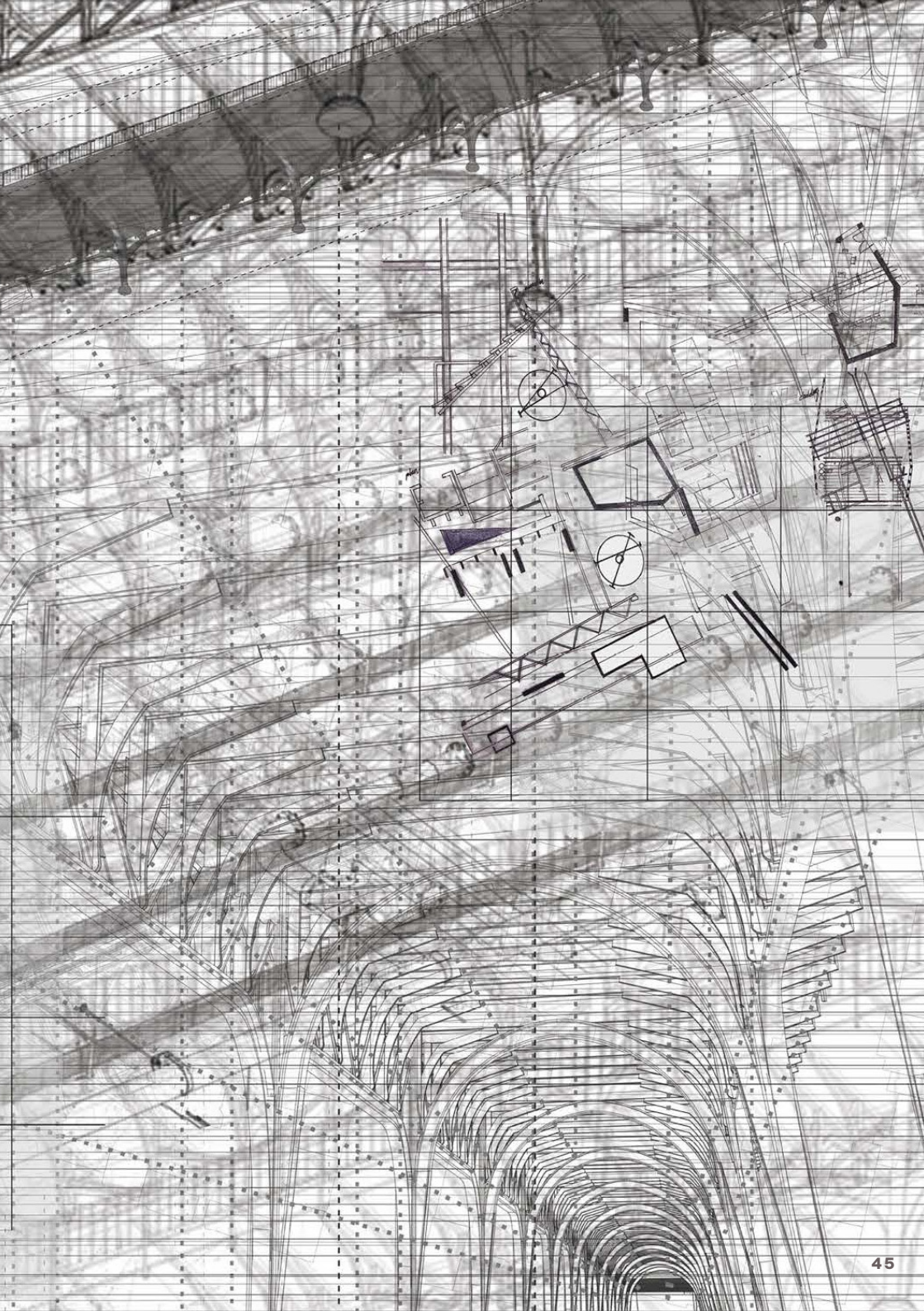
Towards an opportunity for intervention. Of urban harmony...

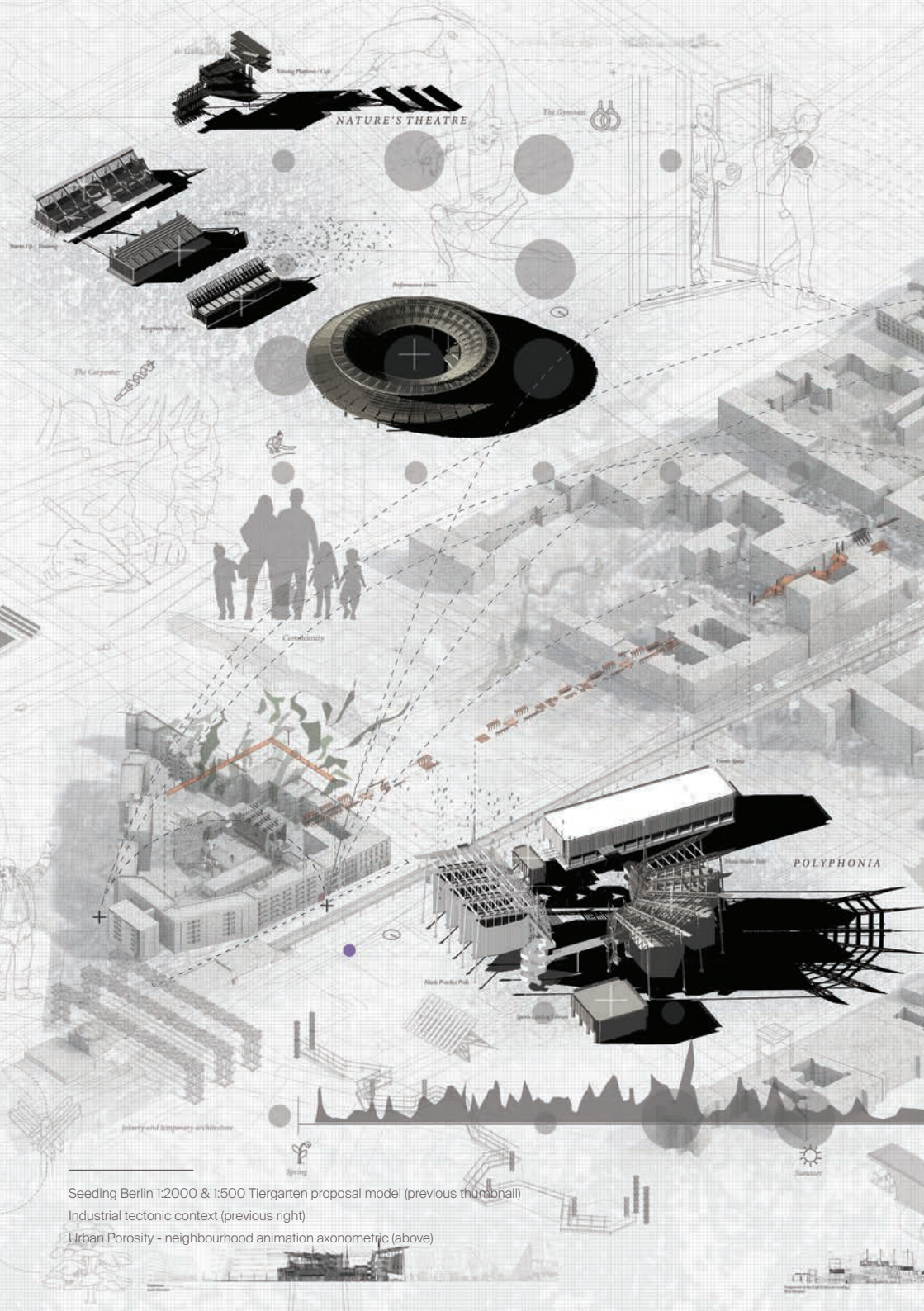
Once cloistered havens, the impermeable private blocks of Bülowstraße now yearn for liberation, shedding their walls to embrace the communal. No longer fortresses of exclusivity, they now beckon to all, transformed into delicately composed hubs of activity.

In this metamorphosis, the Berlin block becomes a canvas for innovation, a stage for the dance of leisure and community. Music, Craft, and Sport take centre stage, weaving a tapestry of cultural exchange and kinship among Bülowstraße' denizens and beyond.

As the architecture shifts over time, it breathes with the city's pulsing beckon for resilience and adaptability. Modular and fluid, these structures become vessels of transformation, reflecting the ebb and flow of urban life. Branching off, from the span of the Bülowstraße' bridge a harmony between humanity and nature is unfolded. Enabling the thriving of the vibrant ecologies that dwell within and without, animating a porosity of movement amongst human and non-human protagonists.

Within the beating heart of Bülowstraße, the trinity of community, nature, and culture converges in a kaleidoscope of care, nurturing, and vitality, ushering forth a new dawn in the great city's eternal symphony.



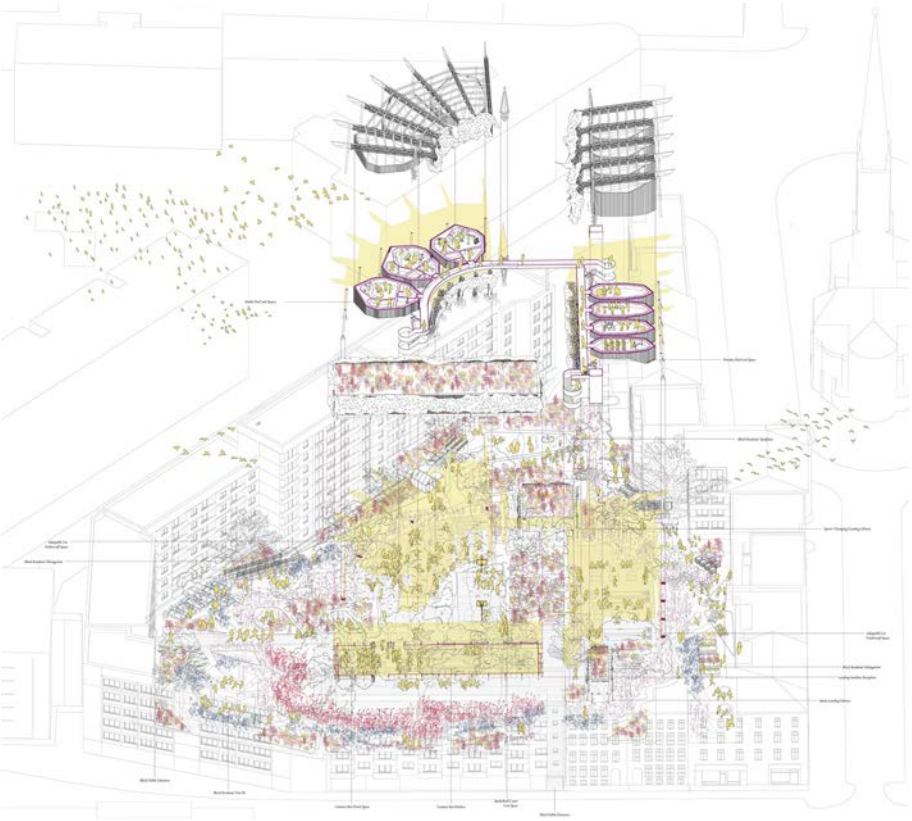


Seeding Berlin 1:2000 & 1:500 Tiergarten proposal model (previous thumbnail)

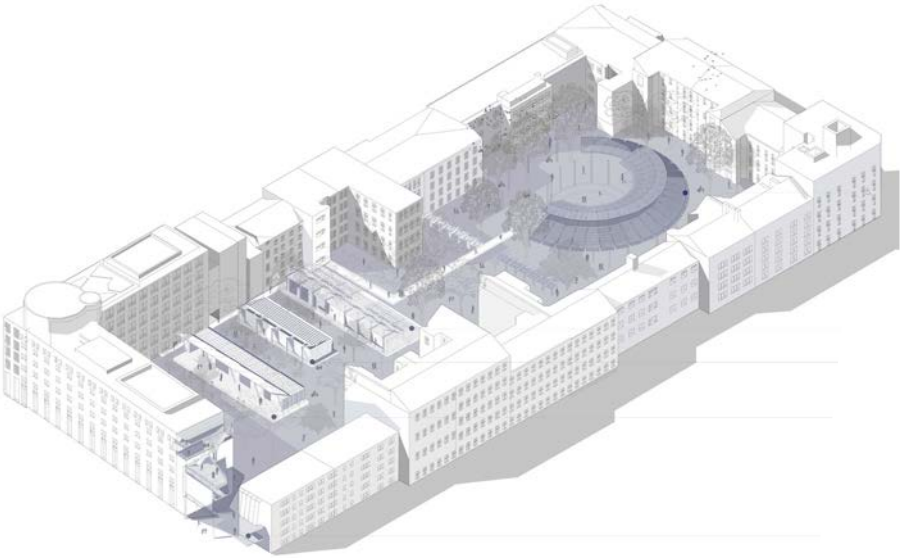
Industrial tectonic context (previous right)

Urban Porosity - neighbourhood animation axonometric (above)

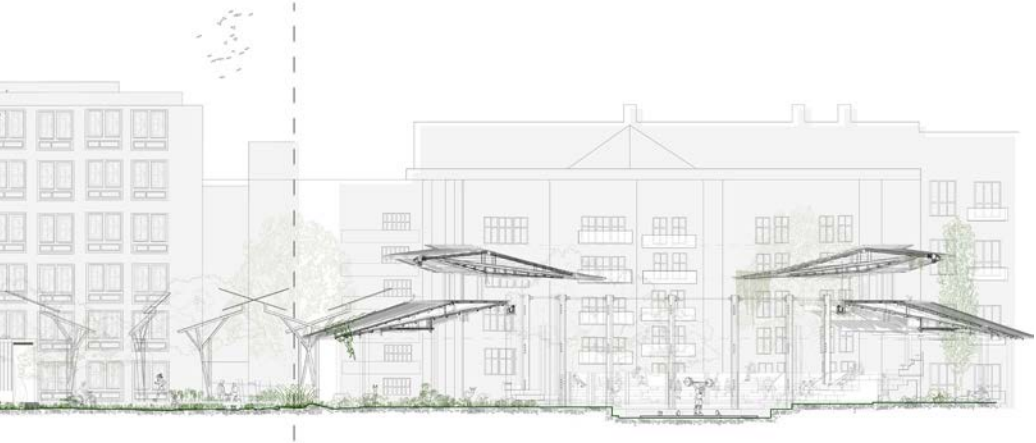
COMPONENT
[CENTRE FOR
Sports Lending Library
Sports Hall
Mass Lending Library
The Booker
Carbon offsetting
Retrofitting potential
Street furniture
Autumn
Winter

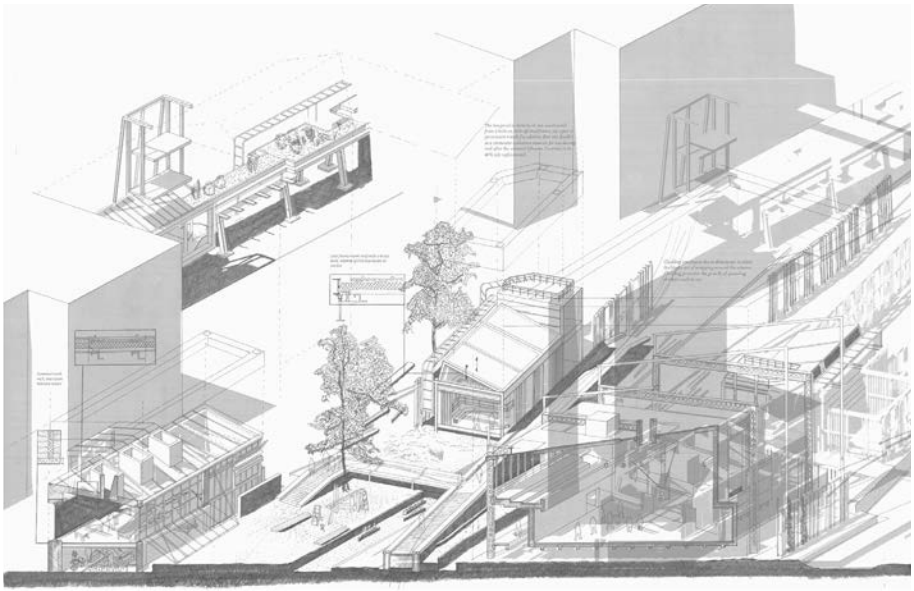


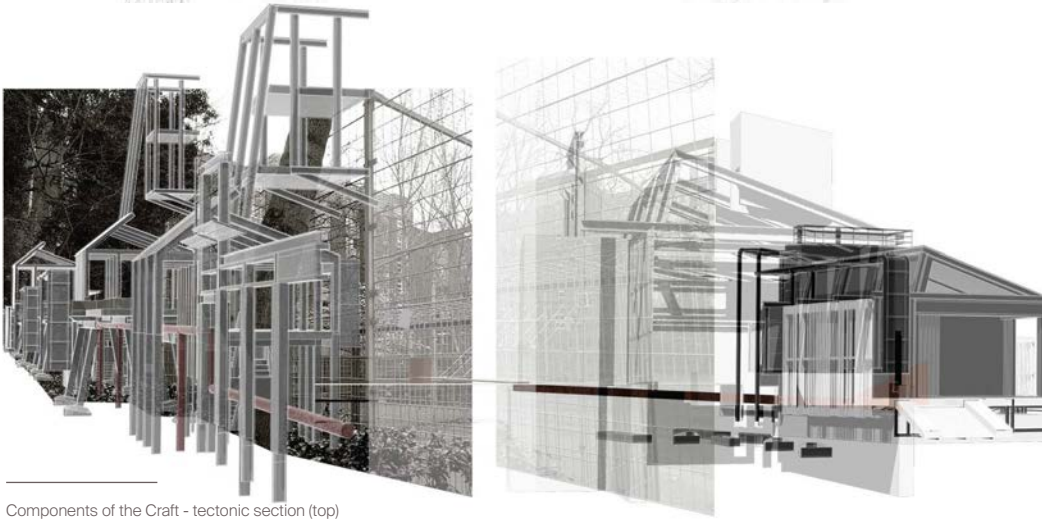
Polyphonia habitation axonometric (adjacent top)
Tiergarten in motion - visualisation (adjacent bottom)
Polyphonia - community garden perspective (above)
Polyphonia - habitation section (below)



Seeding Berlin - maquette (adjacent top)
Nature's Theatre - auditorium perspective - (adjacent middle)
Nature's Theatre - block axonometric (above)
Nature's Theatre - habitation section (below)





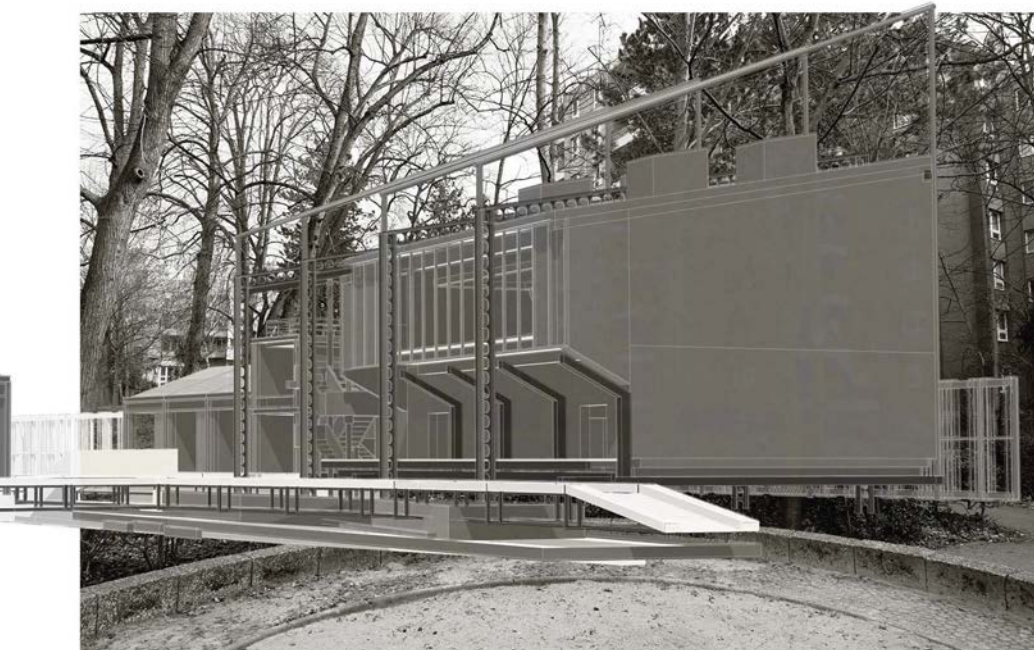


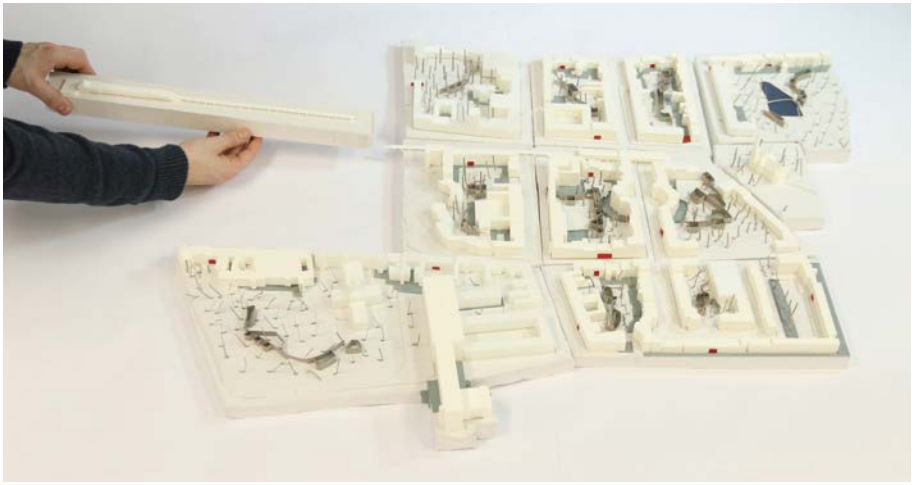
Components of the Craft - tectonic section (top)

