

# ATLAS

The University of Universities project is, at heart, a pedagogical innovation that seeks to draw together students and academics from across Europe and beyond in the pursuit of thinking, learning and creating in the fields of art, architecture and urbanism. The opportunity is there for us all to learn together, to cross-fertilise our understanding of place and to develop new techniques to become better and more relevant designers. The UoU runs workshops throughout the year with just these goals in mind. And, every year, many, many students work together online and in person to set the creative spatial agenda for years ahead.

The ATLAS section of the journal is a chance to showcase projects that touch on the theme of an issue, and that show new ways of investigating and communicating ideas.

On the pages that follow we get to see some wonderful work from students in Edinburgh (Scotland) and Nicosia (Cyprus) who were faced with the prospect of thinking about borders in their studios.

In the former case, those borders were to be found between the natural and the man-made in considered sites in Berlin. What is impressive here, is that the students had to develop investigative tools to drill down into the problem being set and to help them arrive at conclusions that they could move forward towards potential solutions. The students explain themselves well, so without repeating that here, it is worth

emphasising this identified need that unites these projects - to understand the boundary and the micro relationships around it, to question the spatial and temporal qualities of it and to remember at all times that boundaries implicate humans and non-humans. In the case of Nicosia and Agios Sozomenos, the border as a marker and remnant of conflict is all too apparent. By devising new 'mapping' techniques students are able to capture something of that borderscape - 'mapping the invisible' as they put it - and to interrogate it.

The communication of the findings and the emerging solutions they lead us towards are carefully presented by the students. The 'visual' is an international language and we see a range of drawing, photography and painting techniques in use to project the tangible and intangible results of seriously useful work.

The call for this edition was designed to stretch the imagination and to engage with new ways of looking at a condition we are all familiar with. The submissions all emphasise the role of the pedagogic enterprise that is university education in architecture and urbanism in equipping students to do this, and, by reciprocity, also equipping the staff with the where-with-all to have complex and meaningful discussions.

As the University of Universities projects grows (it is now at 30+ partners) there will be more opportunities for students to virtually and physical cross boundaries and to learn from and with each other.

## Devereux, Michael<sup>1</sup>

<sup>1</sup>School of Architecture and Environment. University of the West of England, Bristol, UK.  
Mike.Devereux@uwe.ac.uk

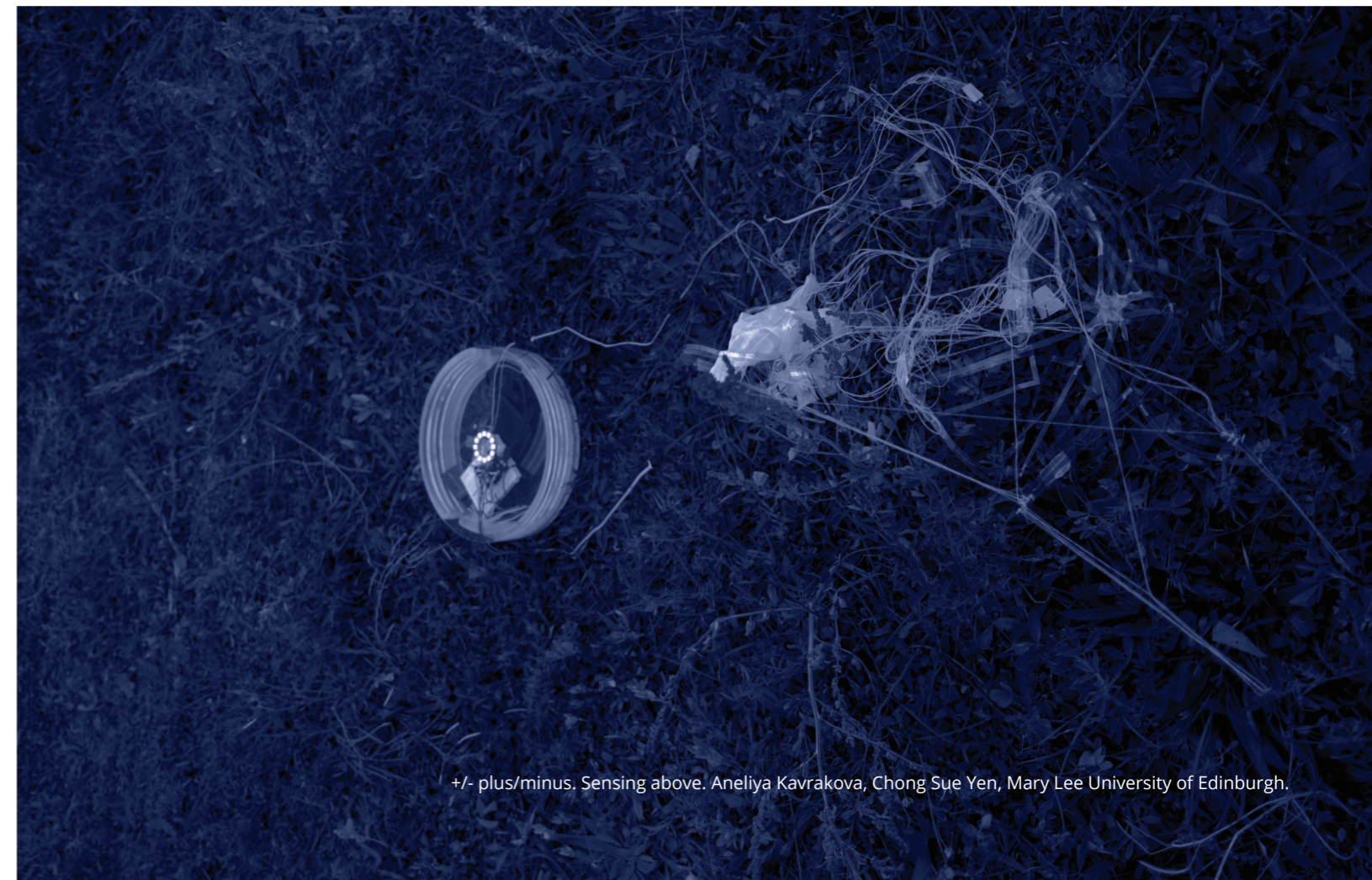
Citation: Devereux, M. (2023). "Atlas" UOU scientific journal #05, 216-233.

ISSN: 2697-1518. <https://doi.org/10.14198/UOU.2022.5.18>

This document is under a Creative Commons Attribution 4.0 International license (CC BY 4.0)



+/- plus/minus. Sensing above. Aneliya Kavrakova, Chong Sue Yen, Mary Lee University of Edinburgh.

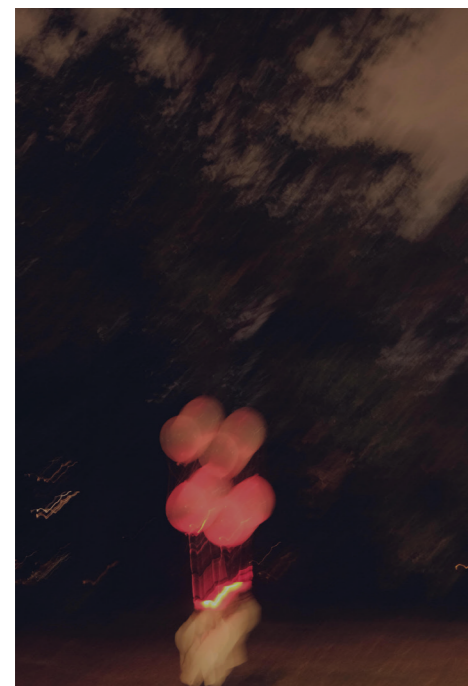




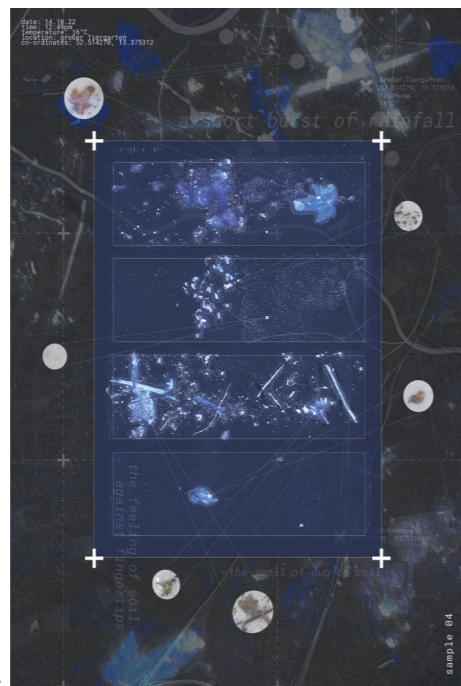
# +/- plus/minus

Aneliya, Kavrakova; Chong, Sue Yen; Mary, Lee

<sup>1</sup>University of Edinburgh, Master of Architecture\*



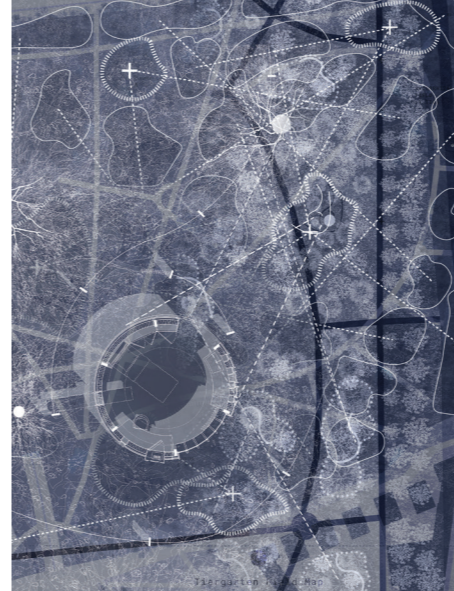
1.



4.



6.



1. +00. Sensing Above, Air device

2. +00. Sensing Above, delicate weaving of air device lattice frame

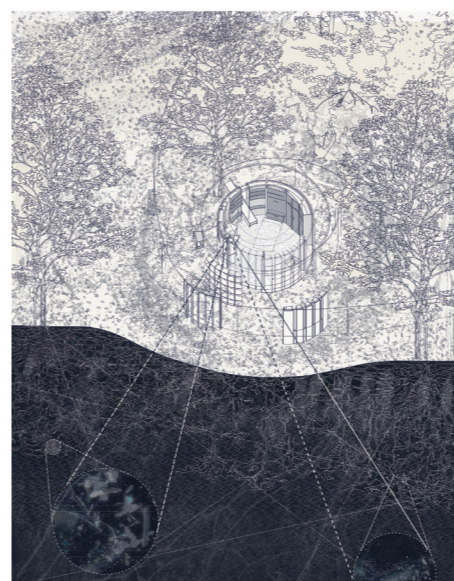
3. -00. Sensing Below, Soil device, a portable instrument

4. air sample from Tiergarten

5. -00. Sensing Below, sonification of soil and air conditions.

6. Synthesise, an ecological journey across Berlin. Map of micro-interventions of field stations across Berlin

7. Nord-Sud Grunzug experiential field station, Tiergarten mycorrhizal field.



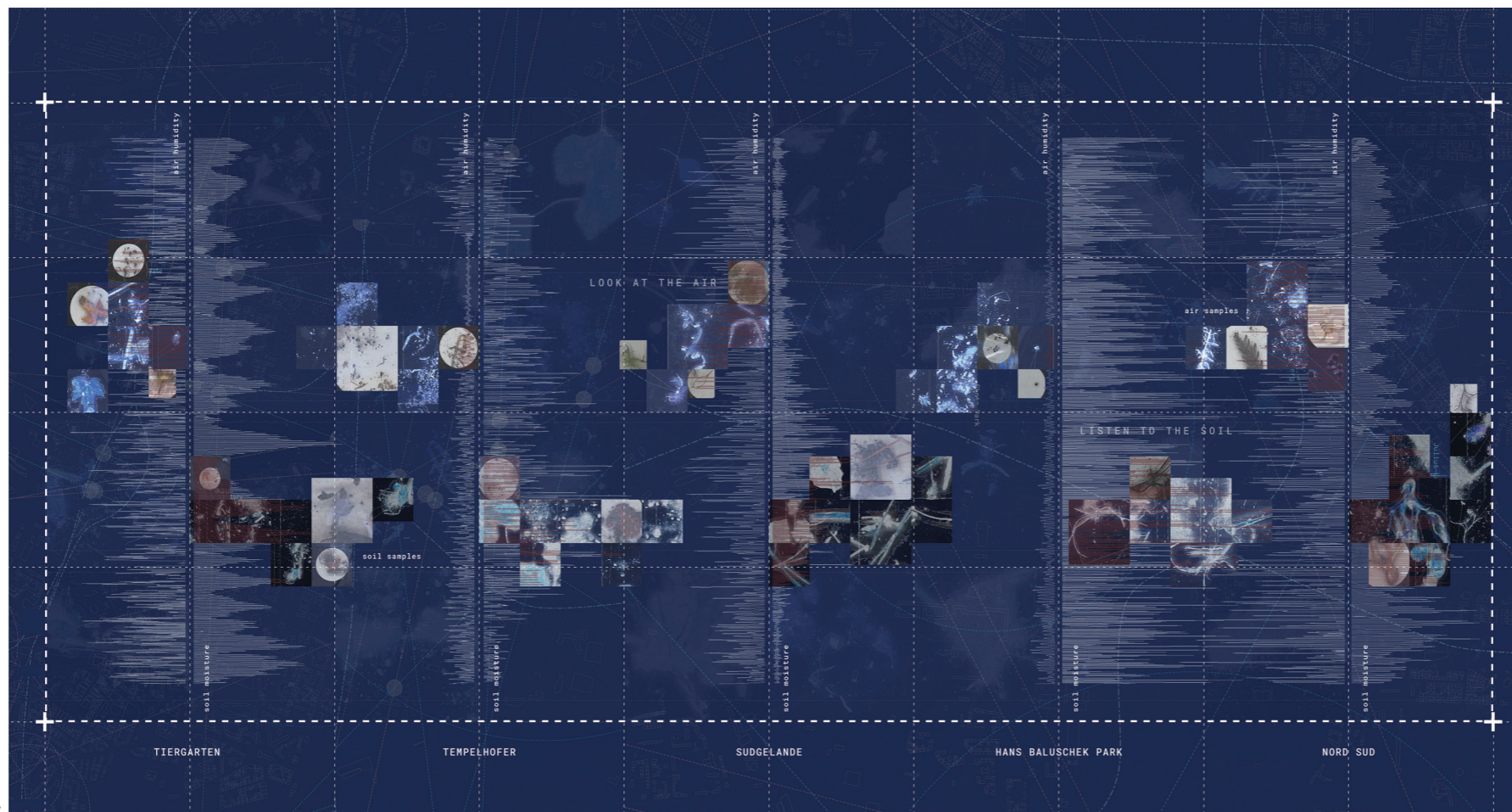
7.