Components of the Craft - habitation section (above middle)

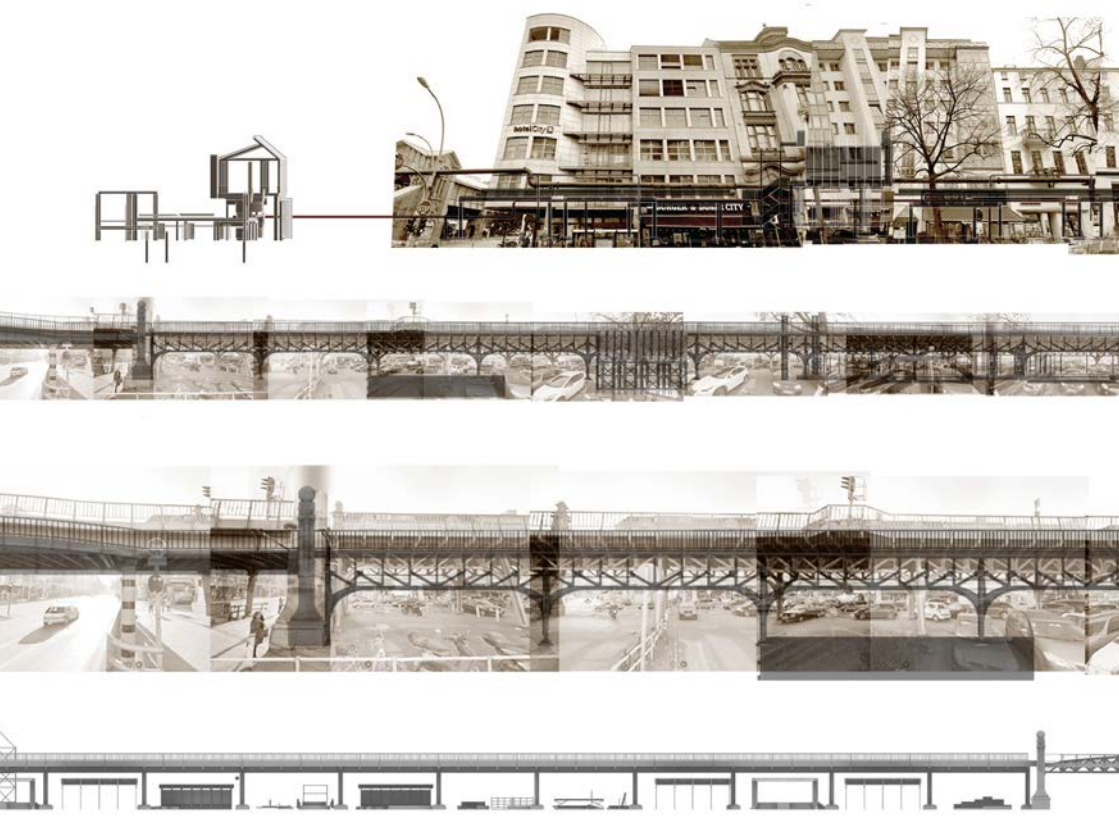
Components of Craft - perspective (bottom)

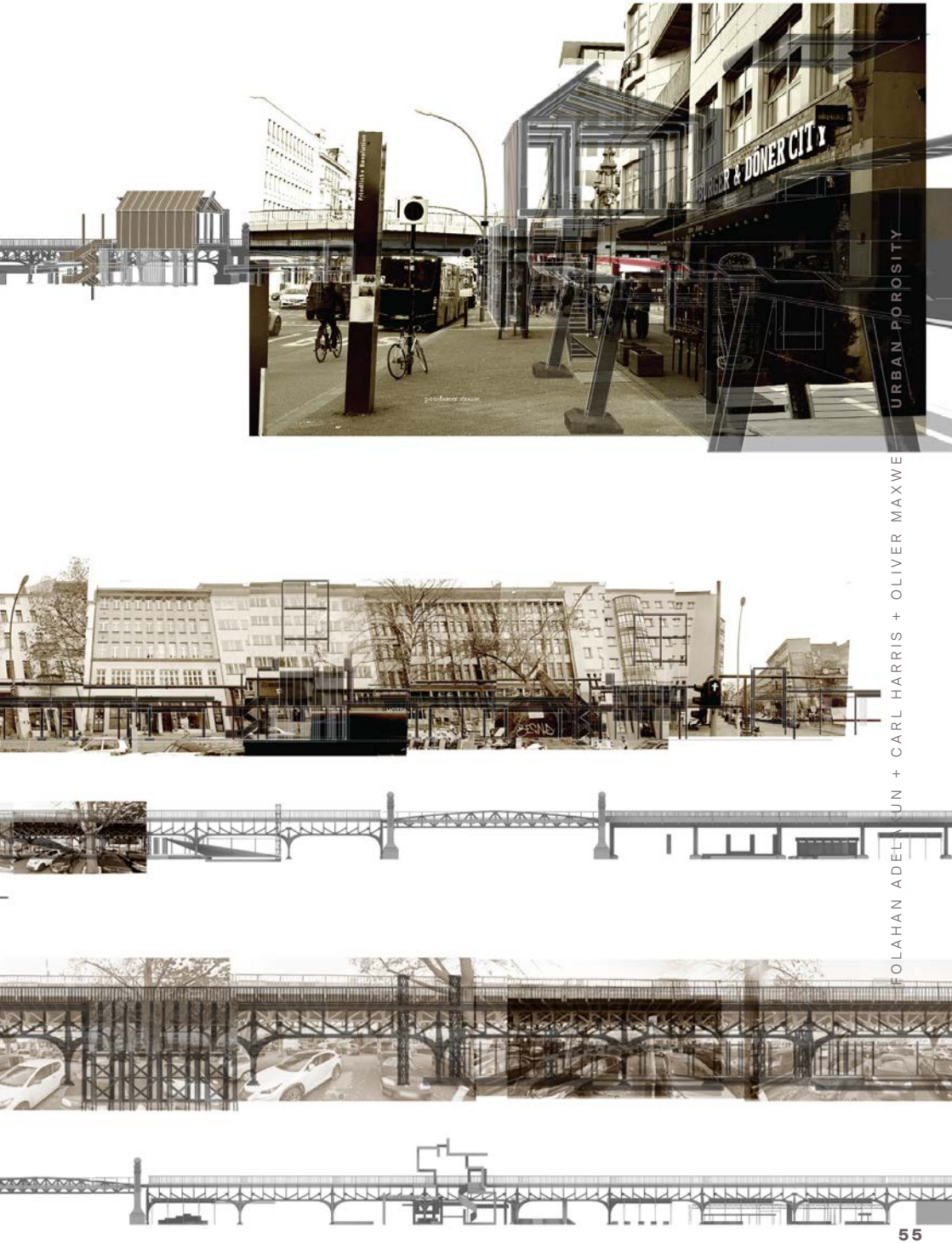
Components of the Craft - tectonic study model (above left)
Components of the Craft - arboricultural plan (above right)





Neighbourhood intervention model (above)
Components of the Craft - Potsdamer Strasse perspective (adjacent top)
Bülowstraße U-Bahn festival site (below)





URBAN POROSITY

FOLAHAN ADELAKUN + CARL HARRIS + OLIVER MAXWE

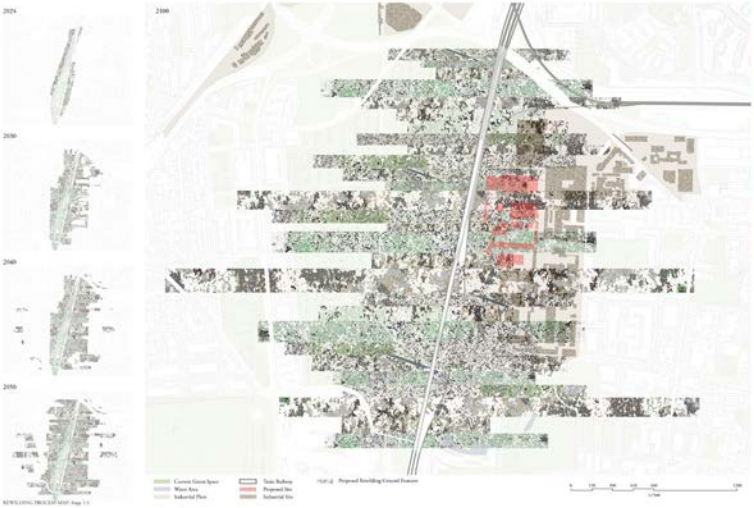
Berlin's Blocks to Rewilding Plots

Warehouse to Birdhouse: Revitalizing Grey Area Lots in Berlin

In the heart of the city of Berlin, where the hustle and bustle of urban life is intertwined with the whispers of nature, we embark on an ambitious journey to redefine this human and non-human interface. Our goal is not just to observe, but to actively engage with the city's ecological narrative, utilizing cutting-edge technology to bridge the gap between human perception and the often-overlooked nuances of urban ecology.

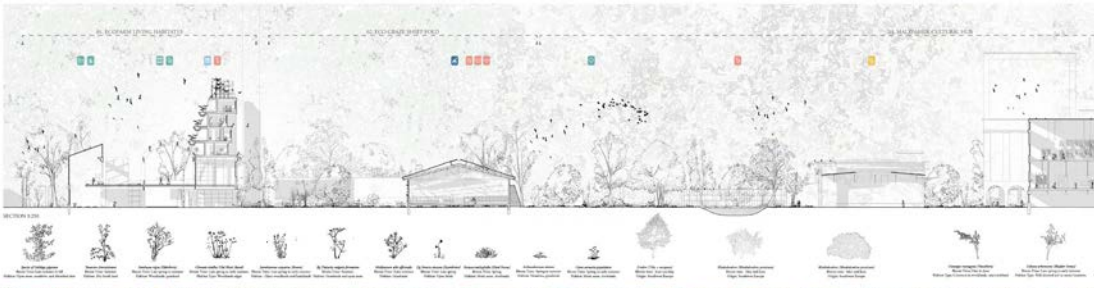
The Urban Block to Rewilding Plots project focuses on **transforming an industrial site**, previously utilized for car rental and carriage storage, **into a rewilding and residential development**. Seen on the right side of the Neukölln Park in Berlin, **we draw inspiration from the city's historical transformation of ruined train stations into green spaces**, aiming to rewild urban areas to create habitats for flora and fauna. By doing so, we addressed the urgent need to balance human and non-human ecology, mitigating the impact of climate change and biodiversity loss, ultimately shaping the Berlin of tomorrow.

The field of technology is dynamic, and advancements occur rapidly. Future cars and postal services are foreseen to be fully automated, reducing spatial demands for parking and postal facilities through streamlined and efficient automation processes. By **reclaiming and transforming abandoned, even future-caused industrial sites**, we have demonstrated our commitment to sustainable development and ecological harmony. The proposal seeks to build upon this ethos by converting three urban blocks, a Briefzentrum (postal service), car dealing and repairing station and an unoccupied beer factory site into a hybrid greenhouse- and residential area.

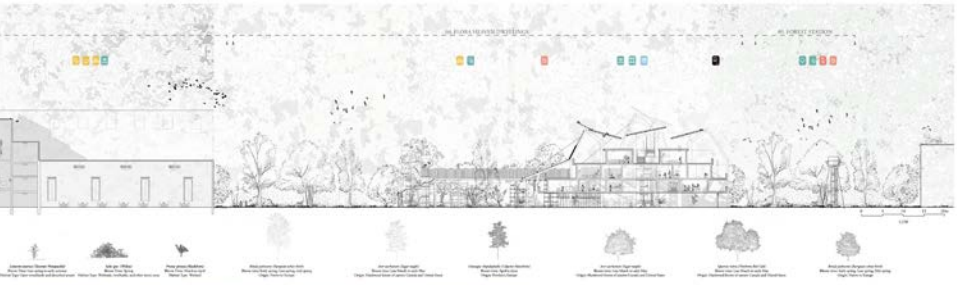


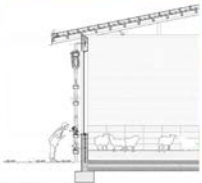
REWILDING TRUCKS MAP, Page 1:1

THE SUBTONE FOR HUMAN AND NON-HUMAN HABITANTS



SECTION 1:250





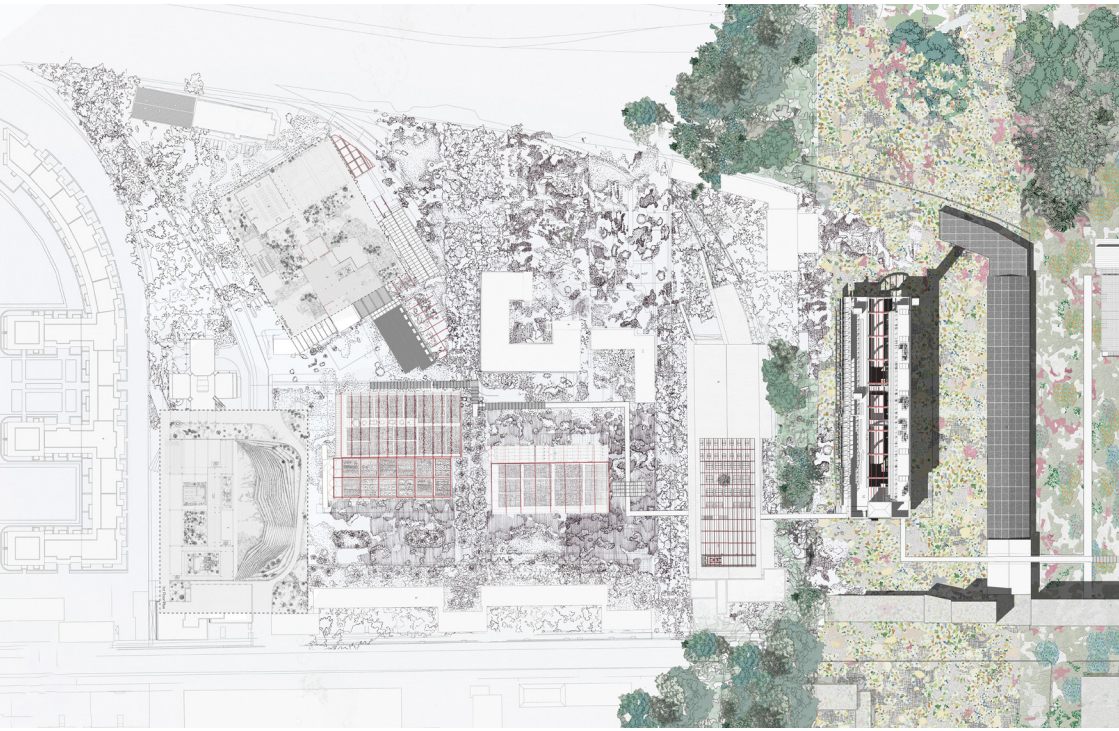
03

BERLIN'S BLOCKS TO REWILDING PLOTS

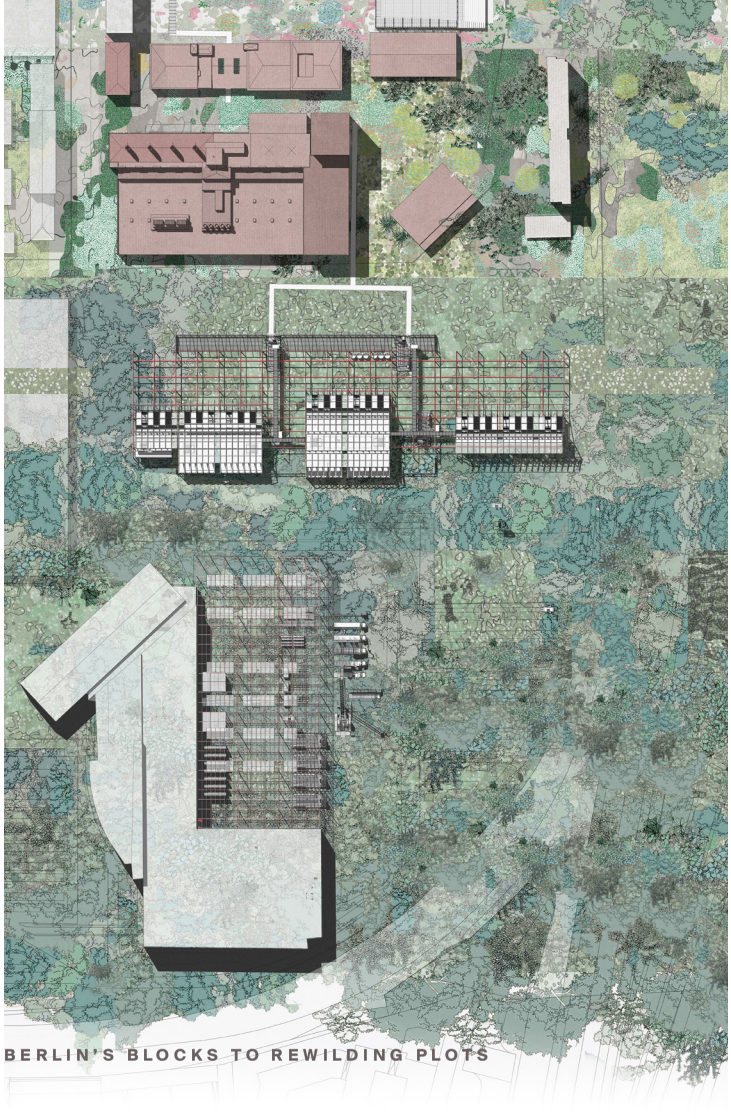
WAREHOUSE TO BIRDHOUSE

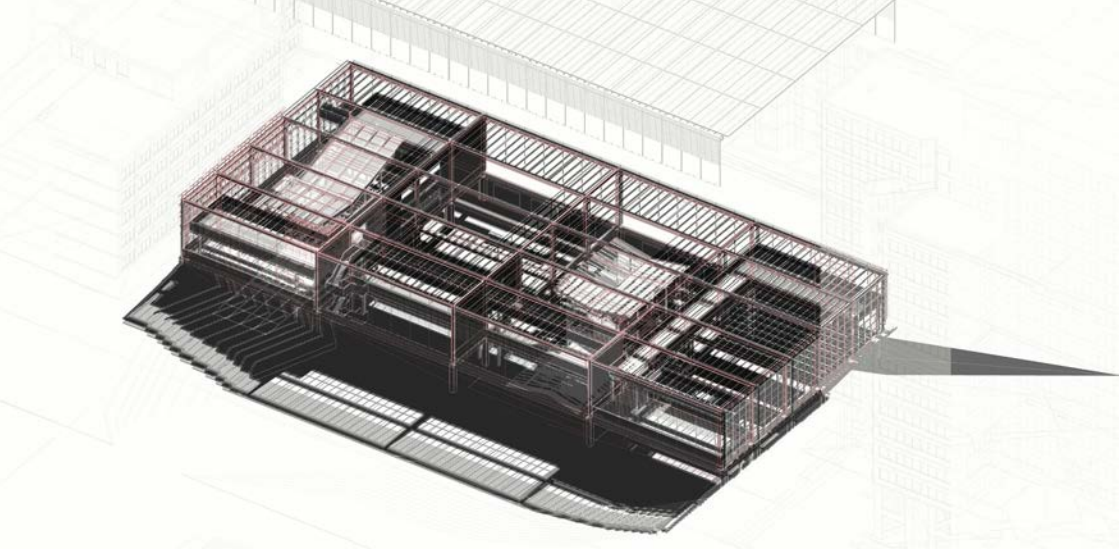
TERRY FENG
KIM LEE
BINGZHI LI

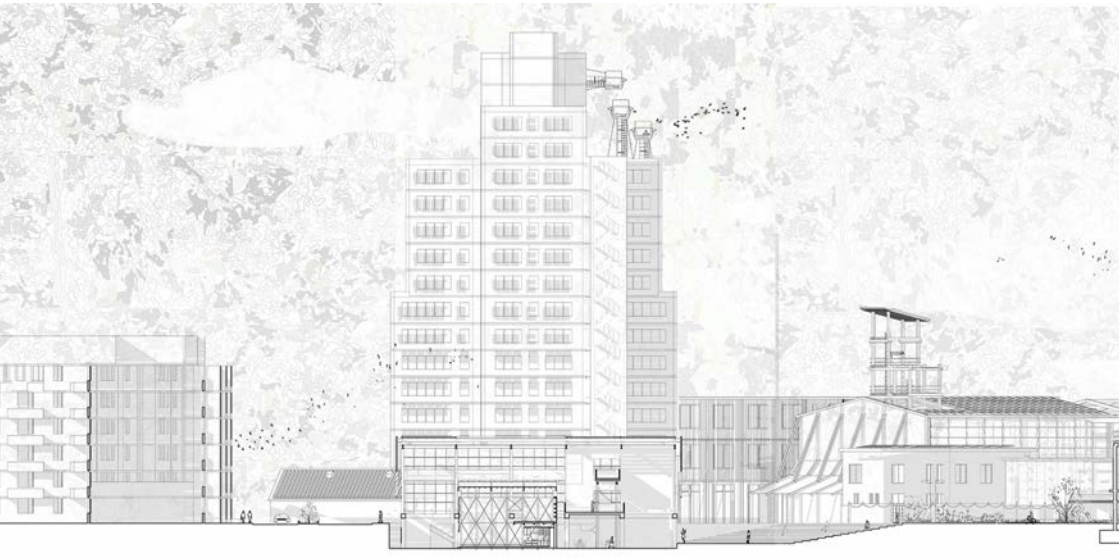
The project represents an extensive revitalization aimed at redefining the relationship between humanity, non-humans, and the environment within urban landscapes. In this context, revitalization refers to the process of adapting building structures to meet changing user requirements while honouring Berlin's tradition of transforming industrial sites into green spaces. Our mission is to engage with the city's ecological narrative and address the pressing challenges of climate change and biodiversity loss. Our design draws inspiration from 19th-century Schrebergärten (allotment gardens) and railway wasteland transformation. The project retains the steel frames (or useful concrete structure) of existing industrial buildings, introducing sustainable pavilions and architecture that promote a harmonious balance between human habitation and rewilding. We incorporate community farming, plant nurseries, and vertical gardening to facilitate this transformation. A core aspect of the development is the 15 to 30-minute city concept, where residents have convenient access to services within a short distance. In the first part of our project (the competition phase), we transformed a former postal service centre, car dealership and repair station, and an unoccupied beer factory site into a hybrid greenhouse and residential area. Subsequently, we proposed converting warehouses, abandoned offices, and parking lots into a primary school, sports pitches, a day care centre, a community centre/performance hall, residential areas, a furniture factory, and a market. This setup encourages community cohesion and reduces commuting, promoting a sustainable urban lifestyle.