2.



3.



5.

The mainstream narrative in scientific literature is one of competition and the survival of the fittest in times of trouble and emergency. While this remains true, a more silent narrative is emerging. This is the one of reciprocity and the mutual flourishing of multi-species. These reciprocal relationships - between trees and fungi, dolphins and fishermen - have always been there all along, and we are only just beginning to unravel them. In our time of climatic emergency, we shift our attention to our more-than-human kin for ways to rebuild more reciprocal relationships between the democracy of species. plus/minus is a continuation of an existing approach to ecological and economical thinking, exploring the circular and reciprocal relationships within the critical zones between soil and air. The study is situated in Berlin, Europe's most biodiverse city, and learns from the post-war development of the urban brachens, practices of controlled neglect and the balance between preserving as is and developing value.

Berlin is explored through the lens of the datascape, mapping its ecological landscape against its economical and infrastructural topography. This top-down research methodology through the technocentric infrastructure of the city was combined with a bottom-up urban research practice through two surveying instruments. An Air and Soil Device were constructed as a method of understanding the city, whilst exploring the feasibility and processes of a more hands-on urban ecological research practice across five key sites in Berlin. These surveying instruments function to communicate between air and soil to humans through a technological interface, mediating the thresholds between the heights above and below the human's everyday perception.

Learning from this body of collected fieldwork data and embodied spatial practices with the devices, the proposal envisions a network of micro-interventions spanning across the city. At each site, a research field station is situated as an initiation to connect and redefine the borders between the air and soil, between human and non-human relationships, and between science and perception. These sites act as test beds in generating alternative narratives of economy and ecology in urban Berlin. Together, they string a journey through the North-South Greenbelt of Berlin with tales of reciprocity, generosity, and care between the human and non-human kin who call Berlin home.

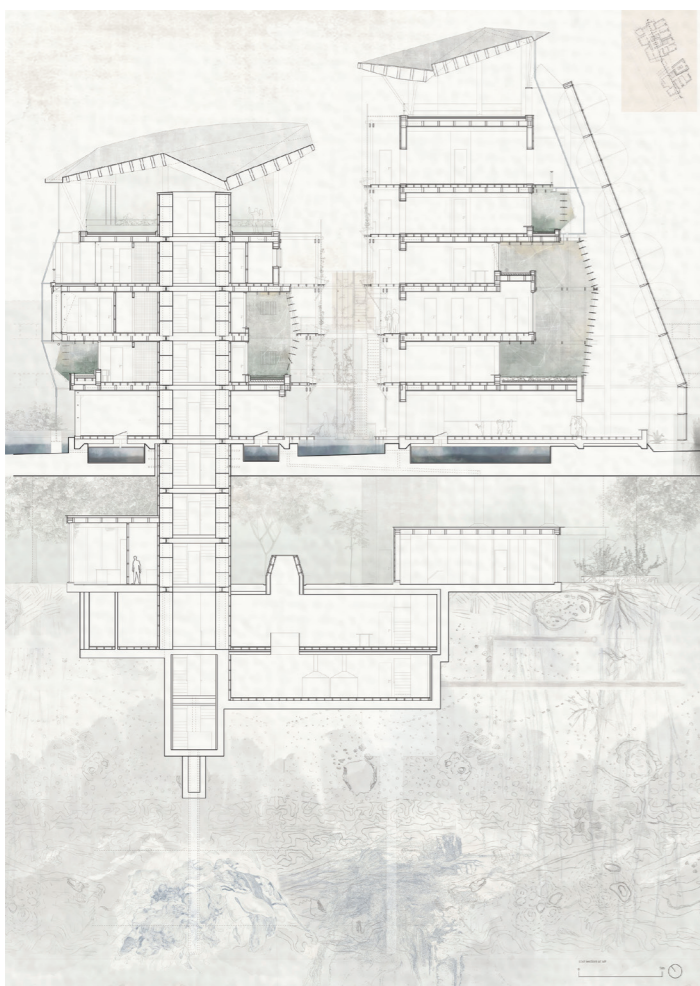
\*Studio Sender Berlin. Tutors: Miguel PAREDES MALDONADO, Andrew BROOKS, Andrea FAED. University of Edinburgh, Master of Architecture.



# Waterscape - A Permeable Moment

Mari, Helland

University of Edinburgh, Master of Architecture\*



1.



2.

In *Critical Zones* Bruno Latour defends against landing on earth, calling moderns 'absent landlords', a distinction between the politicised world they live in and the natural world they live off<sup>1</sup>. Drawing out the edges, the threshold between the concurrent existences prompt a place of presence, a possibility for encounter between the twofold<sup>2</sup>.

Conceived from an ambition to unite Latour's dual world, the project 'Waterscape - A Permeable Moment' seeks a better understanding through weaving

the urban and natural landscape of Berlin into a pseudo 'critical zone'. As such it rejects well-established beliefs of the anthropocentric city through reimagining the way we inhabit it by re-organising its waterscape to promote a synchronicity between human and non-human counterparts. Considering the building as a threshold through its rethinking of the human-centric cityscape, it embodies a space in-between the natural and the urban, its porous boundaries speculating as to on what the post-Anthropocene city

might entail.

Catalysed by intensified climatic changes, the project recognises its existence within a liminal space. The masterplan (developed as part of group work) questions existing infrastructures, offering a proposal for a climate of dichotomies, periods of increased rain and drought. Imagining such as concurrent to a move away from car-centric transportation, the motorways of Berlin offer a real estate suited for these new infrastructures, and thus embodies the duality of the

threshold, as existing between the spatial and temporal. It envisions a new waterscape that connects existing rainwater catchment areas, offers natural filtration and vital storage and allows the city to mediate the change in precipitation patterns. Implementing natural landscapes in the filtration process creates new homes, that within the lakes and amongst the reeds, has the potential to provide for the multifarious life within the city.