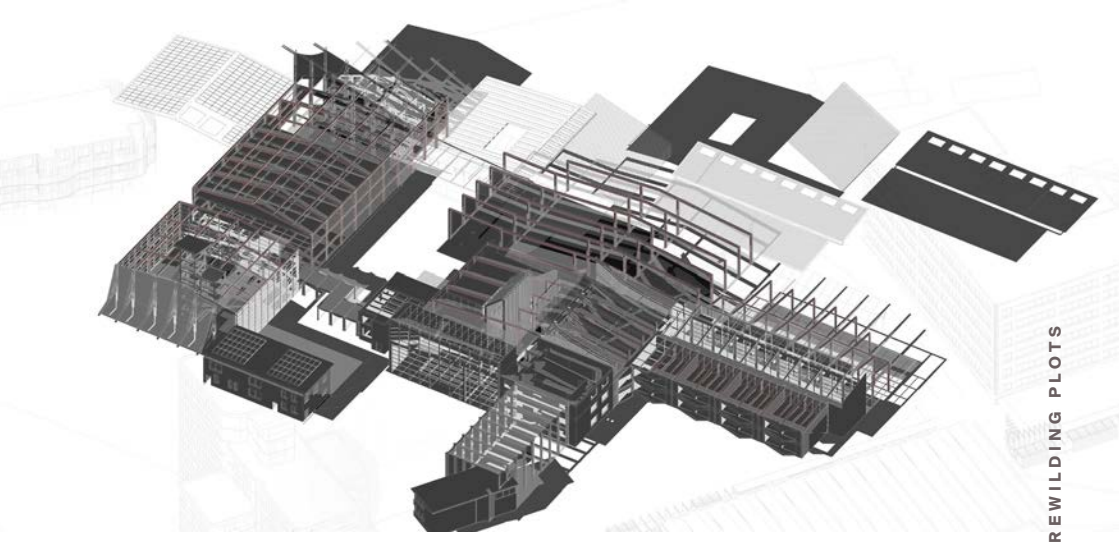
Observation tower model (previous thumbnail)
Rail side Industrial Rejuvenation: Rewilding along railway lines (previous right)
Rewilded site plan and corresponding scheme section (above)
Farmland with intensive agriculture building perspective (adjacent bottom)
Farmland with intensive agriculture building section (below)

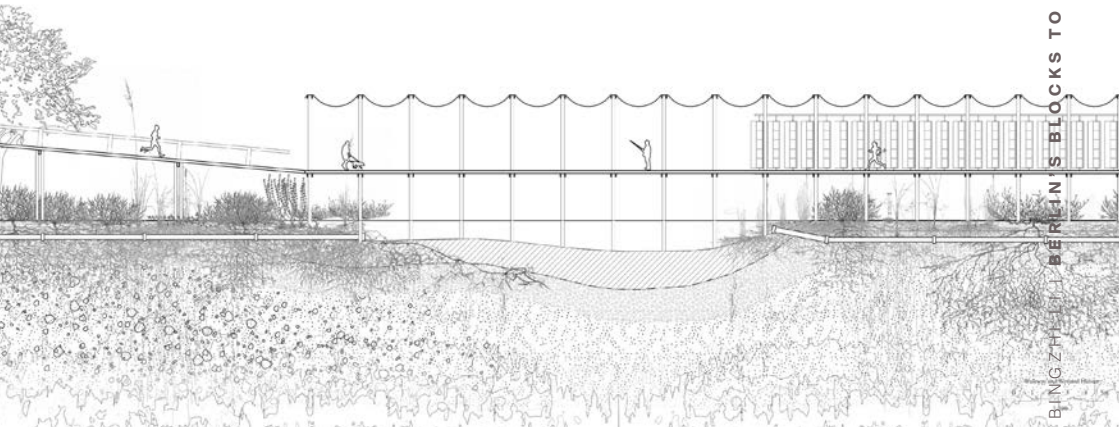


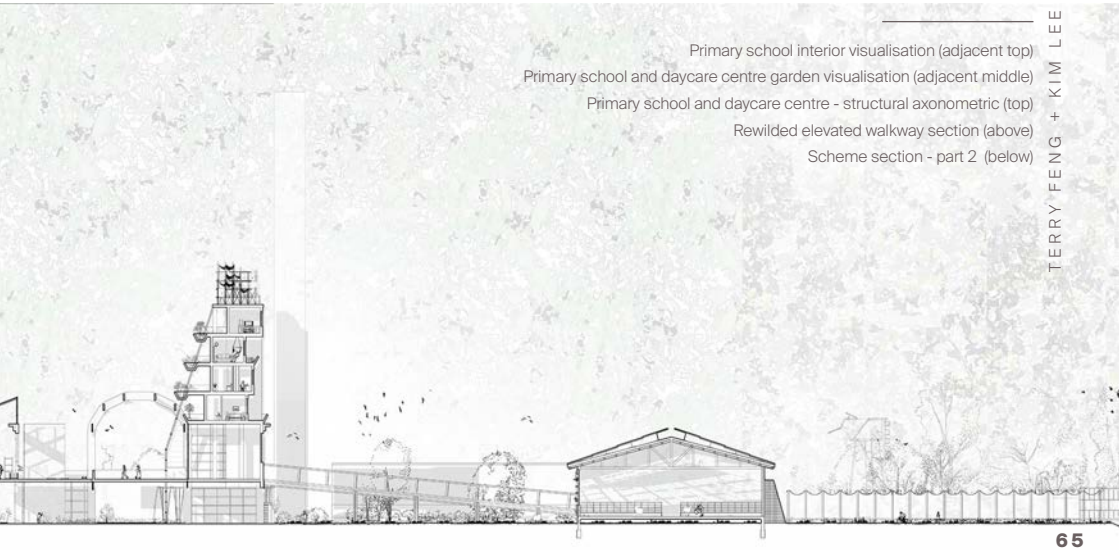




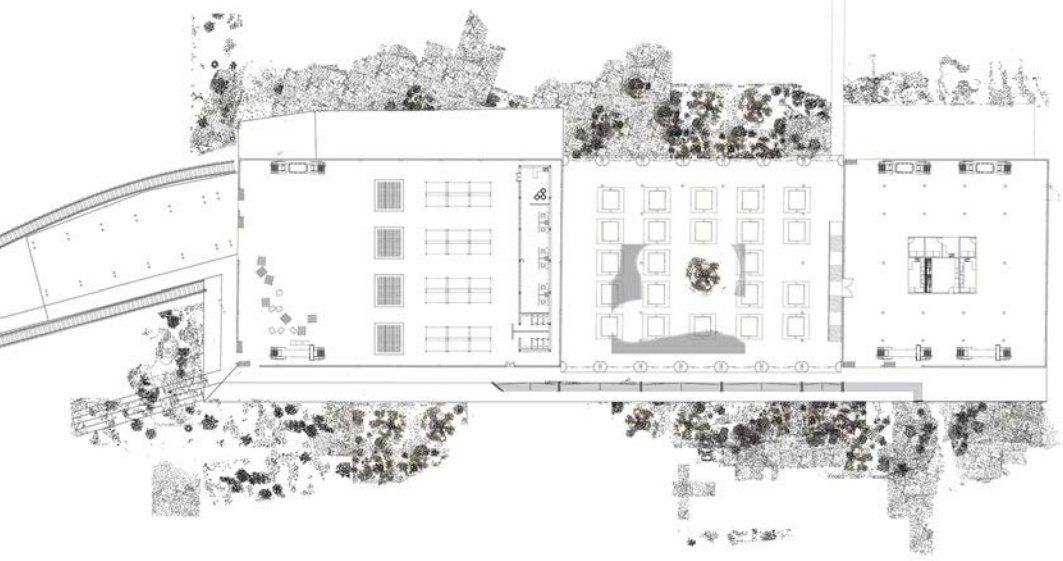
Enclave Hall - structural axonometric (adjacent top)
Enclave Hall - visualisations (adjacent middle and above)
Scheme section - part 1 (below)

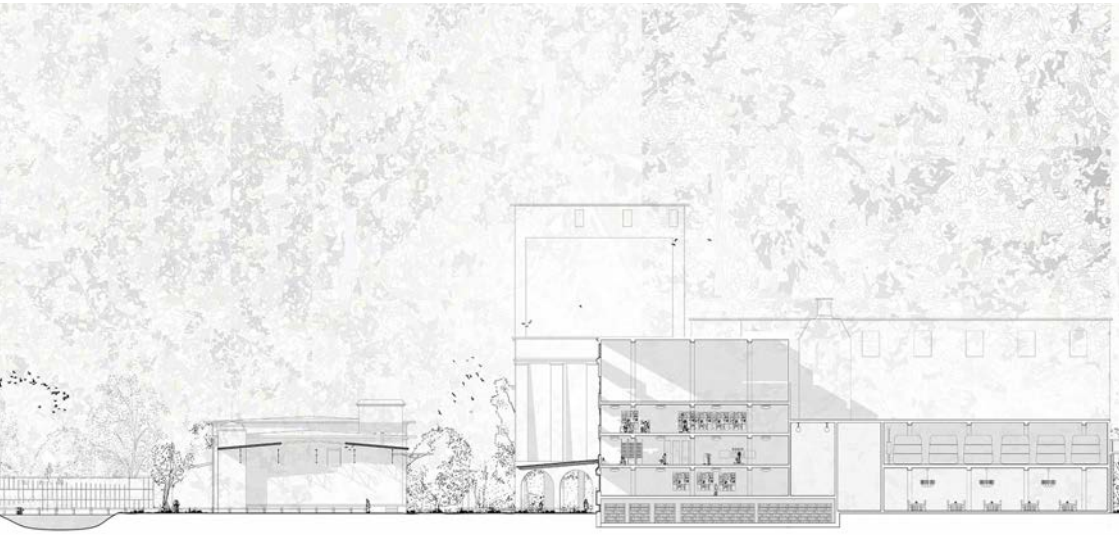






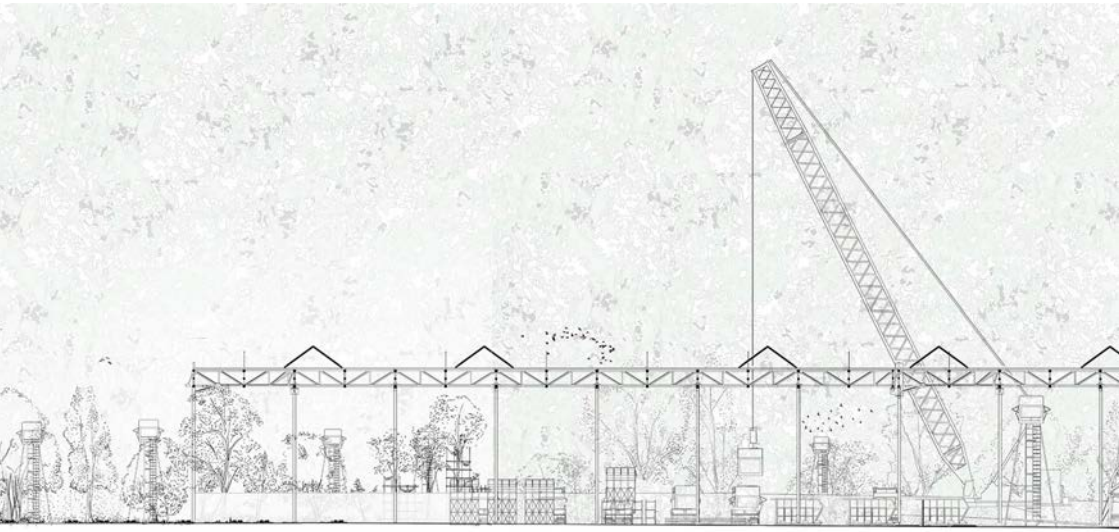
Primary school interior visualisation (adjacent top)
Primary school and daycare centre garden visualisation (adjacent middle)
Primary school and daycare centre - structural axonometric (top)
Rewilded elevated walkway section (above)
Scheme section - part 2 (below)

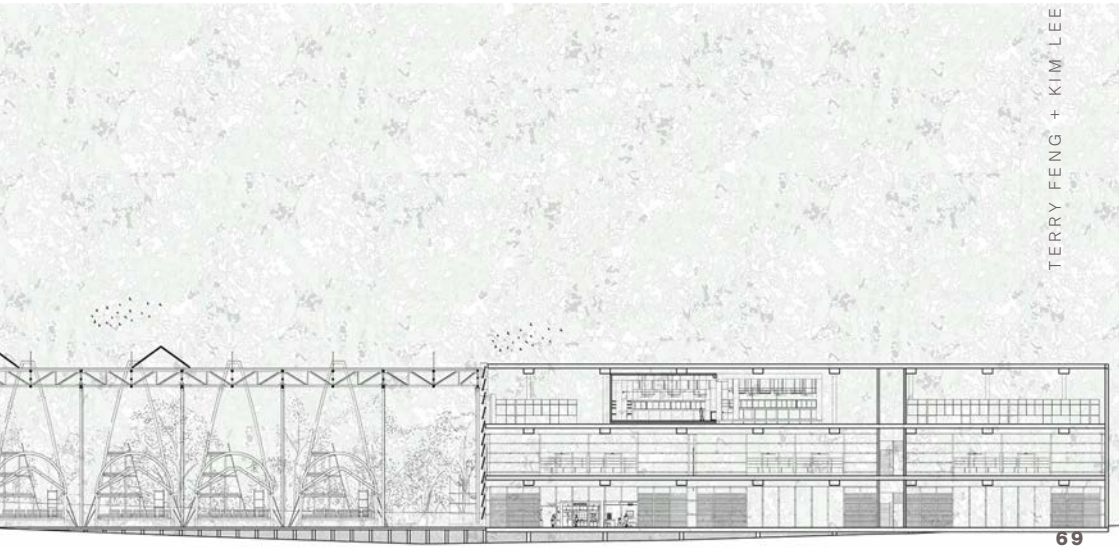




Harvest Junction Depot, Market & Communal Kitchen plan (adjacent top)
Central Market visualisation (adjacent middle)
Field Station - Site Monitoring Station (above)
Scheme section - part 3 (below)

Rewilding Device Workshop visualisation (above)
Harvest Junction warehouse (adjacent top)
Scheme section - part 4 (below)





INTERWEAVING HABITATS

A More-than-Human Infrastructure for Landwehrkanal

Moving towards tomorrow, Berlin is confronted with diverse challenges, ranging from lack of affordable housing and homelessness to dwindling biodiversity and increasing pollution of the Landwehrkanal and its banks. The proposal looks at the central section of Landwehrkanal, which epitomises the diverse challenges. Whilst environmental degradation impacts water quality and endangers the biodiversity of adjacent green spaces, the increasing homelessness crisis has made tough sleeping notably prevalent along the canal's fringes.

Interweaving Habitats re-imagines the canal as a multi-species landscape, addressing concerns around the provision of affordable housing and ecological habitats in one scheme. The proposal establishes infrastructural bio-huts that support human and non-human inhabitation, defining pockets-nodes of ecological and psychological structural framework for housing to attach onto. It recognises the heritage of Landwehrkanal as a driver in the housing expansion of Berlin as an artery of transport for construction materials, and uses this potential to its advantage by establishing a temporary barge transport system, in which buildings that better value than things is employed.

As the three investment challenges require different temporal reference, the proposal looks at both providing immediate relief to the housing crisis as well as for a long term sustainable development. According to this logic, the proposal is phased across different stages.

(1) Establishing infrastructural bunkers, which divide the green corridor along Landwehrkanal into patchworks of biodiverse habitats, accommodating both human and non-human populations

(2) Assembling temporary housing units along the bunkers to provide immediate relief for people without permanent shelters.

(3) Extending temporary accommodation with housing modules to form a permanent affordable housing scheme, integrating communal facilities and infrastructure to help connect the newly-created biodiversity and water quality corridor.

Networks of Water and their adjacent green spaces

EXTENDED HOUSING AND COMMUNITY FACILITIES

20-40 Years

The addition of extended housing modules helps strengthen the communities and ecological habitats in the area. The further integration of housing blocks onto disused facilities, or vacant lots, facilitates the building of local communities.

Examples of the housing modules are designed to be 'refurbishment' for disused and non-human spaces, promoting uses in the existing, thereby degrading existing.

TRANSITIONAL HOUSING

5 - 10 Years

Pre-fabricated CLT housing units attach onto the infrastructure frame, providing a short term solution to housing people without permanent homes.

Building can be able to maximise optimal comfort, allowing the maximisation of habitable people contained and built.

INFRASTRUCTURAL BIOCRETE

100+ Years

The infrastructural bunkers provide a framework for housing to attach to, and interact with the ecosystem of water and biological habitats on site. Its concrete shells harness habitats and create sheltered courtyards.

The structure makes the water accessible to many species, whilst the plants and grasses, plays the role of soil and plant beginning.

PROPOSED RECLAIMED ECOLOGIES

100+ Years

Patches of landscape define 'community' of natural habitats, the water bodies and the 'patches of land' making new areas for the re-created ecosystems to flourish.

The ecosystems begin and progresses with the existing historical green edging the canal with natural patches forming symbiotic relationships, enhancing the biodiversity of the green corridor.

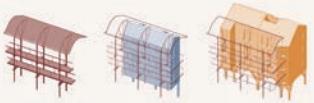
EXISTING GREEN AMENITIES/LANDWEHRKANAL

A popular recreational canal front running through the heart of the city, but also a historic key transit artery.

A rich ecology playing home of water pollution sensitive ground water, as well as biodiversity hot.

Layers of Infrastructure and their natural and ecological function

View Across the Canal Towards a Courtyard Bracket, Autumn 2061



1 - INFRASTRUCTURAL SKELETAL

100+ years

Conceptual walkway structures are assembled from reused steel components. They frame beaches of landscape and form housing for housing blocks to attach onto. Certain areas deal with the circulation of water and electricity and provide a framework for future tenants to develop.

2 - TRANSITIONAL HOUSING

5 - 10 years

CLT prefabricated housing units can be assembled under the canopy of the walkway and attach onto its frame. Each block consists of 4 temporary housing units across three floors. Each unit contains one bedroom and a 1 bed bathroom.

3 - PERMANENT HOUSING

50-80 years

Housing modules, which attach onto the temporary accommodation, integrate the existing structure and habitation to become part of a larger 2nd called to long-term rehabilitation. Units can be extended in the vertical form to form two-bedroom flats or be combined across multiple floors to form larger housing units. Recycling and reuse of materials is encouraged in the assembly and removal of the units. Communal spaces in the form of a bicycle service or cooperative.

Temporal Layers of Housing Development

Masterplan of Housing Brackets and Proposed Ecologies, 2050

Detail Section through Temporary Housing and Walkway with Timber Framed Extrution Modules to Elevation

Section through a Courtyard Bracket with a Wetland Ecology

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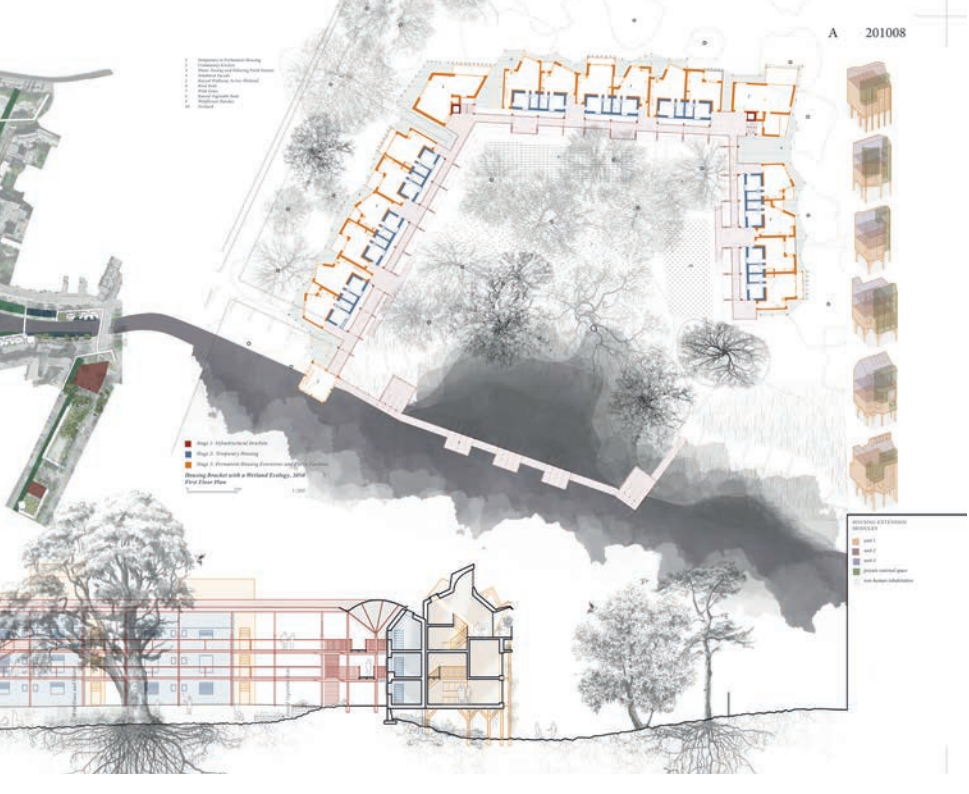
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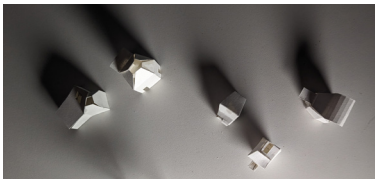

04a

CRAFTING FUTURES

JODIE HORSBURGH

Building on Interweaving Habitats, the project further embraces the theme of care for both humans and non-humans.

Nestled in a green corridor within two streets in Bärwaldstraße, and near the historically industrial Landwehrkanal, the project seeks to harness the potential of this urban ecological space while fostering an educational scheme. The proposal consists of a Construction College integrated with surrounding greenery, aimed at re-training adults with vocational skills to bolster employability. The existing site is composed of two areas, with the proposed educational college infrastructure located in the north and public allotments and park space situated in the south.

By reclaiming and re-purposing underutilised greenspace, the project contributes to the enhancement of Berlin's biodiversity. This is further prevalent with the placement of a biotope patchwork that is incorporated throughout the site, which supports native flora and fauna. The establishment of a Vocational Training College for Construction equips individuals with marketable skills, particularly focussing on those living within the previously developed housing scheme. The college itself is subdivided into three main areas: General Construction Skills, Electrical Engineering and Plumbing, with design influenced by specific needs for each of these sectors.

The replicability of this proposition extends beyond its physical footprint and is viewed as a template across these greenspaces within the city of Berlin. While the specific programmatic elements may vary, the intent of the proposal is to enhance these spaces by unlocking their full potential.

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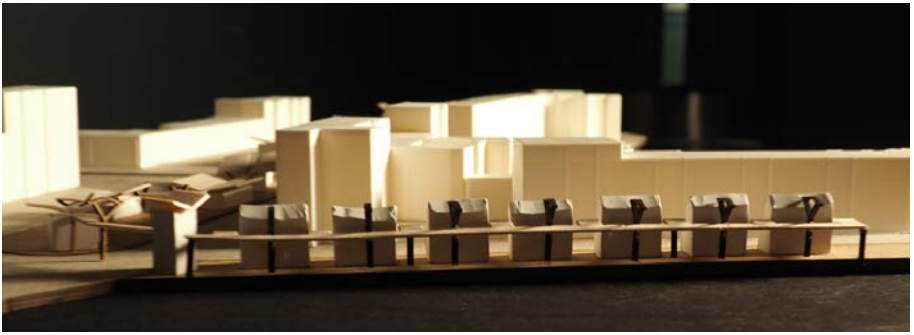


Field station maquettes (previous thumbnail)
Crafting Futures - site plan (previous right)
Long Section (top)
Site, tectonic and developmental maquette models (middle)
Short section through college (below)

04b

LANDSCAPE OF CARE

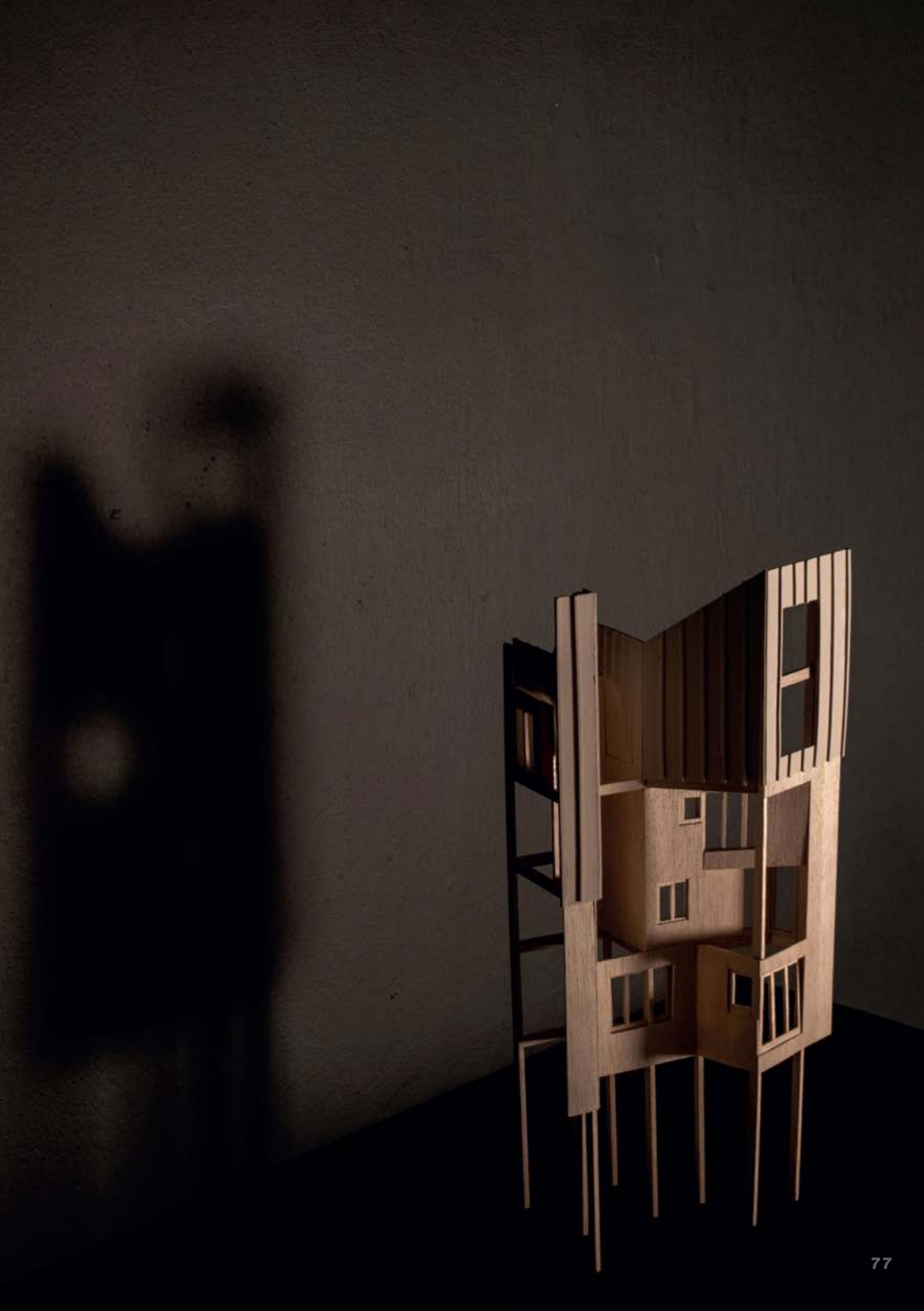
CRITICAL ZONE OBSERVATORY

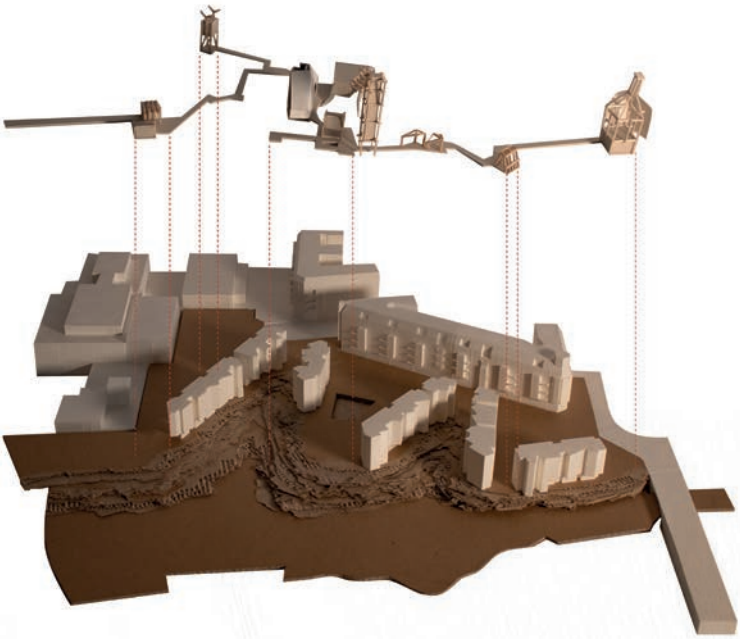
INKA EISMAR

The Interweaving Habitats masterplan aims to rewild the former industrial waterway of Landwehrkanal by forming a patchwork of ecologies in the currently monotonous grassy landscape. The proposal introduces a critical zone observatory within the masterplan, which monitors the process of diversifying the canal ecology and studies how humans and non-humans can cohabit in the city. By softening the hard canal edge, the waterline is brought further inland to create a series of wet and dry ecology patches bracketed by buildings. The public promenade along the canal is transformed into a field station walkway with a sequence of monitoring stations, providing spaces to observe the newly established biotopes.

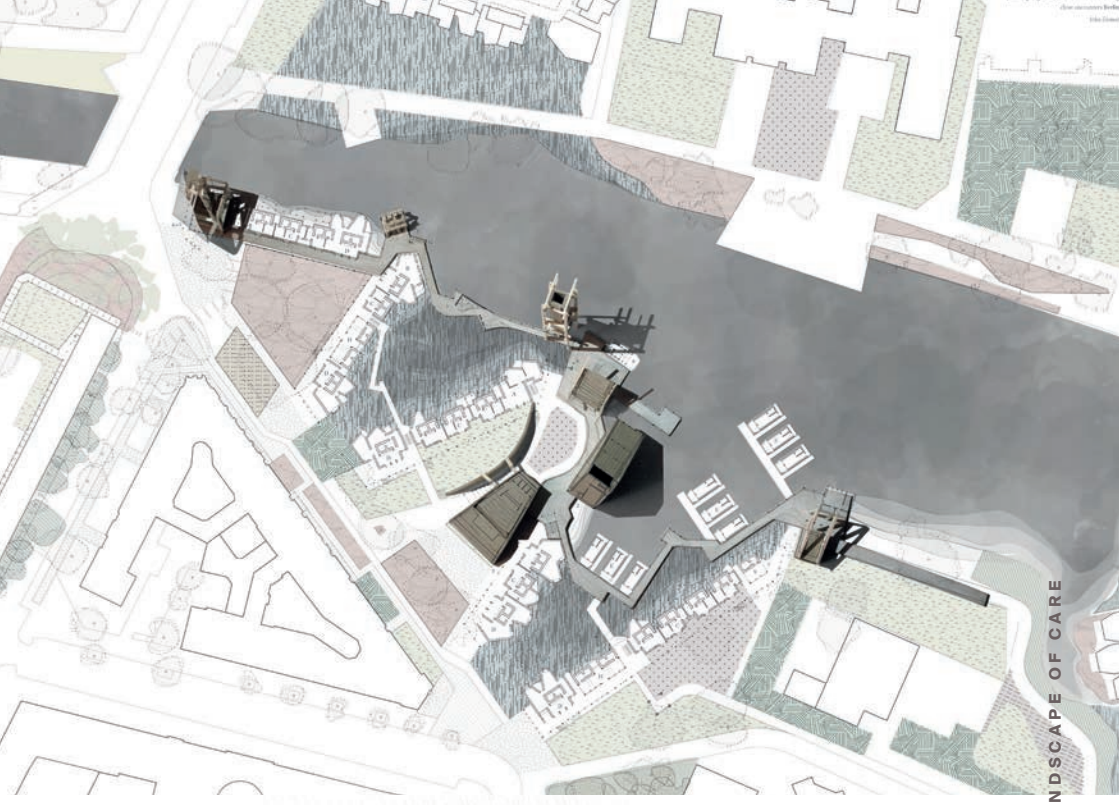
The observatory includes residential accommodation, which provides on-site housing to scientists and accommodates various forms of short and long-term research stays. The residential component simultaneously serves as a case study for the observatory mission, as close cohabitation of human and non-human residents is studied. The houses are raised on stilts, sitting above wetlands and providing multi-species contact points in their layered façade.

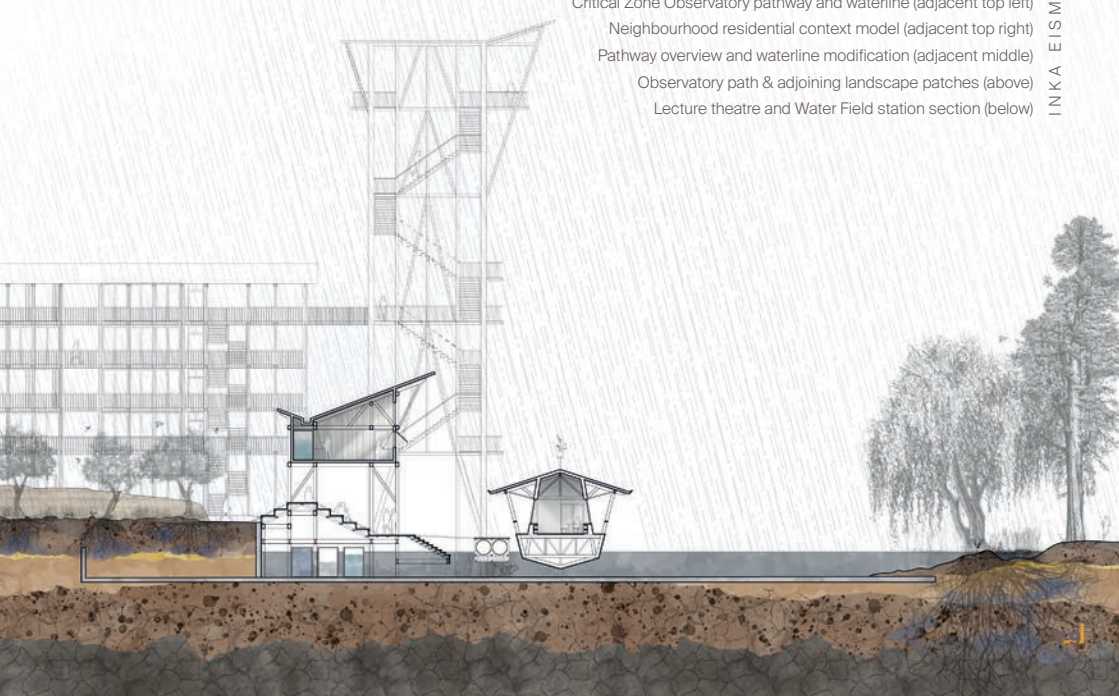
Through the lens of critical zone theory, water, nutrient and energy cycles are monitored in a multi-disciplinary way. Monitoring stations are structured according to the core spheres of the critical zone: atmosphere, hydrosphere, soil and biosphere. Interactions between elements are studied from micro to macro scale, and from small reactions to the long-term ecological regeneration of the canal.

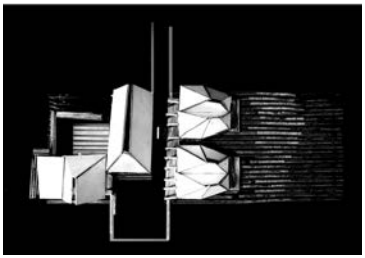




Critical Zone diagrams: Critical Zone, Lithosphere, Soil, Hydrosphere, Atmosphere (previous thumbnail)
Inhabited facade model study (previous right)
Critical Zone Observatory pathway and waterline (adjacent top left)
Neighbourhood residential context model (adjacent top right)
Pathway overview and waterline modification (adjacent middle)
Observatory path & adjoining landscape patches (above)
Lecture theatre and Water Field station section (below)







04c

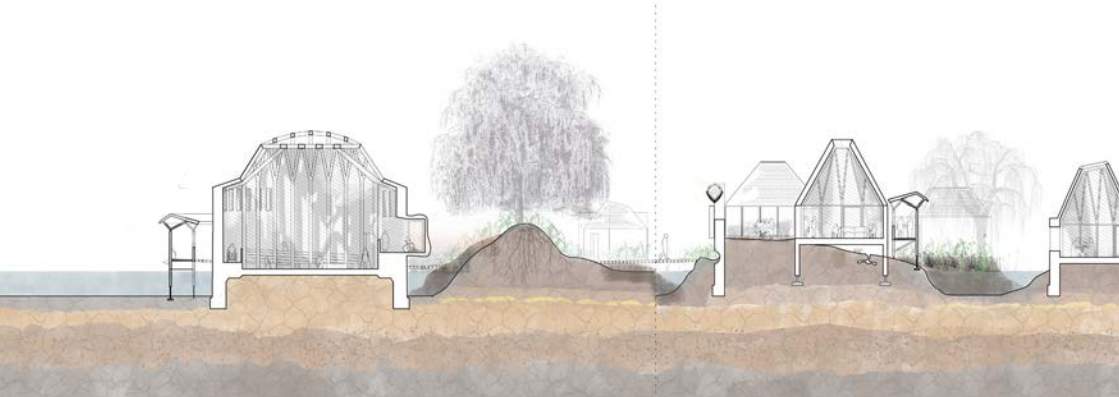
REWILDING ISLANDS

NURTURING COMFORT IN PALLIATIVE CARE

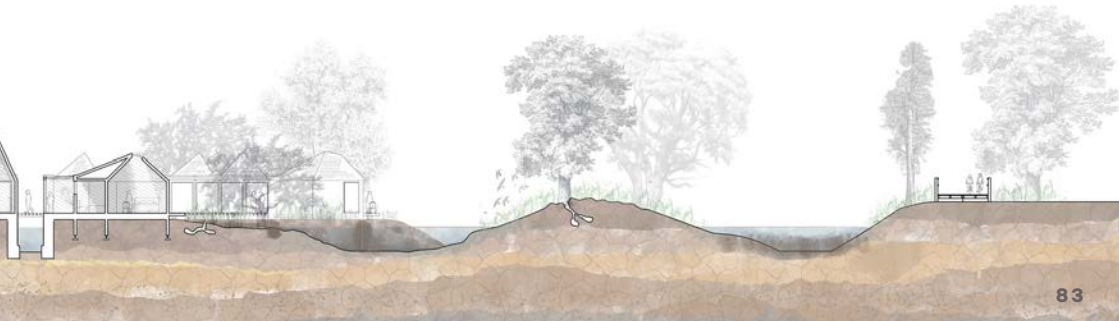
EILIDH MCKENNA

Expanding upon Interweaving Habitats, the project seeks to redefine the relationship between more-than-human and human care. Situated along the Landwehrkanal, the project reintroduces island formations into the canal. Adjacent to the Nantes Krankenhaus Berlin Hospital, it revitalises underutilized greenspace while offering crucial support to the hospital community. The proposal offers additional support for the hospital, whether this be for patients, visitors, or staff. Acting as a transitional domestic space between the city, the mega-hospital, and individuals' homes. The concept aims to reconnect people with nature, giving an escape from the clinical setting instead creating a nurturing and dignified environment. The dichotomy between open islands and walled courtyards protects ill patients from harsh elements while promoting healing interactions with nature; a salutogenic holistic approach to care. The scheme accommodates future flash-flooding by softening the canal edge to create a permeable ground surface. While the retaining walls act as a barrier protecting the islands from water flow erosion; overtime sediment will build up around the walls, creating marshlands that promote carbon sequestration. The islands use the developed biotype patchwork system to support native flora and fauna, enhancing biodiversity and creating habitats. The program includes the Public Outreach Wildlife Tower, The Hospice, The Maggie's Centre, The Short-Term Visitor Housing, and the non-denominational Chapel.

The scheme can be used as a framework along the canal, re-purposing the program to best care for the surrounding context.



Hospice in sedimentary landscape model - plan (previous thumbnail)
Collage visualisations: pathway, canal and hospital context (previous right)
Hospice in sedimentary landscape model - section (adjacent top)
Soft canal edge - rewilded landscape (adjacent middle)
Roof plan with mediated landscapes (above)
Non-denominational Chapel, Maggie's Centre and residential facilities section (below)



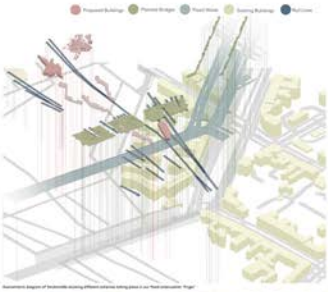
Code: 250199

Der Große Park: Enhancing Flood Resistance through Urban Re-Wilding

Der Große Park bridges the gaps between urban development & public parks to encourage outdoor living. It establishes a green corridor across the city that connects the 3 major parks: Tiergarten, Park Am Gleisdreieck & Nature Park Sudgelande. Our proposal redefines Berlin's urban landscape by linking a variety of ecosystems into one cohesive park.

Zooming into Tiergarten, a sustainable & interconnected outdoor space, we support social interaction with activities accommodated in a variety of new positions & selective planting, encompassing human & non-human coexistence in this external environment promoting long-term health & well-being. Redundant bridges across roadways are repaired to create planted walkways.