Distinguishing the housing crisis as occurring for both the human and non-human population of Berlin, a residential building for people under 30 seeks to relieve the issue. The project uses thresholds, cuts into surfaces of the building, to create a porous and habitable skin, with planting beds, birds, insects and bat-habitats promoting coexistence, offering a moment of respite from the non-human flight from the city. Aiming to leverage the threshold that has too often functioned as separation between Latour's two worlds and enforced the human-centric view

in the ambition to divide social and environmental factors, the project instead considers it as a place of encounter between species<sup>3</sup>. It is a place of transition, not only between spaces, but also where nature can thrive throughout the seasons, designed as a biosphere with multiple habitation and hunting opportunities across the building. This is merged with the building as a vessel for water, a method for collection with the 'droplets' caught is used to replenish the ground beneath and feed the building's thriving greenery.

Linking together the past, present and future, the building attempts to join Latour's worlds, and imagine how a building for the post-anthropocene might mediate co-existence between humans and non-humans. The proposal recognises water as life-giving, and as such aims to offer a greater level of water security to the people of Berlin through leveraging existing car-centric infrastructures in the city.



3.



4.

\*Studio Sender Berlin. Tutors: Miguel PAREDES MALDONADO, Andrew BROOKS, Andrea FAED. University of Edinburgh, Master of Architecture.

REFERENCES

1. Bruno Latour and Peter Weibel, *Critical Zones : the Science and Politics of Landing on Earth* / Edited by Bruno Latour, Peter Weibel. Ed. Bruno Latour and Peter Weibel. Karlsruhe, Germany: ZKM/Center for Art and Media Karlsruhe, Germany & The MIT Press, 2020.

2. Edward S. Casey, *The World on Edge* / Edward S. Casey. Bloomington, Indiana: Indiana University Press, 2017

3. Till, Boettger, *Threshold Spaces: Transitions in Architecture, Analysis and Design Tool*, Basel/Berlin/Boston: Walter de Gruyter GmbH, 2014.

1. The building as a threshold. 3. Contextual section and water strategy drawing.

2. Site strategy and overview. 4. Contextual drawing and floor plan.

(group project: Mari Helland, Lulu Alsharan, Minyoung Choi and Alice Reed)



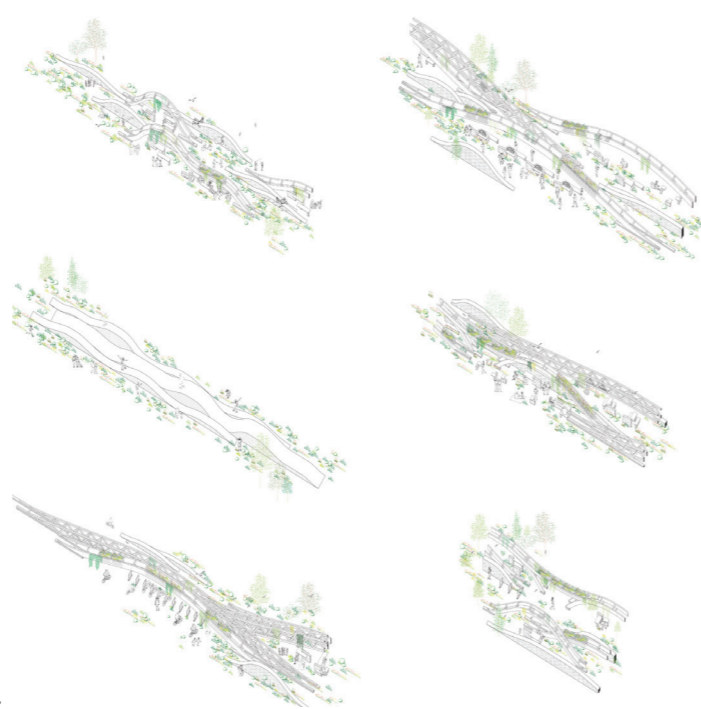
# Interspecies threshold strips in Tempelhofer Feld - Berlin

Changhuan, Xu; Yunfang, Xu; Xiaowei, Xue

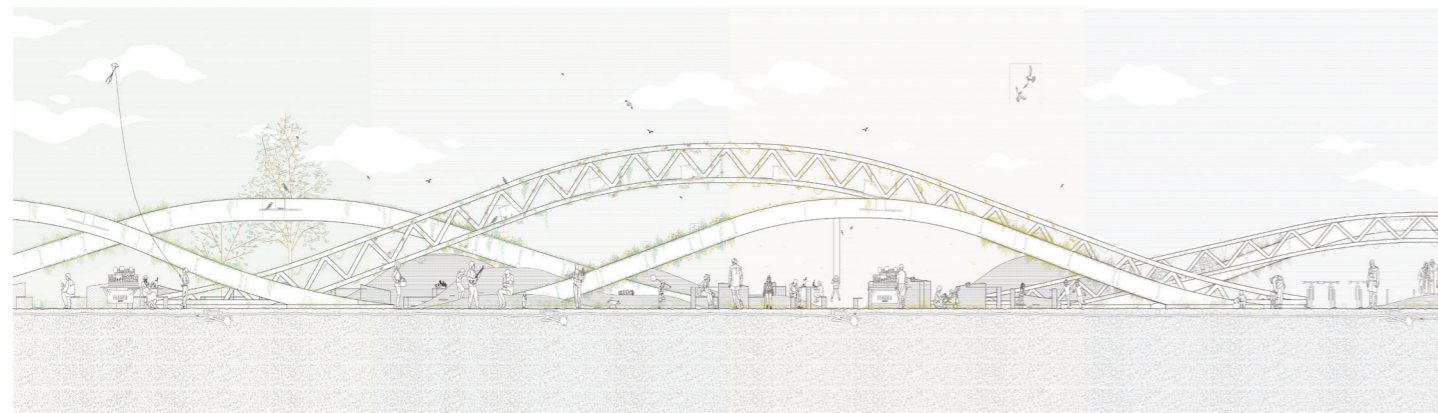
<sup>1</sup>University of Edinburgh, Master of Architecture\*