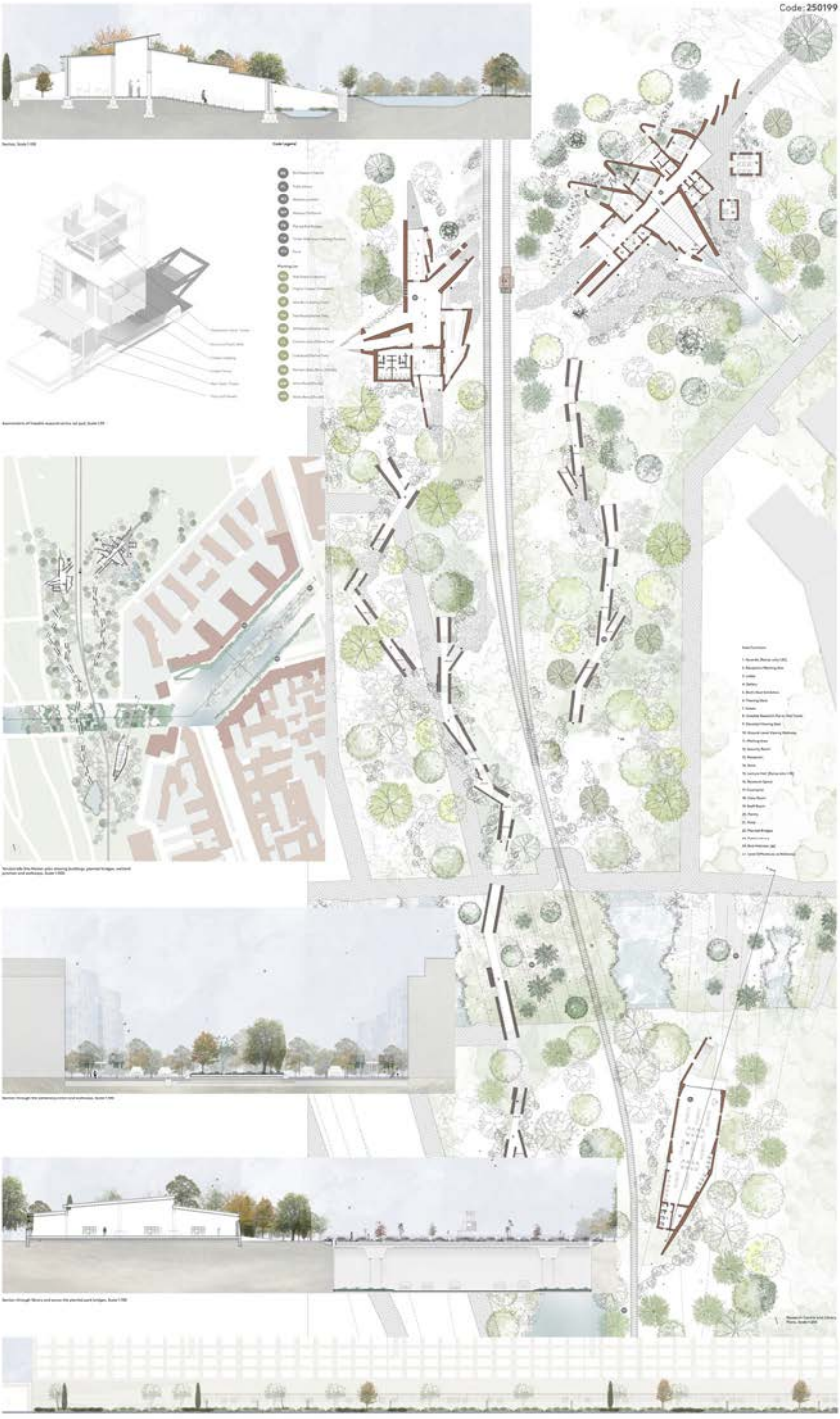
The strategic focus on Tiergarten, with its flood attenuation design, showcases a commitment to sustainable urban development & ecological resilience. Our wetland modelles convert the site into a 'sponge' seeking up surface water flooding while re-providing habitats for birds.



Accessibility diagram of Tiergarten showing different vehicles taking place in our flood attenuation design

View showing walkway and rising land for birds watching

View of Bird Research Centre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05a

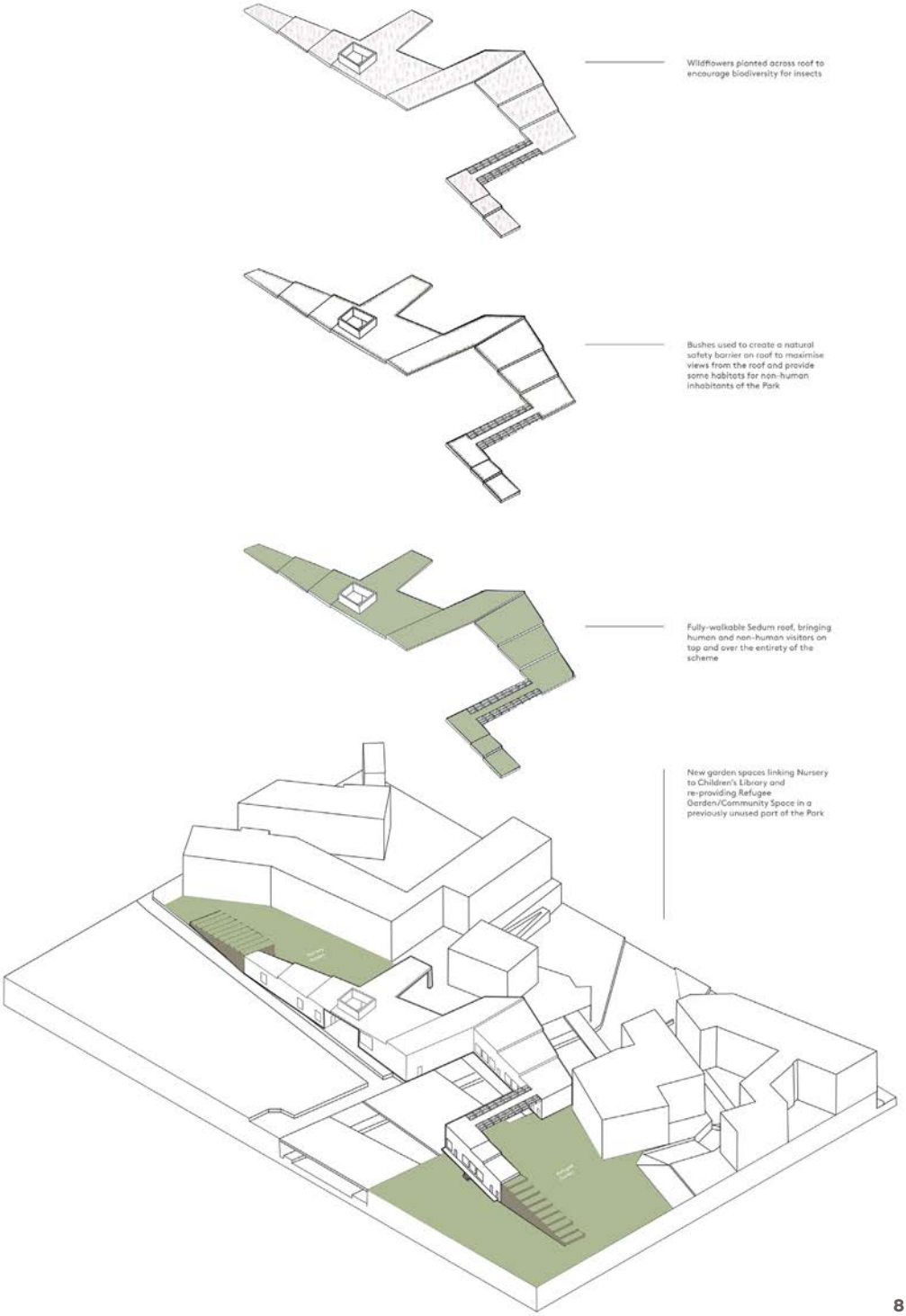
GATEWAY TO THE GREEN CORRIDOR

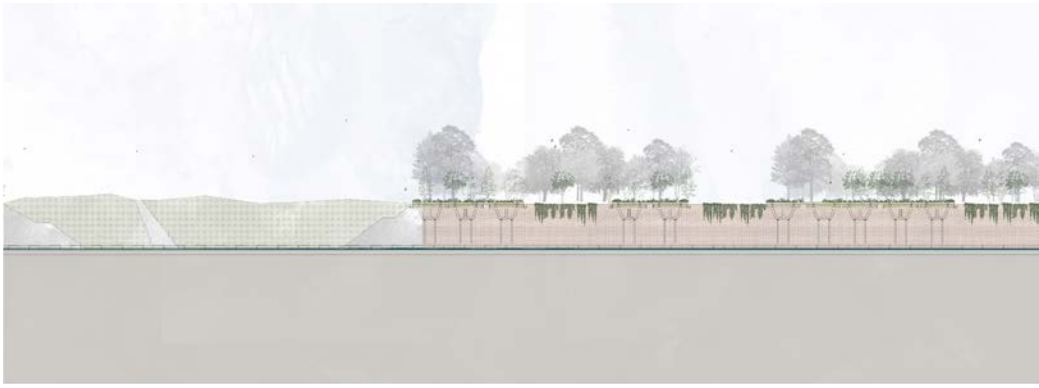
GEORGIA TUCKER

Located in the Park am Gleisdreieck, along the busy Yorckstraße junction in Berlin, the Gateway community hub comprises a hybrid library/ community centre spanning the park's rail bridges. The gateway hub situates itself within the site based on research and development from an initial competition scheme, a green corridor through the centre of Berlin; re-linking park spaces within the city to form a singular, Große Park.

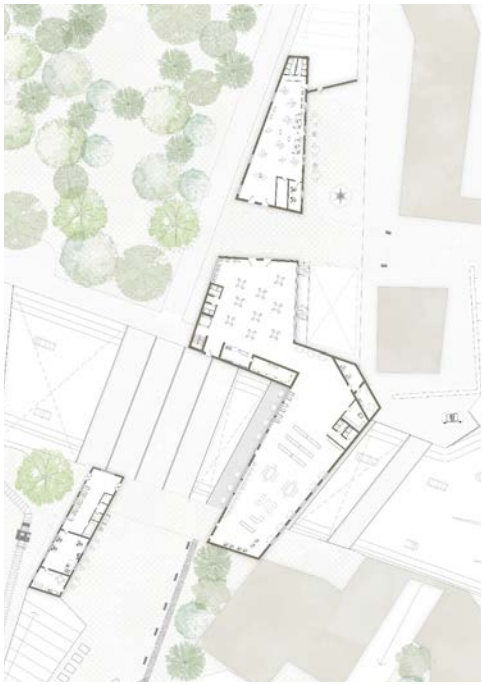
The hub aims to connect the lower junction and residential area with the upper-level park, through a singular community centre that acts as a circulatory gateway up, down, across and over the site. Clad in timber, with a fully walkable green roof, the hub is sustainably built using natural materials. Rainwater is collected from the junction wetland proposed in the competition scheme and is reused throughout the building. The hub is positioned within the old refugee garden, which has been relocated to an empty park section, bringing new life to a previously desolate space. Within the old refugee garden, a small play park has been added to encourage links between the children's library and a local nursery opposite the building.

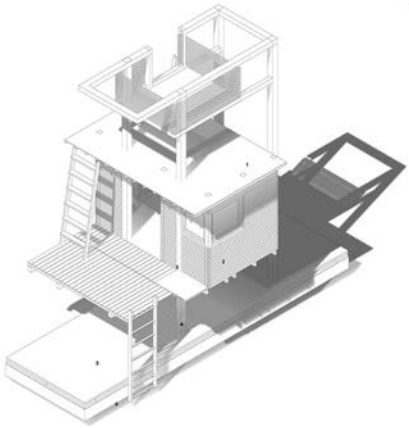
There is also a series of 'mini city spaces' below the park, built into the junction's wall. These small rooms create an underground city bridging the two neighbouring residential blocks on either side of the park, encouraging further use of the underground spaces - livening up the wide junction space below.

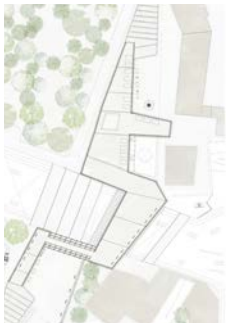

Wildflowers planted across roof to encourage biodiversity for insects
Bushes used to create a natural safety barrier on roof to maximise views from the roof and provide some habitats for non-human inhabitants of the Park
Fully-walkable Sedum roof, bringing human and non-human visitors on top and over the entirety of the scheme
New garden spaces linking Nursery to Children's Library and re-providing Refugee Garden/Community Space in a previously unused part of the Park

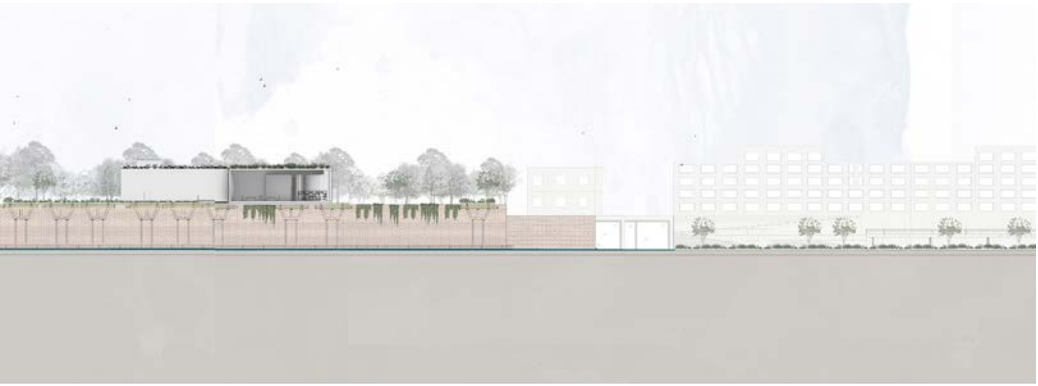


Library section model (previous thumbnail)
Landscape strategy layers (previous right)
Park approach visualisation (adjacent top)
Carved massing model (adjacent middle)
Plans: ground, basement and roof (right)
Liveable research pod (middle)
Long section urban to park through rail bridges (bottom)









05b

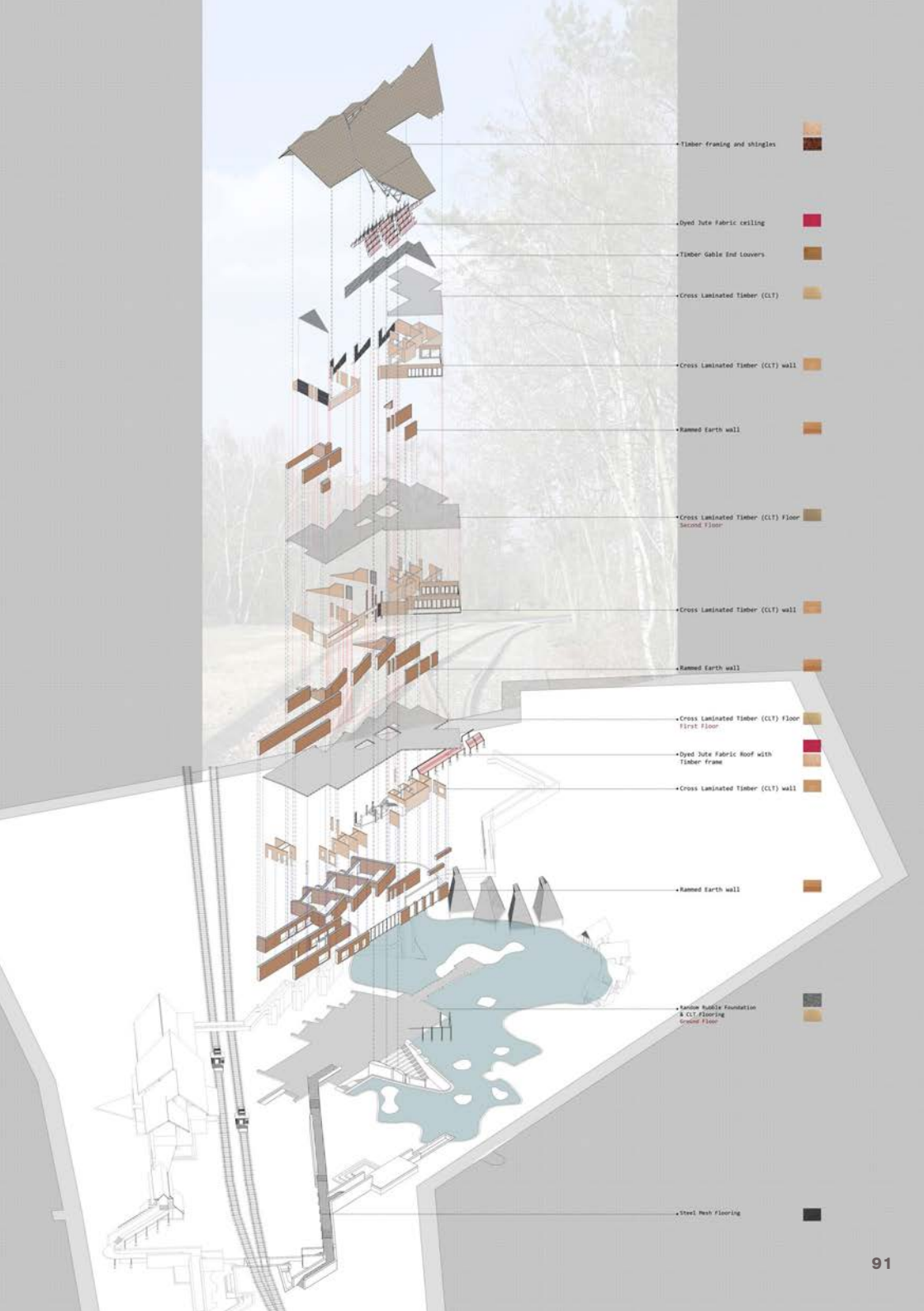
NESTING DER GROßE PARK

UNVEILING NATURE AND BIRDS

SIMY PUTHENVEEDU ABRAHAM

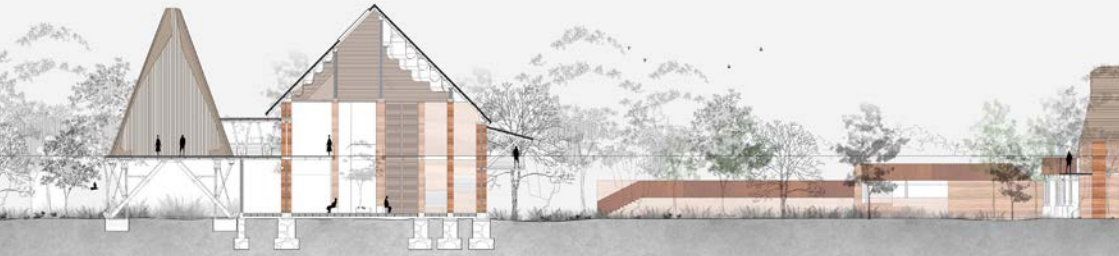
Gleisdreieck, Berlin is a historic railway junction turned vibrant urban space that seamlessly integrates history, neighbourhoods, and parks, where creating a neighbourhood for birds makes it more prominent. 'Nesting' - a bird research space and exhibition centre in an urban context mainly focuses on creating and promoting a safe urban neighbourhood for birds, where humans can observe, listen and interact with non-humans.

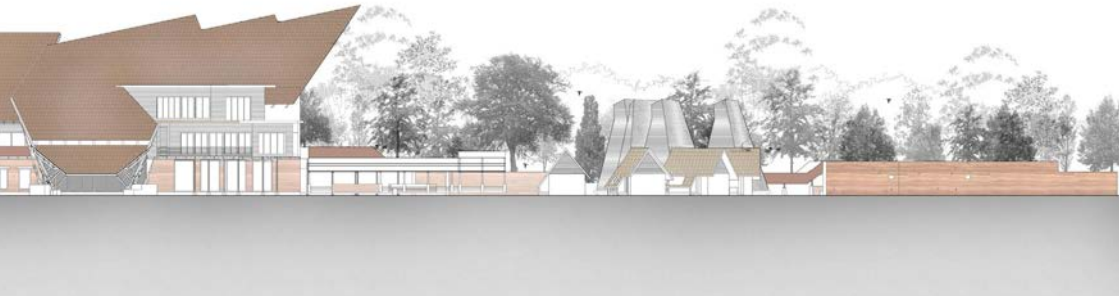
Elevating the biodiversity without tampering with the ecological balance is essential while designing bird-friendly infrastructure. Nesting encompasses two separate buildings, one with an exhibition centre open for the public showcasing bird-related materials and sensory experiences while the other one with private research space dedicated to ornithology. These buildings are mainly designed with rammed earth walls and timber, also featuring a long-elevated pathway for humans to observe birds. This leads through rammed earth walls on both sides accommodating nesting space for various species of birds at different heights. The tree bird habitat is located on the northern side while the water bird habitat is on the southern side. This bird habitat is designed without disturbing the existing trees and planting new ones accordingly. It also includes a new body of water which merges with the existing landscape. The thriving vegetation of trees, bushes and plants along with the water makes the space even more bird-friendly and a soothing space for humans where they can experience and enjoy the music of non-human life.

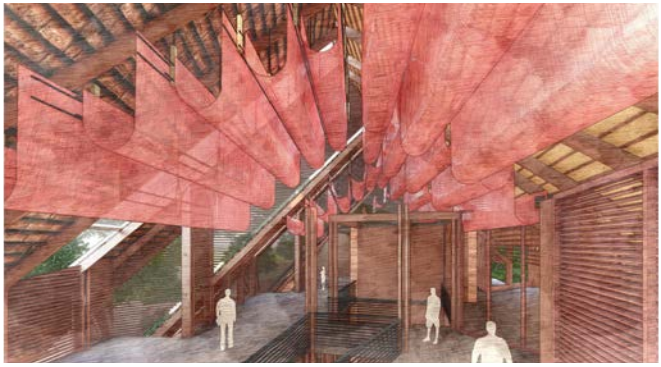

Timber framing and shingles
Dyed Jute Fabric ceiling
Timber Gable End Louvers
Cross Laminated Timber (CLT)
Cross Laminated Timber (CLT) wall
Rammed Earth wall
Cross Laminated Timber (CLT) Floor
Second Floor
Cross Laminated Timber (CLT) wall
Rammed Earth wall
Cross Laminated Timber (CLT) Floor
First Floor
Dyed Jute Fabric Roof with
Timber frame
Cross Laminated Timber (CLT) wall
Rammed Earth wall
Random Rubble Foundation
& CLT flooring
Ground Floor
Steel Mesh Flooring

Bird species (previous thumbnail)
Constructional exploded axonometric (previous right)
Elevation (top)

Water body visualisation (top middle)
Open amphitheatre (bottom middle)
Cross section (bottom)





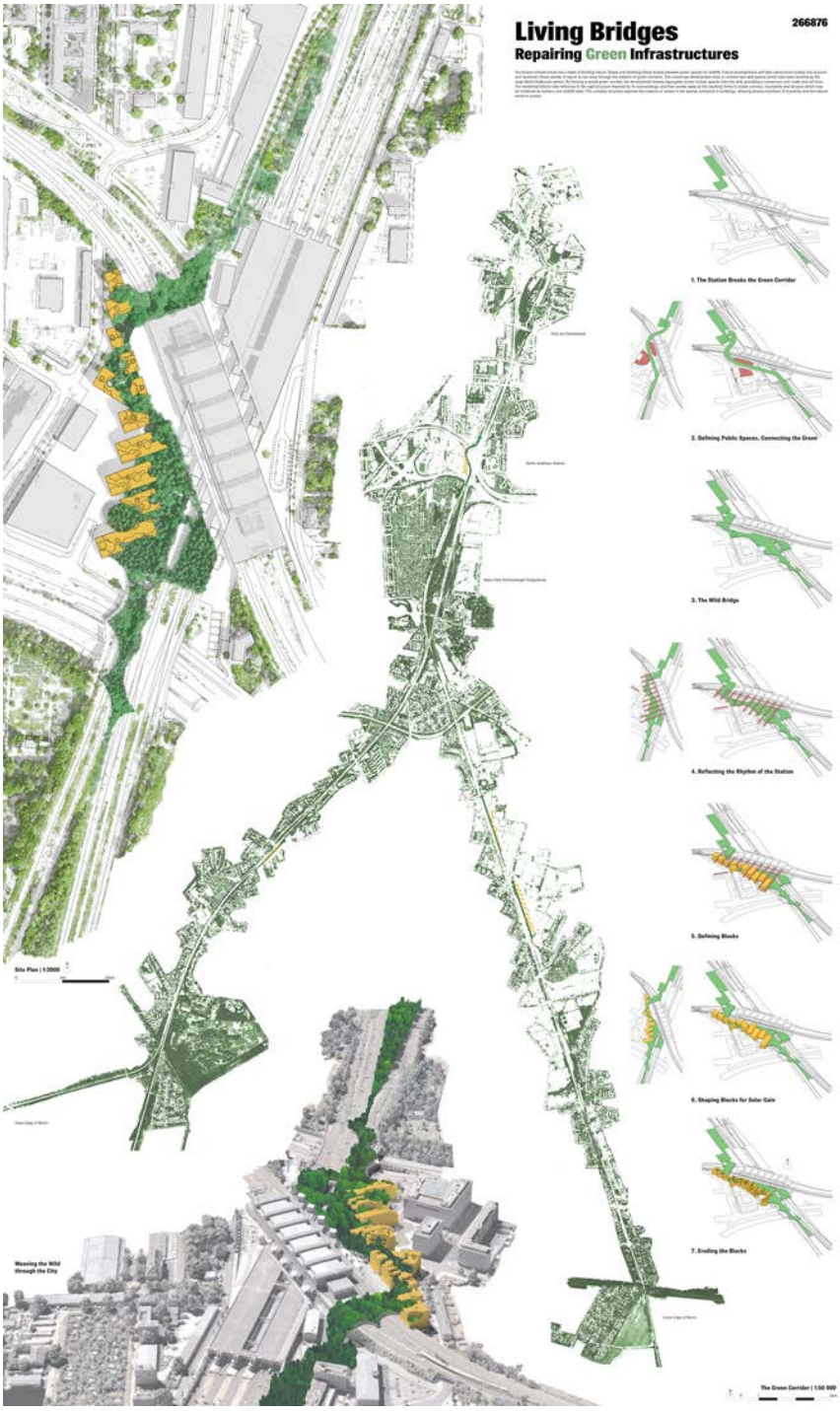


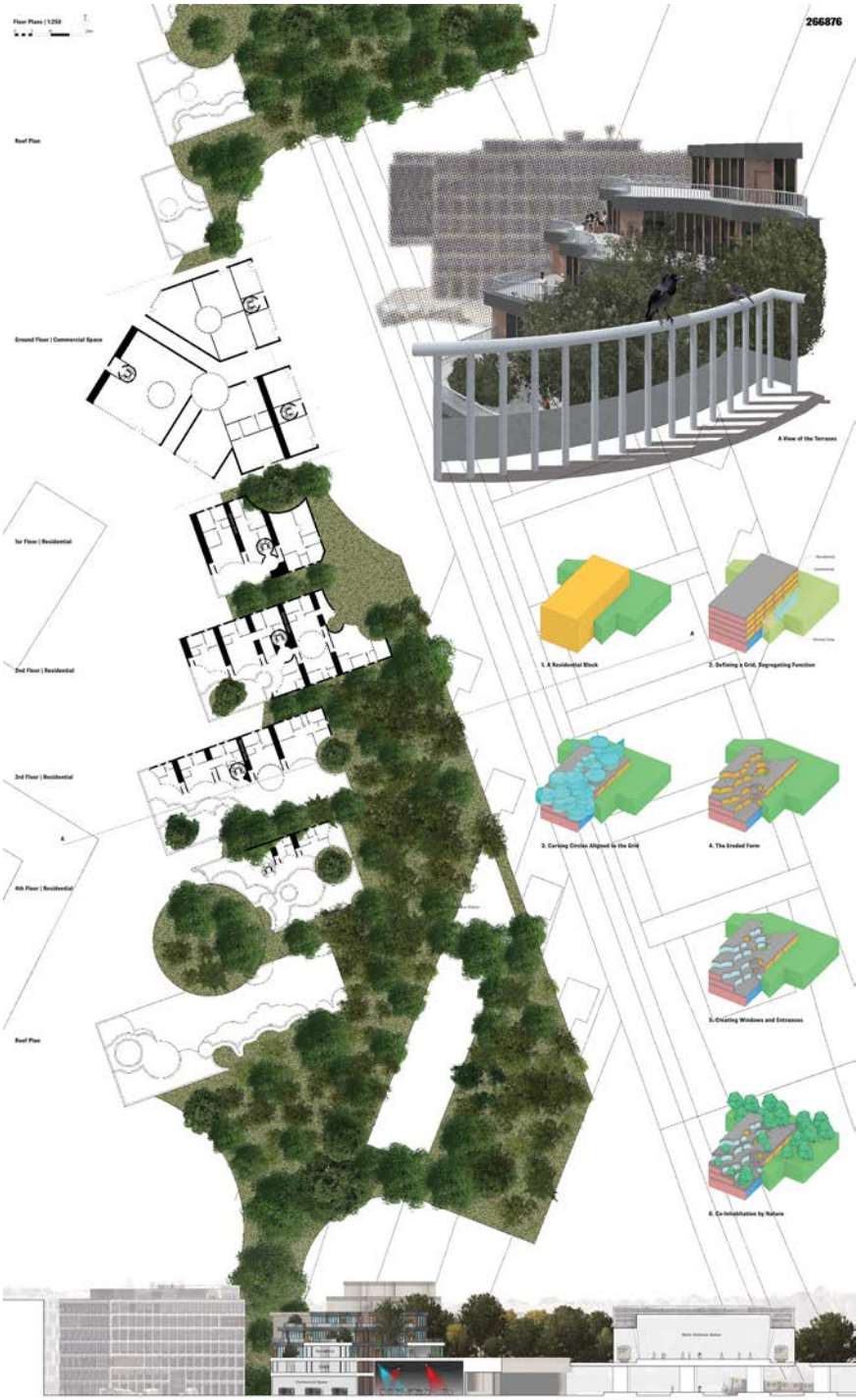
Eaves display space (top middle right)
Bird watching promontory (bottom middle right)
Large Field station model (middle left)

Living Bridges

266876

Repairing Green Infrastructures




Floor Plans | 1:250
266876
Roof Plan
Ground Floor | Commercial Space
1st Floor | Residential
2nd Floor | Residential
3rd Floor | Residential
4th Floor | Residential
Roof Plan
A View of the Terraces
1. A Residential Block
2. Defining a Grid, Segregating Function
3. Carving Circles Aligned to the Grid
4. The Eroded Form
5.-Creating Windows and Entrances
6. Co-Inhabitation by Nature

06

LIVING BRIDGES

REPAIRING GREEN INFRASTRUCTURES

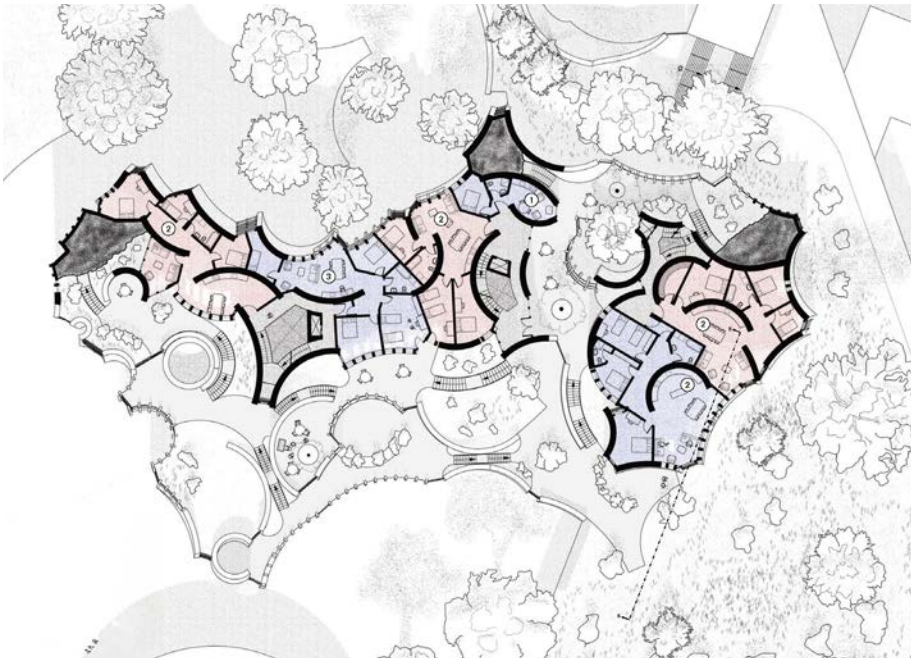
WULFRIC CLACKSON

Living Bridges explores how humans and nature may coexist in urban environments. It challenges the typical structures of the city and explores alternative forms, giving more space for people to dwell, and more connection to the city's non-human inhabitants.

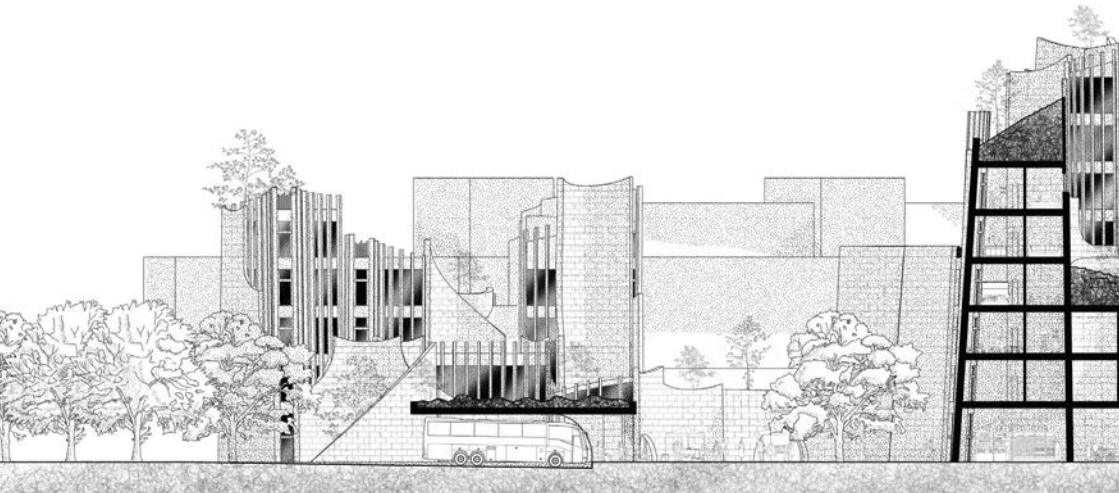
The project looks at how the structure of the city fragments wildlife, and how we can re-purpose existing infrastructure to reconnect it. Focusing on the rail lines which served the former Anhalter Bahnhof in Berlin, Living Bridges studies how the decay of this infrastructure creates ideal spaces for the creation of a wildlife corridor.

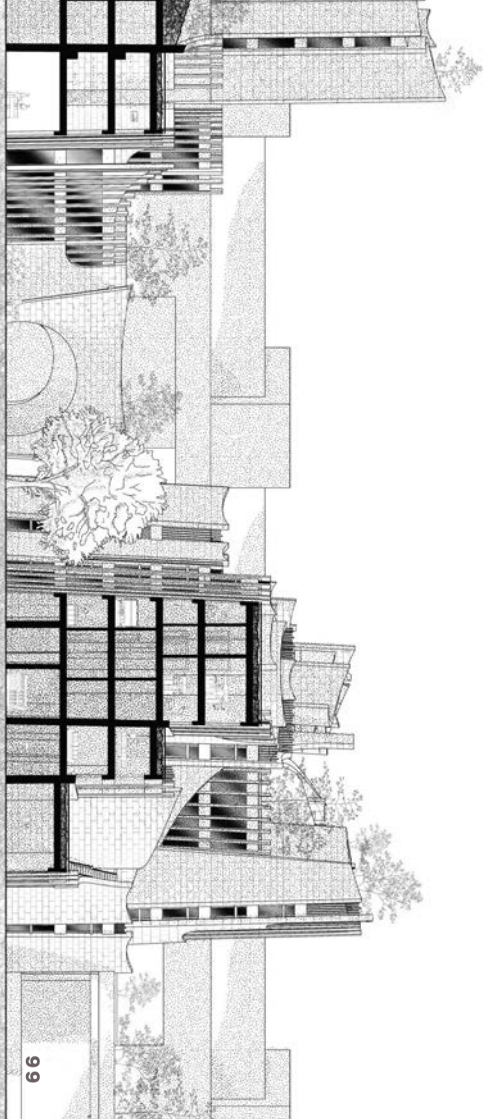
This route has gaps, however. Here architectural intervention is required. The largest such gap is at the Südkreuz railway station. To bridge it, the project takes heavy inspiration from nature, and the work of Hans Scharoun and Paolo Portoghesi. It creates an eco-duct, entwined in complex series of buildings, which are reflective of the fractal complexity of the natural world, a contrast to the rigid forms presently on the site.

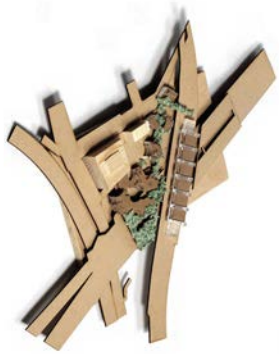
Housing is in dire need in Berlin, so the project looks at how housing may be integrated into the corridor, allowing both humans and non-humans to coexist. Referencing Soft City, by David Sim, the project challenges the present structures of the city and aims to create a richer, more diverse place to live.

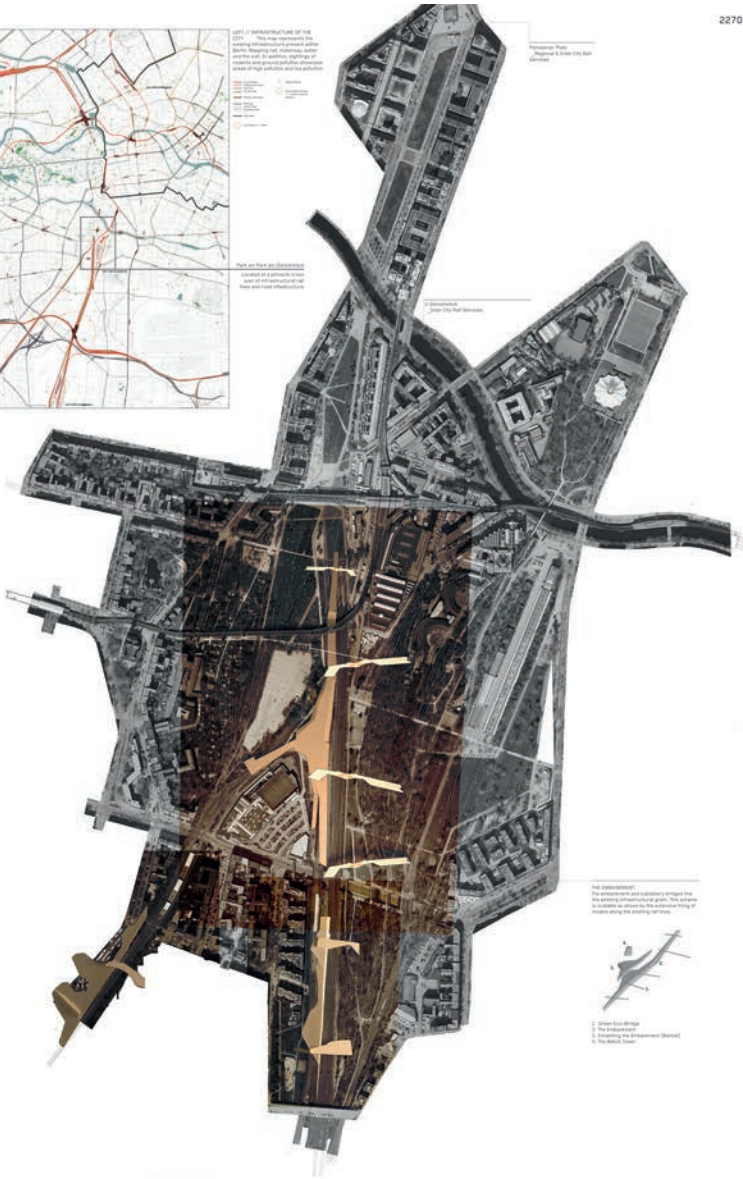


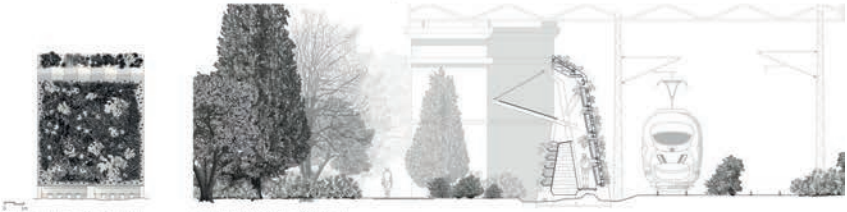
Modular ellipses maquette (previous thumbnail)
Scheme overview around Südkreuz rail station (previous right)
Third floor residential and terrace plan (above)
Elliptical courtyard visualisation (adjacent top right)
Iterative layered site model (adjacent left top)
Clay massing maquette (adjacent left middle)
North-south section (bottom)

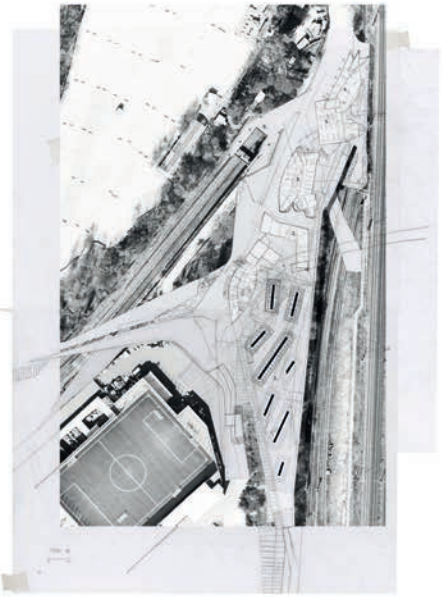







LEFT // INFRASTRUCTURE OF THE CITY
This map represents the existing infrastructure present within Berlin. Mapping rail, motorway, water and the wall. In addition, sightings of rodents and ground pollution showcase areas of high pollution and low pollution.
Park am Gleisdreieck
Located at a pinnacle cross over of infrastructural rail lines and road infrastructure
Pohsdamer Platz
Regional & Inter-City Rail Services
Gleisdreieck
Inter-City Rail Services
THE EMBANKMENT
The embankment and subsidiary bridges line the existing infrastructural grain. This scheme is scalable as shown by the extensive lining of motors along the existing rail lines.
1. Green Eco-Bridge
2. The Embankment
3. Smashing the Embankment (Marina)
4. The Watch Tower


1 : 1.00 Embankment Facade Component
The facade's cladded panels are perforated, thereby allowing foliage to pass through and spread to form a living green wall.
THE EMBANKED EMBANKMENT
1 : 0.00 SECTION A-A2
The cladded embankment exists as a diffusive space that deflects and protects humanities advancement into Park am Gleisdreieck.



1. Independent Market
2. Semi-permanent independent shops
3. Garden Centre
4. Fairtrade Office Spaces
5. Commercial Market
6. Watch Tower

0 5 10m

1. Lorry Unloading
2. Worker Parking
3. Lift
4. Ascending Ramp

0 5 10m

[0] 1:500 Access Level. Sitting within an undevelopable space, receiving developments due to its converging proximity to local railway, the expanded human intervention slots into the embankment and expands to fill the space. Following the grain of the site, market stalls are placed around structural wall supports for the roof and encourage a vertical movement between the North and South. Ramp access and larger spaces at the entrances permit smaller vehicles to small vans entry to the site.