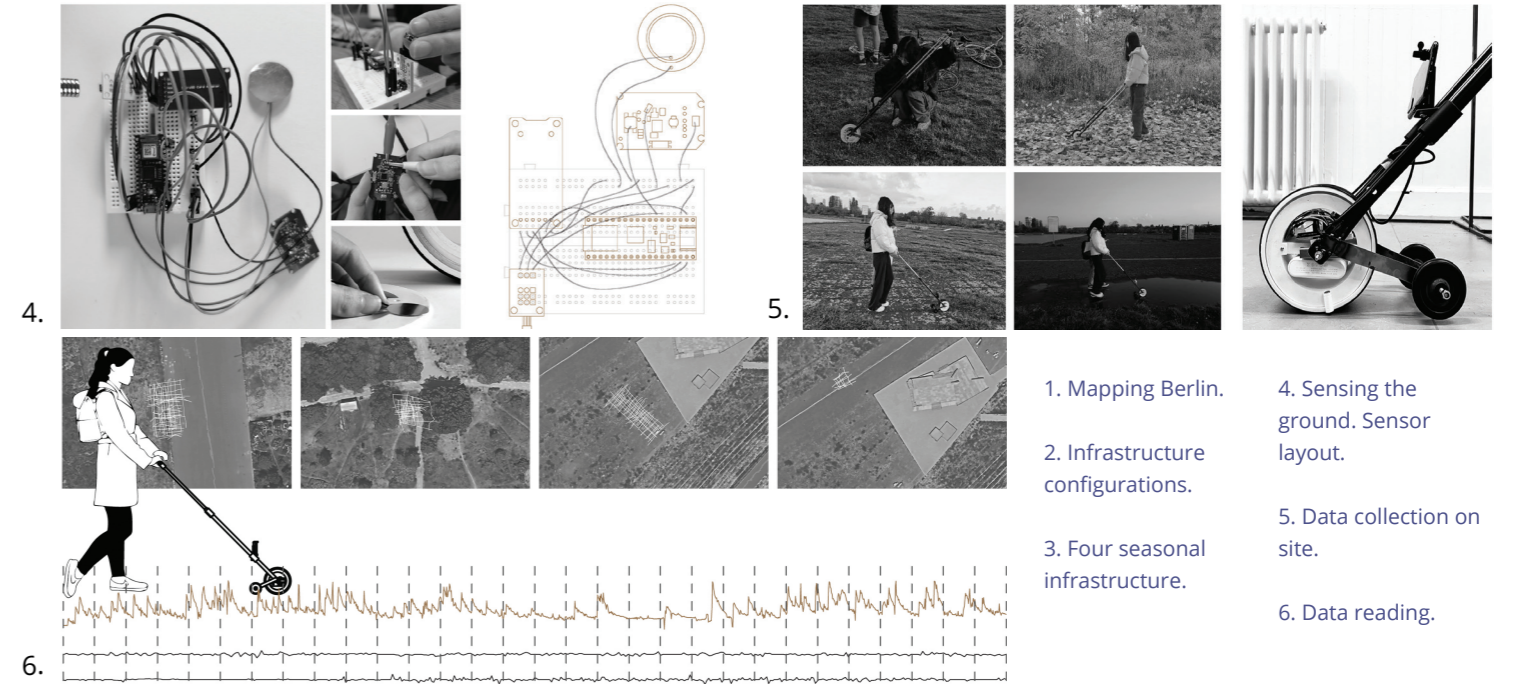
1. Mapping Berlin.



2. Infrastructure configurations.



3. Four seasonal infrastructure.



4. Sensing the ground. Sensor layout.

6. Data reading.

Berlin, as one of the most biodiverse metropolises in Europe, hosts an enormous variety of flora and fauna within its urban fabric. When studying the interactions between different species we discovered that human activities disrupt other species where their paths intersect. This creates boundaries between human and non-human species.

By using the ground as a medium for encounters between humans and non-human species this project aims to challenge the boundary between nature and artificiality, creating a space for interspecies coexistence. The expanded ground turns interference into positive interactions among different species, fostering a conversation between them.

*Mapping Berlin – Searching for Contact Zones.*

This project was initiated by the exploration of contact zones between humans and non-human species. We focused on the city's natural landscapes and reinterpreted different types of green spaces as ground textures to examine their relationship with the interactions between humans and urban wildlife. Tempelhofer Feld, a former airport, was chosen for further investigation due to its flat topography and the potential for conversations between humans and other species.

*Sensing the Ground – Identifying thresholds within contact zones.*

We prototyped a wheel-powered digital sensing device to study the vibrations of different ground textures, exploring the habitats of both human and non-human species. We surveyed data from four different sites, each representing a threshold between natural and artificial textures: Grass growing between tiles, creating a blend of textures; the distinct boundary between the grass field and the asphalt runway; seasonal leaf litter as a unique feature; the appearance of water ponds during rainfall. In these sites, we discovered the possibilities of integrating

nature and artificiality, as well as the interactions between human and non-human activities.

*Design Intervention – Breaking boundaries.*

The infrastructure serves as an extension of the ground, providing shelter for all types of species. It expands the ground and enables various forms of life, aiming to activate Tempelhofer Feld by creating potential contact zones for different species.

Taking into account the density of species distribution in the Tempelhof area, we identified four sites in the most populated areas. We added thin “stitches” to these sites, connecting the park's edge to the center, encouraging human activities from the periphery of the park to move towards the center and connecting interrupted habitats of non-human species. We employed various curved compositions to create different spatial conditions. The structure provides essential infrastructures to accommodate various activities, allowing people to spend more time at the center of the park. Nesting boxes are placed on the structures, providing additional habitats for plants and wildlife. The location and heights of the nesting boxes were carefully considered based on the characteristics of the selected species, while also encouraging all forms of life to inhabit them. The structure adapts to the needs of different activities throughout the seasons. Additional seasonal textures embrace various habitat requirements and stimulate more interactions. Using natural materials, the structure will gradually decay and merge back into the ground in the future, expanding the habits of both human and non-human species without clear boundaries.

\*Studio Sender Berlin. Tutors: Miguel PAREDES MALDONADO, Andrew BROOKS, Andrea FAED. University of Edinburgh, Master of Architecture



# Natura Urbana Revival

Bridging the boundary between humans and nature

Zhaoyi, Yan<sup>1</sup>

<sup>1</sup>University of Edinburgh, Master of Architecture\*

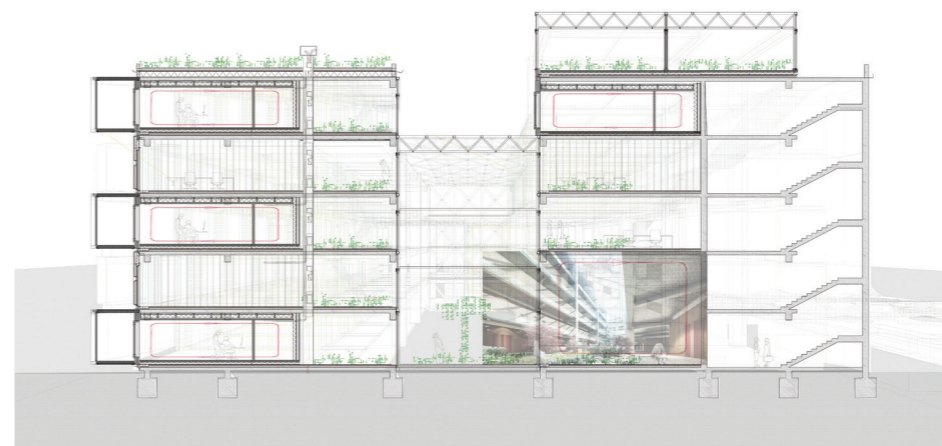
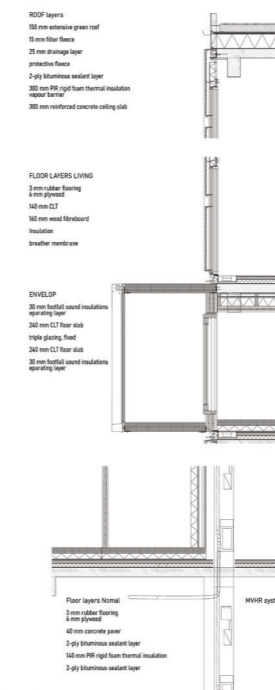
RENDERING SOUTH FACADE