BELOW [0] 1:500 Scale Models. These models displayed are representative of the linear and attachment typology identified within this scheme. Its existing, almost tossing, properties make it feel like it has been weighted down by the railway.

TOP [1] 1:500 Ground / Basement Level. At access level, this floor provides the logistics for larger vehicles, such as lorries, to enter the site and unload. This component exists as part of a growing expanse of the scheme. Commercial markets that are situated further north of the site will be required to use this space.

ABOVE [0] 1:1000 Roof Plan. In the case of this project, there is a vision for a marketplace dedicated to local farmers and independent vendors. This market is characterised by a distinctive roof structure that reflects the market's inherent diversity.

The Inhabited Embankment

A Berlin Infrastructure of Co-Existence

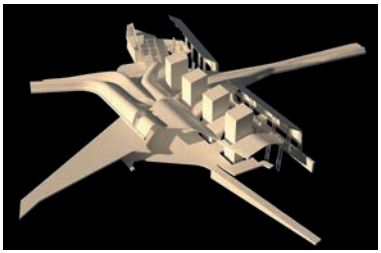
The Inhabited Embankment emerges as an ecological integration within Park am Gleisdreieck, harnessing the vestiges of industrial rail networks to create a living infrastructure that facilitates co-existence. This project aims to reform the concept of urban parks by integrating ecological and social programs through the language of passage by introducing safe crossings for animals, and a viewing tower to offer new perspectives and educational insights.

Approximately 80 years ago, the landscape just south of Potsdamer Platz was dominated by industrious shunting yards, servicing Berlin with freight and mail. The 'green-belt' that we see today is a product of this history, a fragment of not just metropolitan infrastructure – but national infrastructure. Shy of a decisive axis, it's position simplifies 'colocal-in-the-margins' implications, whilst also providing the immediate services for repair, refreshment and rest. The embankment becomes a continuity of the park but remained in a constant state of flux. After forces during the Second World War, leading to its comprehensive destruction by the year 1949.

Since then, the land has been designated as to be part rewilded, part human. Hence resistance throughout the years, the site has, in fact, become a place where nature managed to resist 'filling in' the gap. Whilst severely present by historic comparison, the influence of its principal form still exists today. Layers of overlapping rail lines cross the site with perpendicular directions, crossing over one another to permit transit throughout inner Berlin. The proximity of these rail lines to residential areas, and the existence of the park itself, makes this indispensable infrastructure a viable for the philosophy of this project. At current, it exists purely as a piece of human infrastructure, however, what if the land that sits adjacent, typically a vacant diffusive entity, instead can be used as an infrastructure of co-existence?

The proposal is a 'inhabited embankment', a linear typology of defence combined with inhabitation that can be scaled and applied city wide. Sitting adjacent to the railway, a recessed earth and terracotta device provides a living acoustic barrier that blocks and reflects the intense sound emitted. The railway facing facade of this wall is punctuated by a series of passages of bridge through the dwelling. These 'tunnels' are designed to allow a path of colour resistant animals can be witnessed. This provides a living noise and intermittent space for most By re-defining the remnants of a pivotal shunting yard into a conduit for biodiversity, the Inhabited Embankment stands not just as a barrier but as a living interface, fostering a symbiotic relationship between the city's past and its ecological future. In doing so, it poses the way for a paradigm shift from an anthropocentric to a shared, co-living urban landscape.

[1] Embankment Perspective. This perspective shows the scale and weight of the embankment and its living qualities that are so prominent along it.



07

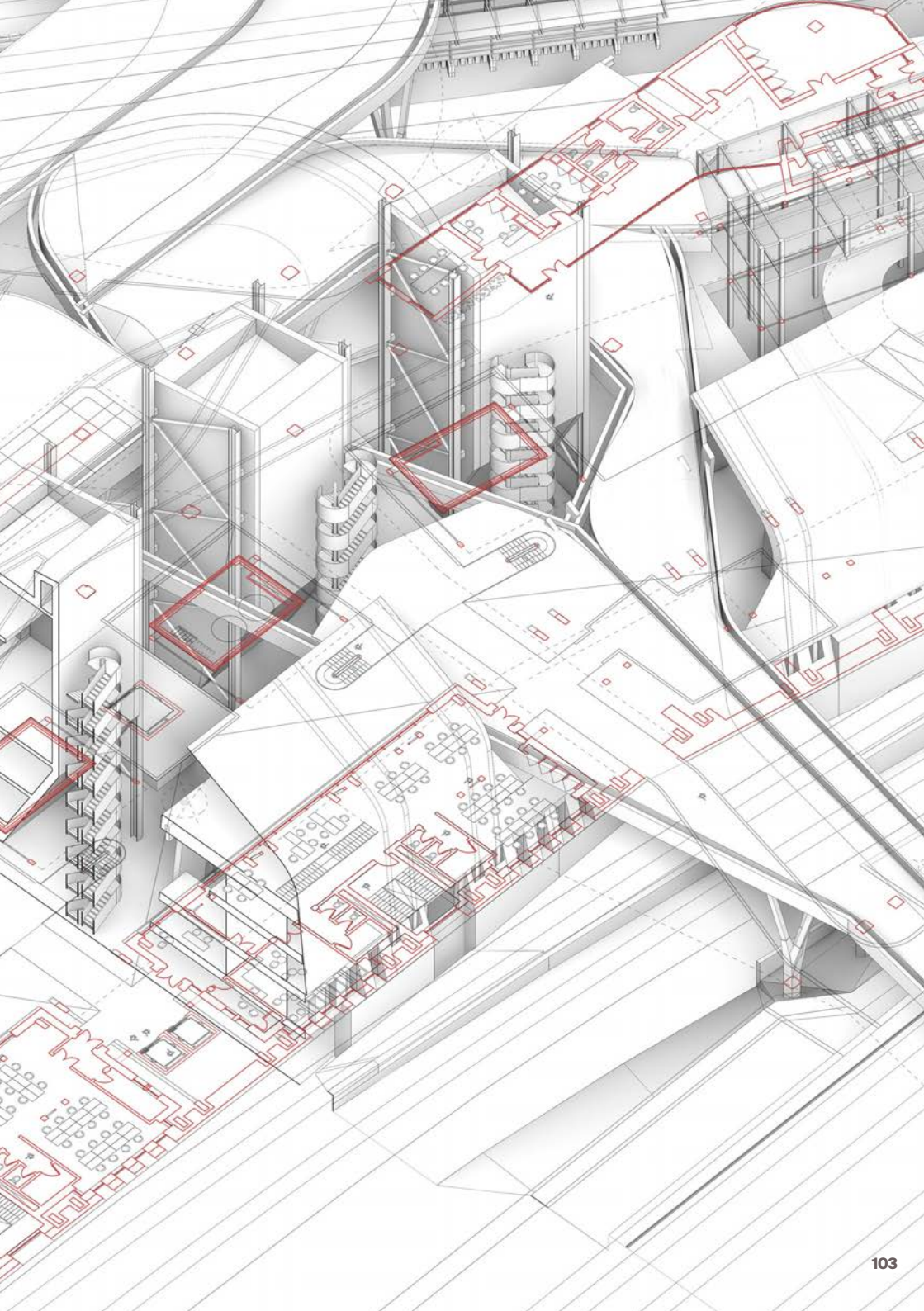
THE INHABITED EMBANKMENT

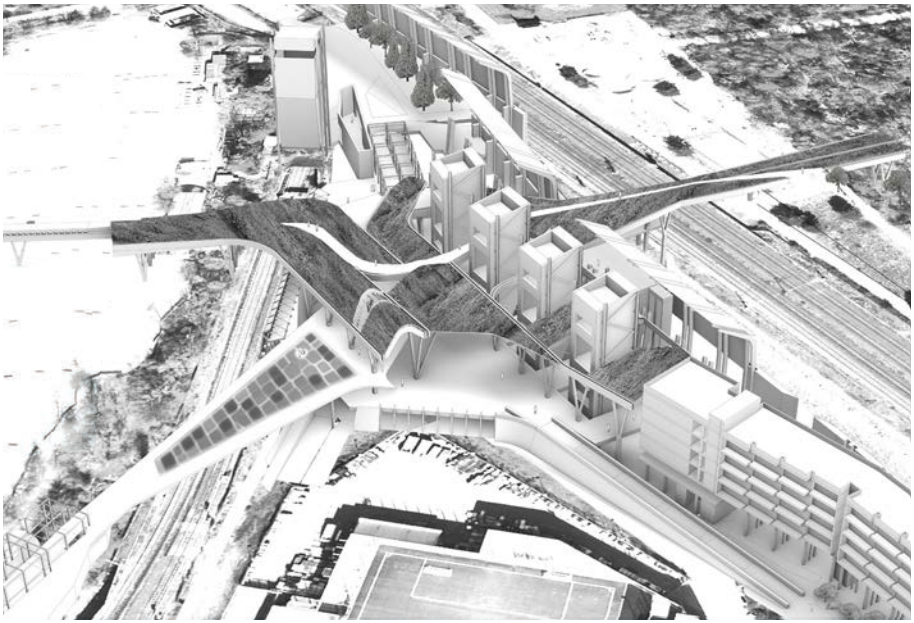
SONIC INFRASTRUCTURES OF BERLIN

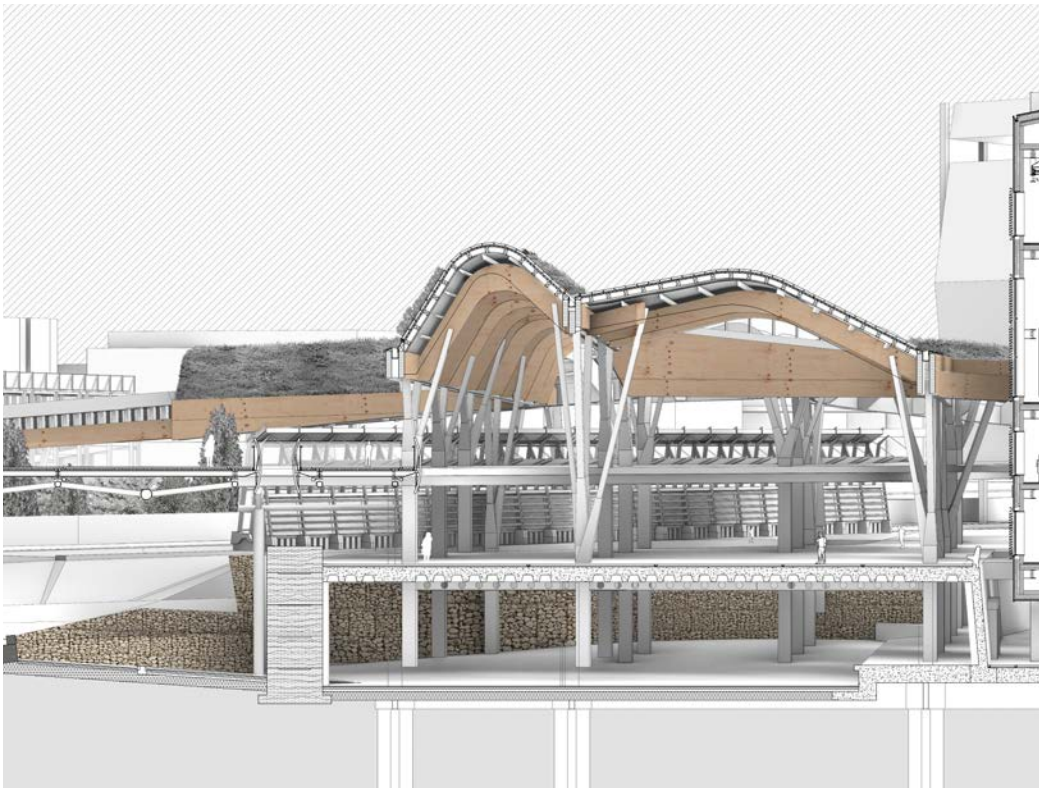
ADAM MITCHELL

Situated within one of the remaining vestiges of Berlin's industrial rail network, the Inhabited Embankment nestles programmes into pockets of undesirable space. Park am Gleisdreieck, a former shunting yard that remained abandoned since the turn of the Cold War, resisted residential development in favour of urban rewilding, preserving a distended outline of the long-standing infrastructural form. The chosen site, positioned within a convergent position littered with an overlapping series of intertwined rail services, provides the opportunity for the creation of a new infrastructure that will morph the existing landscape 100 years into the future, reforming the concept of urban living by intertwining the human and ecological domain through the language of passage, providing safe crossings for both human and nature.

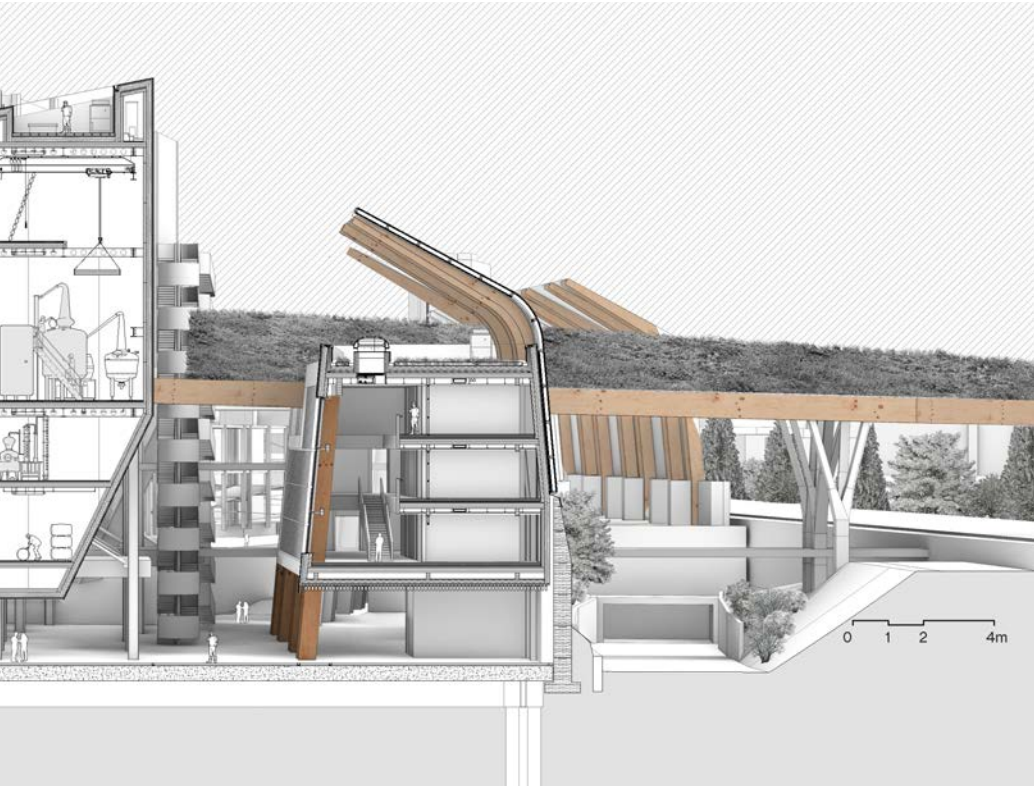
Facing the railway, a thick rammed earth wall protects neighbouring communities against the thunderous sound produced by the passing trains. Sprouting from the thick mass is a series of glulam columns that form an extended barrier, supporting woven willow acting as acoustic protection. Idealised to become a new piece of urban infrastructure, the embankment expands and contracts in height and depth at varying stages along existing rail lines. At specific points, bearing over this wall exists a sedum roof, constructing a 'green bridge' that permits the crossing of human and non-human inhabitants over the existing rail infrastructure.







Scheme massing model (previous thumbnail)
Ground floor plan overlaid to sectional cut (previous right)
Green bridge infrastructures aerial perspective (adjacent top)
Tectonic model (above)
Technical scheme section (below)



AVION INSTITUTE

Science of aerolgy

Connecting and Disconnecting between Human and non Human World

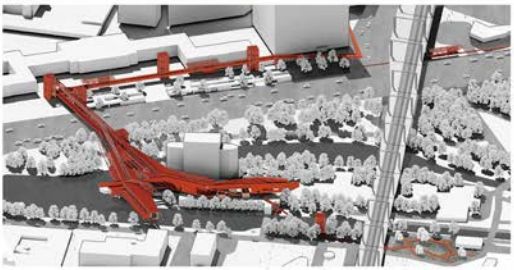
Identification Code: ID-F8Y7M

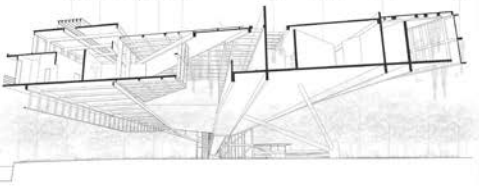
In a profound exploration of Berlin, Germany, our project delved into the intricate tapestry of human and non-human interactions within the site. Through meticulous research and the deployment of specialized devices, we analyzed key parameters such as bird locations, radio wave frequencies, and traffic sounds, unveiling a rich canvas of insights.

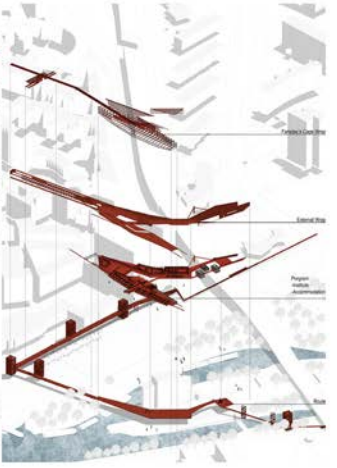
Positioned as a bridge between two entities, our design aims to transcend physical connectivity, fostering a transformative experience for users. The Avian Institute amplifies the site's avian presence while offering a unique sonic encounter. Accommodation services respond to the needs of nearby educational hubs, fostering community engagement. Introducing the innovative concept of the Faraday Cage, we create a sanctuary from electromagnetic fields, inviting individuals to immerse themselves fully in the site's essence. Our vision extends beyond conventional structures, envisioning a dynamic, living design that adapts and evolves with its surroundings. Ultimately, our design embodies the fluidity of life, facilitating movement and interaction for both human and non-human inhabitants, redefining architecture as a living, breathing entity in harmony with its environment.