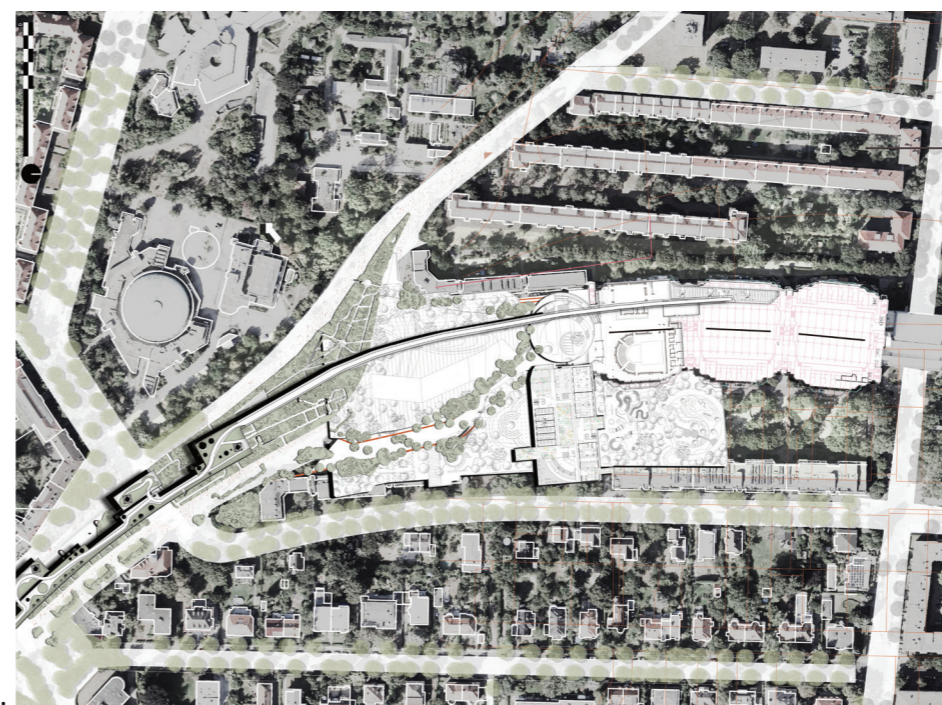
1.



4.



3.



2.

1. Bridging boundaries between human and nature. View of the south facade.  
 2. Site plan of the intervention  
 3. Section of the residential modules.  
 4. Detail of the facade

This project explores the present and possible future of a former parking lot in Berlin, Germany. The previous building on the site has become abandoned, and it is being used as a testing ground to initiate communication with the surrounding parks and residential areas.

New residents are being guided to restore building facilities using simple, transparent, and sustainable materials and methods. The goal of this work is to spark discussions around the future of post-industrial urban centres and communities.

The design outcome is not a final product but a gradual transformation of the design process. This proposal allows something to dissipate over time while building a new foundation for humans and other living beings to coexist with mutual respect.

Restoring dialogue with nature is a primary objective of the project. The plan aims to maximize the connection between humans and nature while ensuring residential density. The ground floor serves as a bridge between the original northern garden and the newly built garden in the southern part of the new communication site. Green natural areas are set up in the north and south, guiding people towards the central natural atrium and encouraging them to create suitable habitats for both human and non-human species in this area.

The inserted residential modules are divided into two different scales: single-person and family, measuring 40 square metres and 80 square metres, respectively. Additionally, a small theatre with a capacity of 100 people can be added to the ground floor to meet the daily needs of community residents. The newly built lightweight wooden frame, with the size and combination of the concrete frame as the template, is used to rebuild the roof garden and integrate it into the residential design.

\*Studio Sender Berlin. Tutors: Miguel PAREDES MALDONADO, Andrew BROOKS, Andrea FAED. University of Edinburgh, Master of Architecture.



# Lines in Landscape

## A Mushroom Farm

Gerhardstein, Alicia; Reece, Tsa; Peng, Tom

University of Edinburgh, Master of Architecture\*



1.

1. Hanging hedgerow layered linedrawings showing decay over days 1-6.

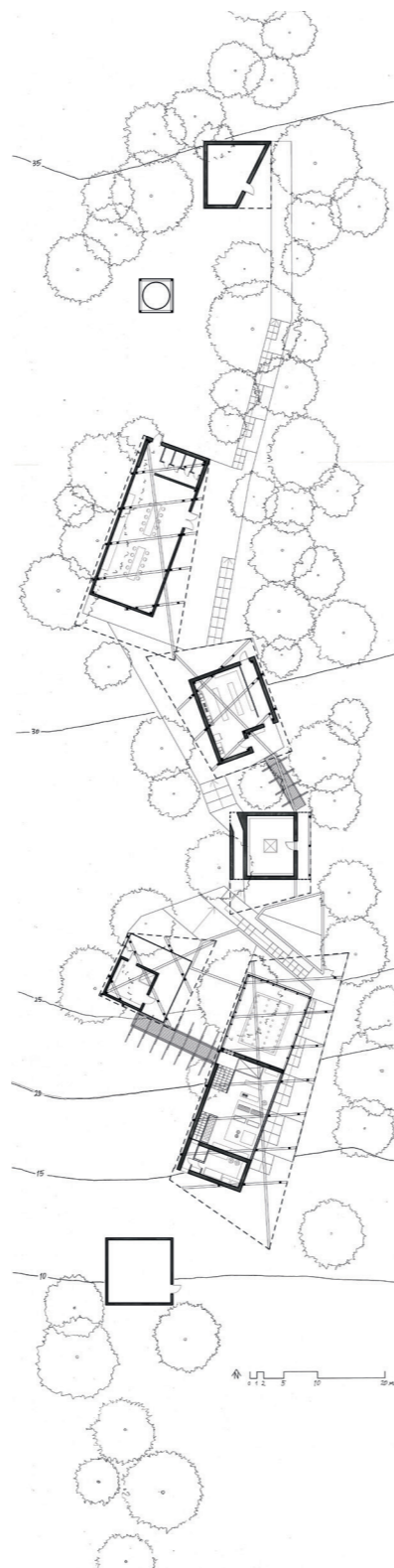
2. Hanging hedgerow layered watercolour paintings showing daily decay over days 1-6.



2.

3. Plan of a Mushroom Farm scheme.

4. Hanging hedgerow experiment.



3.



4.

"A hedge is an edge habitat that has two sides or, in other words, a hedge is all edge" (Wright J., 2017).

The starting point for this project is the Hedgerow, which is in essence an edge, or a border. This quality makes hedgerows excellent habitats for fungi. 'Stress fruiting' occurs within edges of hedgerows when mycelia (fine fibres that make up fungal colonies) detect a lack of nutrition away from supporting trees and sexually reproduce in an effort to maintain the species, producing fruiting bodies (mushrooms). An abundance of light (not present in dense woodland) associated by fungi with moving air, and needed for dispersal of spores also increase mushroom growth. Hedgerows are also landscapes of human construction, at very least in their conception. These defining characteristics are explored in the making of a hanging hedgerow model, composed of species samples from our chosen hedgerow. The effect of time, an essential component to all life quantifying stages of living and decomposition, is explored through line drawings mapping the changing borders of the hanging hedgerow as it withers over a week. Daily decay shown through border movements are highlighted using watercolour.

Nothing human, nor non-human exists in isolation. Hedgerows are a perfect example of interdependence and collaboration of biotic and abiotic in a landscape; collaboration between water, climate, flora, fauna, fungi and humans. Therefore, the hedgerow is also the perfect design impetus for a Mushroom farm. Also encompassed within a hedgerow, the farm contains spaces for all the stages of a mushroom's life cycle (from a human perspective). Water is central to the scheme, as it is to all life both in a Hedgerow and beyond. The roof of each building mimics a tree canopy collecting water through gentle inward slopes which funnel water at one central point from roof to roof moving with gravity. Finally collected in a reflective pond, water penetrates beneath the ground in root adjacent movement through pipes to a filtration unit at one end

of the site, whereafter it is pumped up to a water tower at the other end of the site for redistribution. With wandering pathways parallel to farm's buildings, visitors can process up the site to the dining space whilst observing the growing, harvesting, storage, and cooking of mushrooms; the journey between one building and the next is a transition across the stages of a mushroom's lifecycle. While there are two paths across the site, one for visitors and one for movement of mushrooms from one stage to the next, these pathways intertwine and cross over. This represents the interwoven nature of species in a hedgerow and of all life on earth; interdependence, symbiosis (and sometimes mutualism) and collaboration of biotic and abiotic components across ecosystems and species borders in vital (Tsing A.L, 2015). Within the scheme, interwoven movement removes existing boundaries between food production and consumption. Indeed, there are great physical and intellectual borders between food production and consumption in our world. Crossing these borders is vital not only for increasing food security in the future, but also for recognising human reliance on other species. Disconnecting from a human centric outlook on the world is key to understanding a landscape environment. Collaborative survival is only possible through cross species coordination, and the transcendence of human imposed borders.

### REFERENCES

Edges, Symbiosis, Mutualism, Interweaving, Temporal change.

WRIGHT, J. *Habitat In: WRIGHT, J. A Natural History of the Hedgerow: and ditches, dykes and dry stone walls.* London: Profile Books, 2017. ISBN: 9781846685521

TSING, A.L. *The Life of the Forest.* In: TSING, A.L. *The Mushrooms at the end of the World.* Princeton: Princeton University Press 2015. ISBN 9780691220550





# Time Synergies

## Adaptive Architecture

### Kyriacou Petrou, Angela; Hadjisoteriou, Maria

University of Nicosia, Department of Architecture\*

Perceived as a distinct militarised border the site of the buffer zone in Cyprus has remained tinged and stigmatised by its ambiguous status. However, the boundary between the north and south of the island has been appropriated through different occupational patterns and activities as well as unseen movements and crossings which penetrate the seemingly rigid green line.

Unit 6 investigated the space of the buffer zone from the dense urban site of Nicosia to the uninhabited, abandoned village of Agios Sozomenos. Ground-truthing attempted to communicate ideas about the material conditions of the site as well as personal stories, and practices, which exposed unseen layers of complexity. Through cataloguing actual conditions and creating detailed mappings, representations of the sites attempted to disassemble predetermined ideas about the boundary as simply a line of division, but instead sought for alternative layered narratives of place, re-reading the border-land as a zone of interaction and a dynamic zone of exchange and hybridity. Acknowledged as a site of contestation but also fusion, the boundary was seen, not as a line that delimited a national boundary, but as porous edge, an overlap of

old and new, private and public and a continually mutating landscape.

Studied in parallel the two conditions of the buffer zone revealed the complexities and paradoxes of the specific sites. The buffer zone in Nicosia is evidenced through repeated fragmentation of networks, dead ends and militarized zones of a dense urban space. A series of additions and subtractions emerge along the boundary line often where military fortifications meet domestic spaces, linking everyday living with discarded underground tunnels, trenches and other disused structures. The seemingly strict buffer edge is seen to take different forms masking, extending and penetration the architectural shell as well as the surrounding landscape resulting in a mutation of the edge. Organic appropriation begins to shape and mutate the existing environment; these conditions create opportunity for small-scale public activity and mechanisms for urban transformation.

Agios Sozomenos is an abandoned village on the outskirts of the Nicosia district. A fertile agricultural area, previously used for growing barley it is also scattered with fragments of medieval churches, archaeological artefacts and uninhabited derelict houses of its former residents. The surrounding