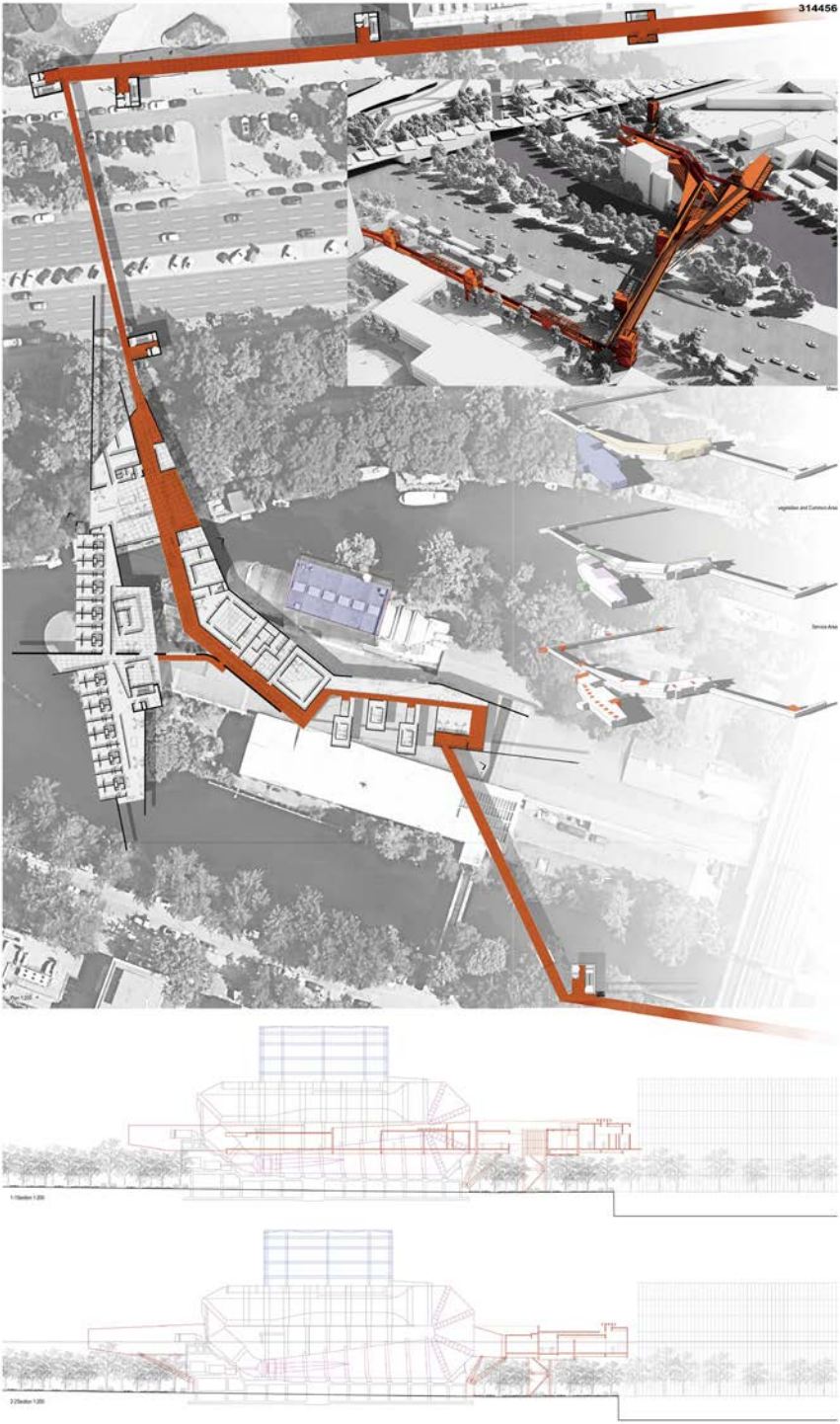
Site Plan 1:1000

Site Section 1:1000





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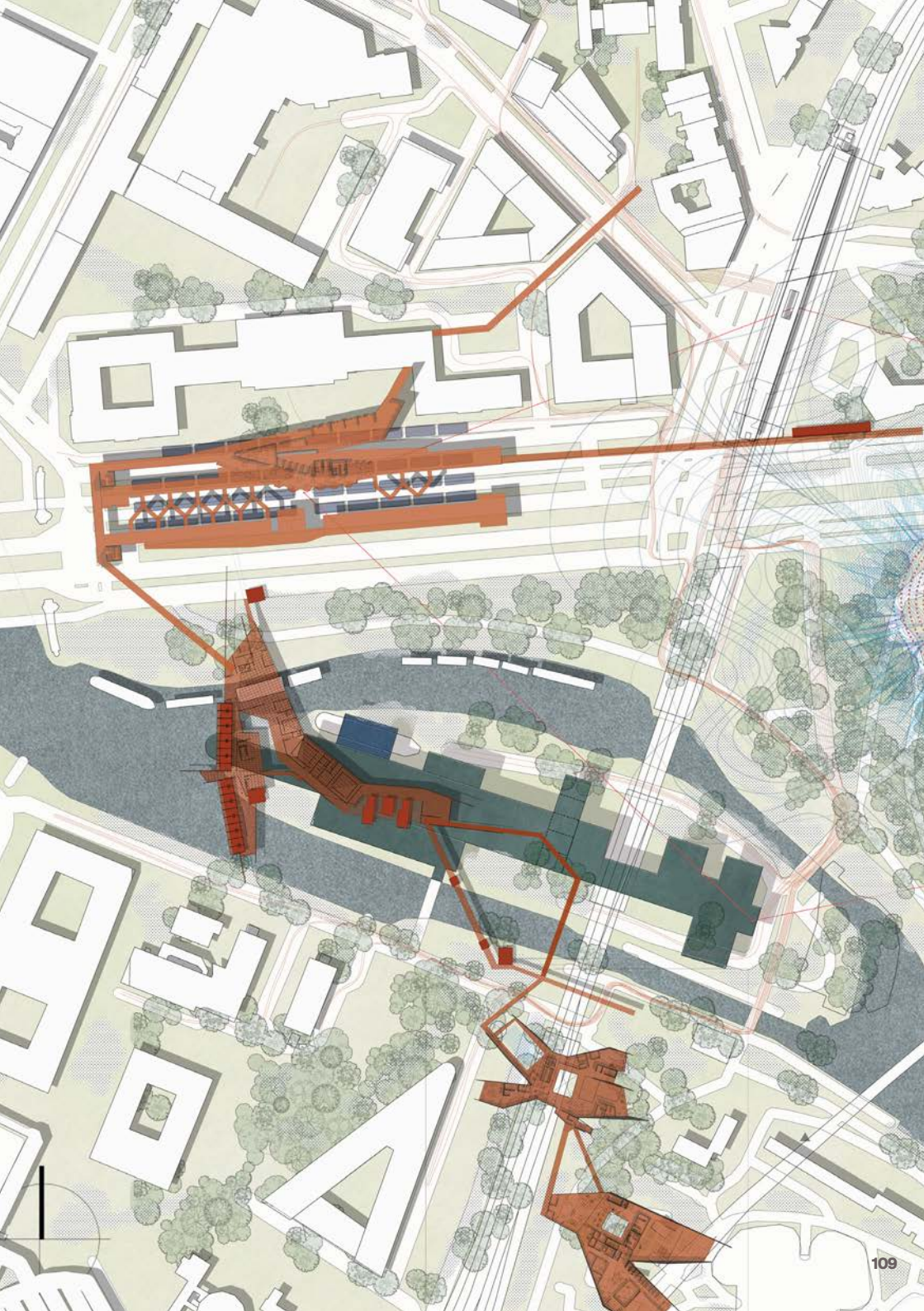
08a

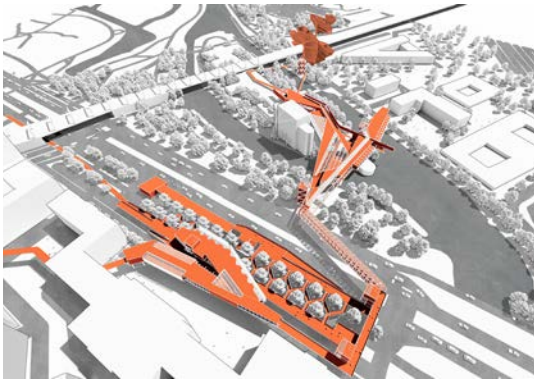
SCIENCE OF NATURE: URBAN-AIR

ZEYU WANG

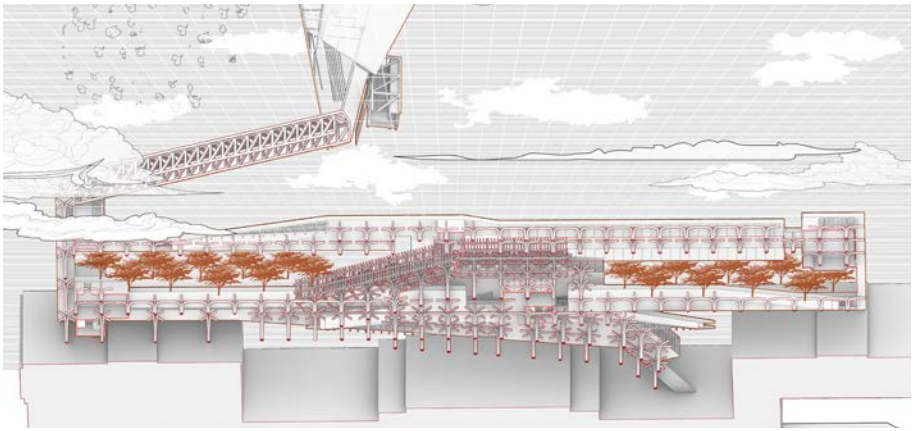
The focus of the project narrative centres on journey and connectivity. The journey is designed to captivate individuals, incorporating two distinct paths: one attracting visitors from the park, and another designed for students. This establishes a route connecting these areas and groups. This pathway establishes a journey and experience from nature, through urban space, and returns to nature. Secondly the project fosters connections: between people, and between people and nature. To enhance the interpersonal interactions, the design incorporates a Faraday cage to block electromagnetic signals, thus promoting direct communication among individuals. The connection with nature is emphasized through auditory experiences, distinguishing between natural sounds, such as birdsong and the rustling of leaves, and anthropogenic noises such as traffic and human conversation. By preserving the original trees and narrowing the roads, coupled with the installation of traffic calming measures, vehicular noise is reduced, allowing for a more immersive natural auditory experience.

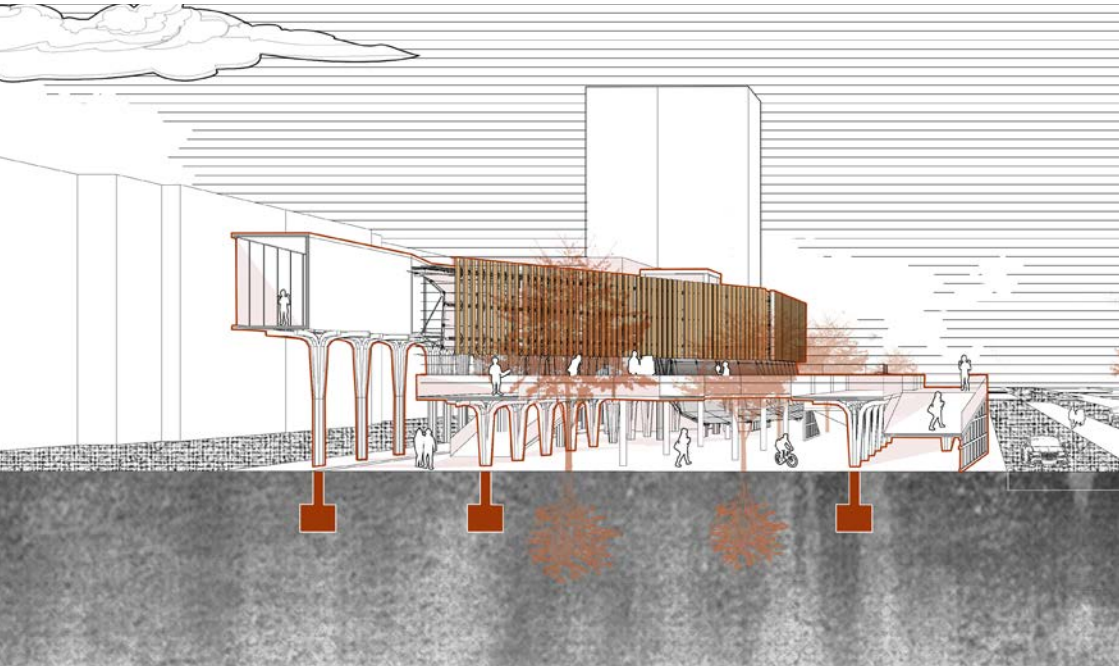
The existing market on the site is maintained while incorporating structural elements reminiscent of tree trunks to echo the natural environment. Considering the restaurant's elevated position and the heat transference through the floor, insulation measures were critically evaluated. The design includes a double-skin façade to decrease reliance on air conditioning systems. Adjustable louvres are implemented to reduce solar gain during summer and gain from the passive heat source in winter.

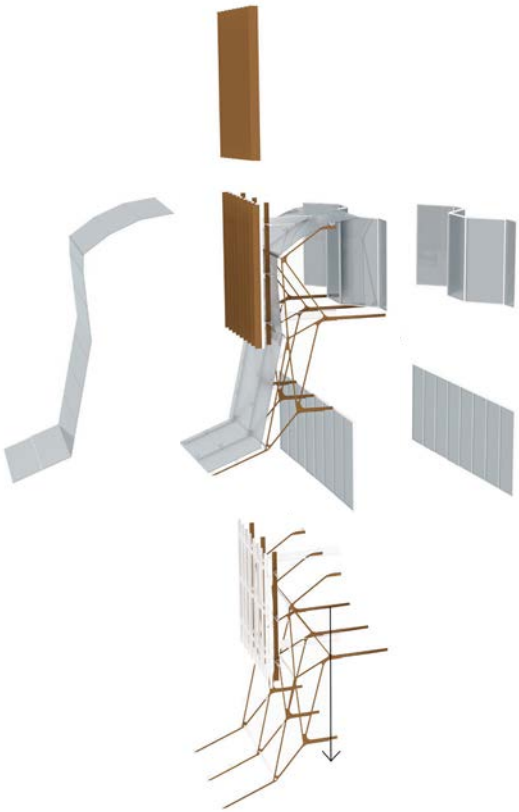


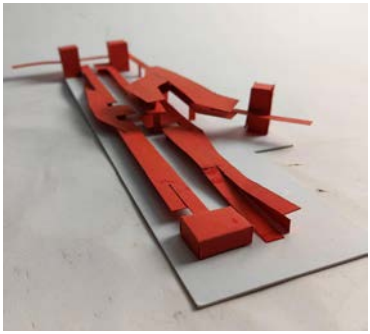


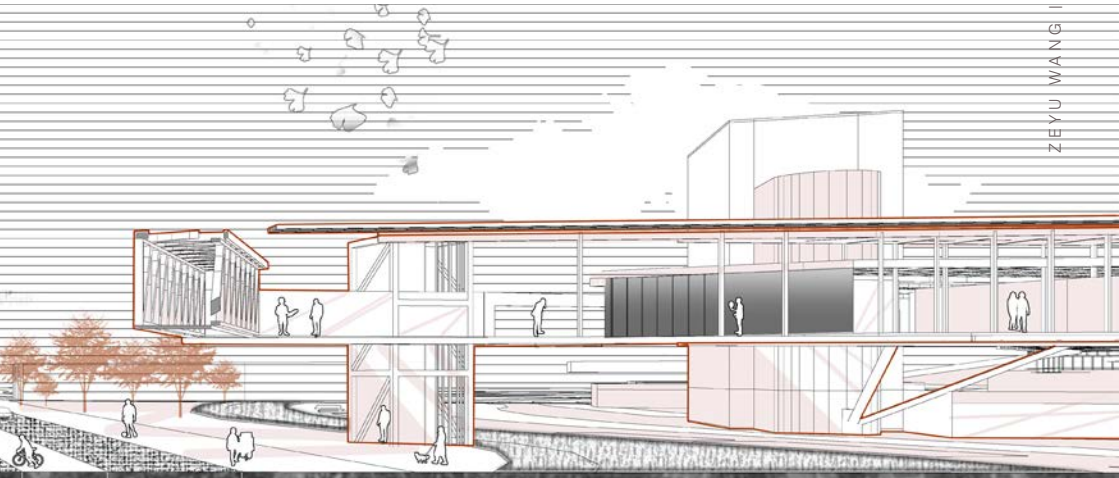
Tiergarten intervention (previous thumbnail)
Scheme masterplan (previous right)
Scheme axonometric (top left)
Structural axonometric, worms eye view (middle)
Sectional perspective (bottom)
Facade layers (adjacent middle)
Walkway structure model (adjacent right top)
Scheme massing maquette (adjacent right middle)

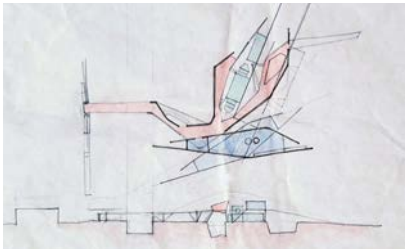










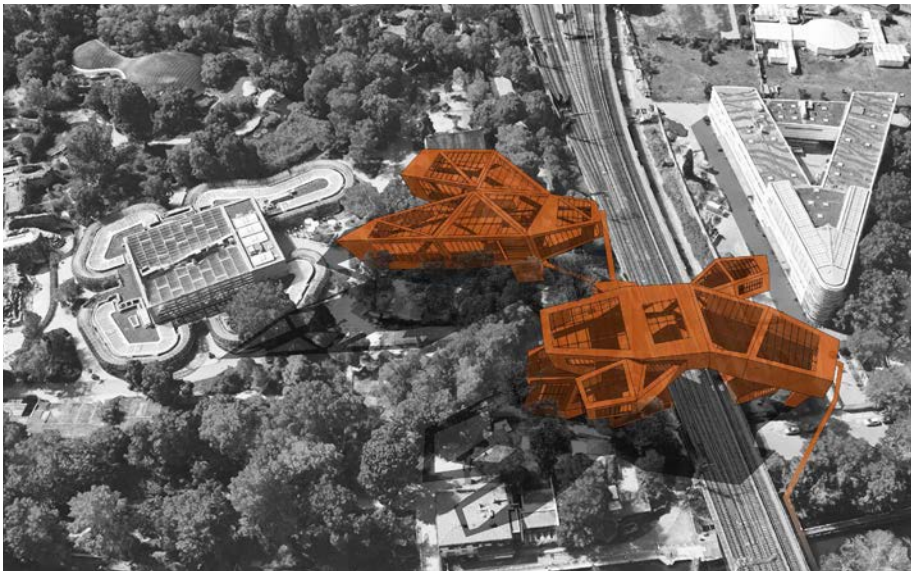


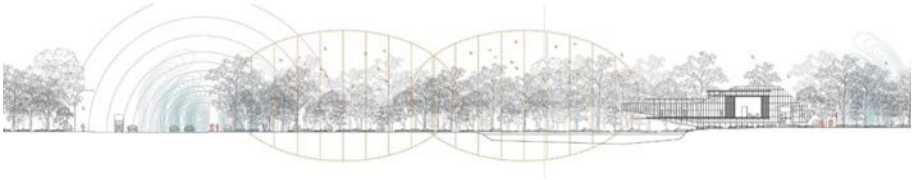
08b

URBAN EPIPHYTE

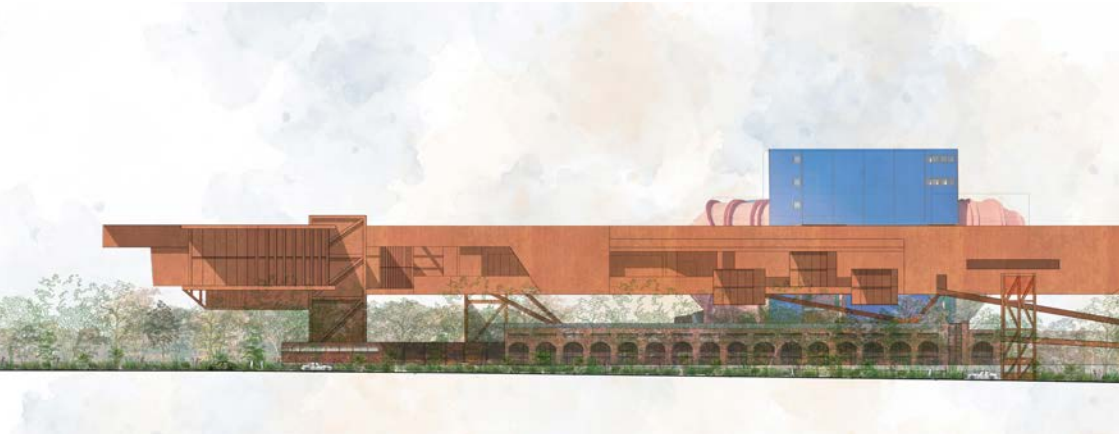
RAJ KACHARE

In the bustling heart of the city, where concrete towers reach towards the sky and the pulse of human activity reverberates through the streets, there exists a hidden realm—a sanctuary intertwined with the fabric of urban life yet often overlooked. Like a delicate vine clinging to the façade of a structure the concept of the urban epiphyte emerges—a testament to nature's resilience and the potential for symbiosis amidst the urban jungle. The urban epiphyte, inspired by its botanical counterpart, embodies the spirit of adaptation and co-existence. It thrives in the most unexpected of places, drawing sustenance from the resources provided by its urban surroundings. Like a silent sentinel, it transforms barren rooftops, neglected alleyways, and forgotten corners into vibrant oases of life and vitality. Rooted in the principles of sustainability and ecological harmony, the project seeks to re-imagine the urban landscape through the lens of the epiphyte. Drawing inspiration from the poetry of architectural phenomenology, the design ethos transcends traditional boundaries, weaving a narrative of connectivity and symbiosis between humans and their environment. As we delve into the intricate dynamics of urban life, we uncover hidden layers of complex birdsong mingling with the hum of traffic, radio waves pulsating through the air, and the rhythmic ebb and flow of human movement. The introduction of the Faraday Cage provides sanctuary from electromagnetic interference, inviting individuals to immerse themselves fully in the essence of Berlin's natural ambiance.





Scheme sketch (previous thumbnail)
Structural cage model (previous right)
Scheme massing overview in context (top)
Tiergarten field station section (middle)
Student facility section and Avion Institute section (bottom)
Rail wrapping scheme maquette (adjacent top left)
Ground floor plan (adjacent top right)
Massing visualisation (adjacent middle)



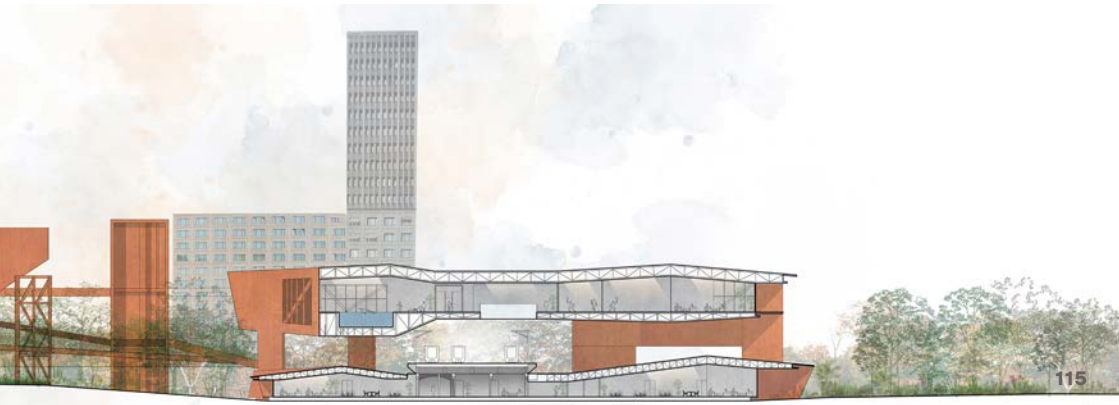


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IMAGE REFERENCES

Cover

- Bird Device – assembly. Photo, Terry Feng, Kim Lee, Bingzhi Li.

Prologue

- Schienenmaus data collection – Natur Park. Photo, Wulfric Clackson, Georgia Tucker, Adam Mitchell.
- Tiergarten from Siegessaule. Photo, Andong Guo, Bolun Hua, Shiyu Zhang.

Close Encounters: Berlin. Experiments with Data, Nature and Collective Life in the Urban Milieu.

1 Overgrown rail tracks, Natur Park. Photo, Terry Feng, Kim Lee, Bingzhi Li.
2 Birds, Tempelhofer Feld. Photo, Terry Feng, Kim Lee, Bingzhi Li.
8-9 Disused rail tunnel, Natur Park. Photo, Terry Feng, Kim Lee, Bingzhi Li.

26-27 Project Index, collated by Terry Feng, Bolun Hua and Cosmo Wezenbeek.

Epilogue

124 Field Data Collection - Physical Interpretation. Detail Photo, Andong Guo, Bolun Hua, Shiyu Zhang.
- Sounding the Ground, device tracking photography. Folahan Adelakun, Carl Harris, Oliver Maxwell.

Snapshots from Awards Ceremony, Konzertsaal Universität der Künste Berlin
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