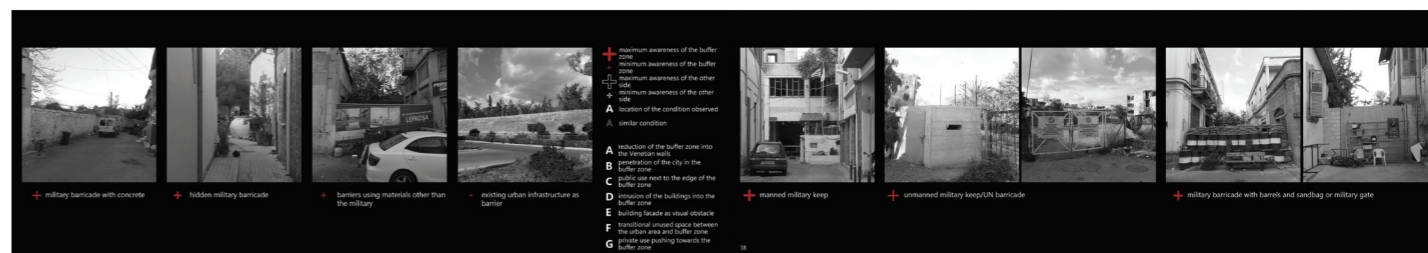
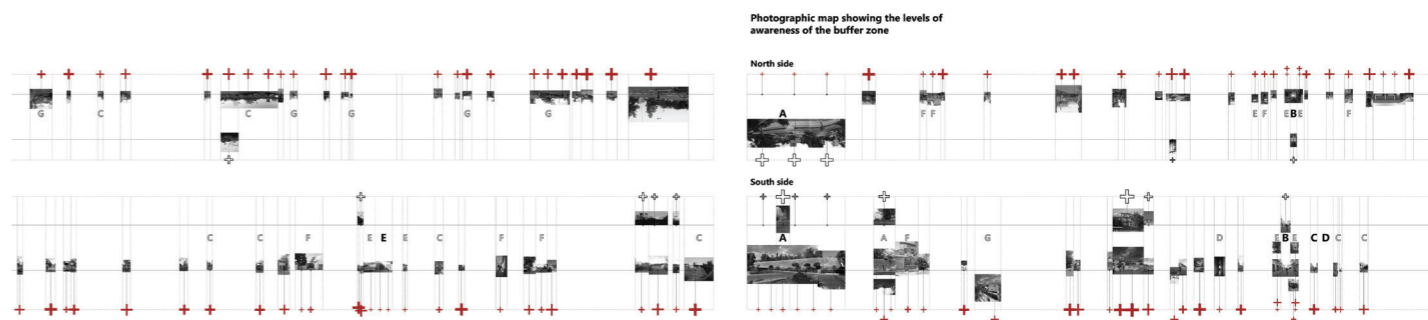
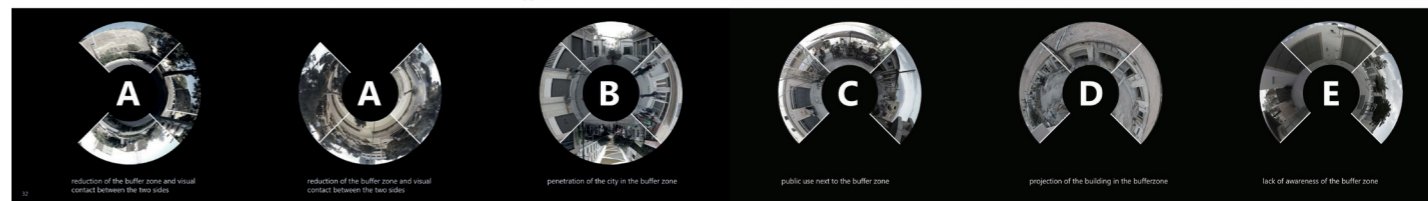
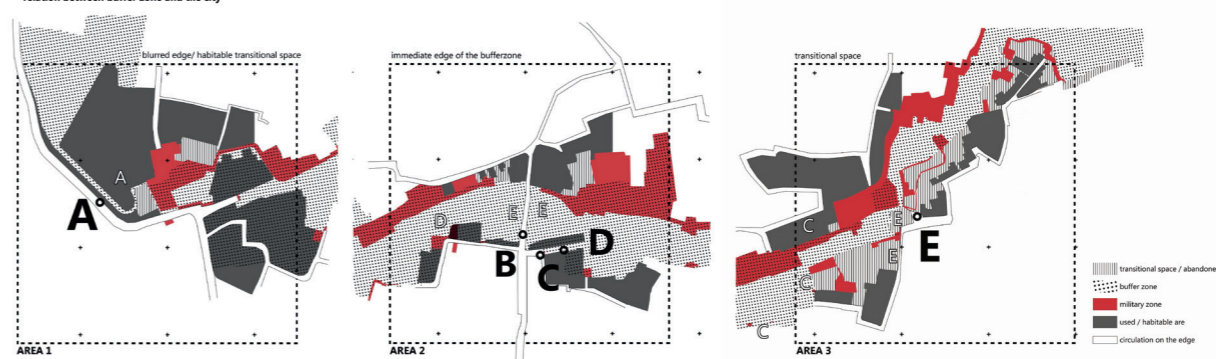
area is made up of farmland for cereal production. The weathered abode bricks, the parched soil, the sandy cliff edge that frames the village and the expanse of agricultural land creates a visually homogenous material landscape. The open landscape of the area slowly unites the north and south of the island without any visible lines of division. - the farmland, which is actively cultivated- creates an informal ambiguous zone of division, demarcated only in the minds of the local residence, some of whom often transverse boundary line.

Compared to the palpable border line of Nicosia, mapping the invisible boundaries and the borderless landscape of Agios Sozomenos was bewildering- the absence of visual boundaries guided a different examination of the edge which was recognised through agricultural practices and the trajectories of individuals. The boundary lines were revealed only through the storylines of the surrounding residents and a brief seasonal emergence of wildflowers which temporarily tinted the dry brown land and revealed a brief visual pattern of layered occupations.

The contribution includes drawings from 4th & 5th year students Unit 6, Spring 2016 led by Angela Kyriacou Petrou and Maria Hadjisoteriou.

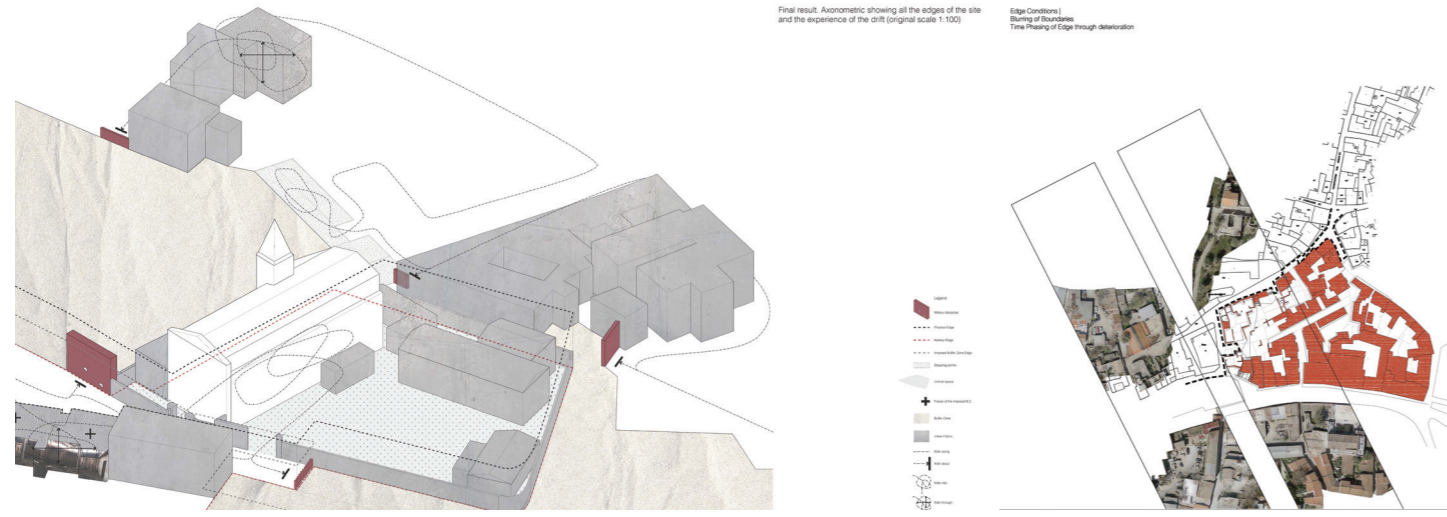
### Nicosia Buffer Zone

Categories of different conditions of the relation between buffer zone and the city





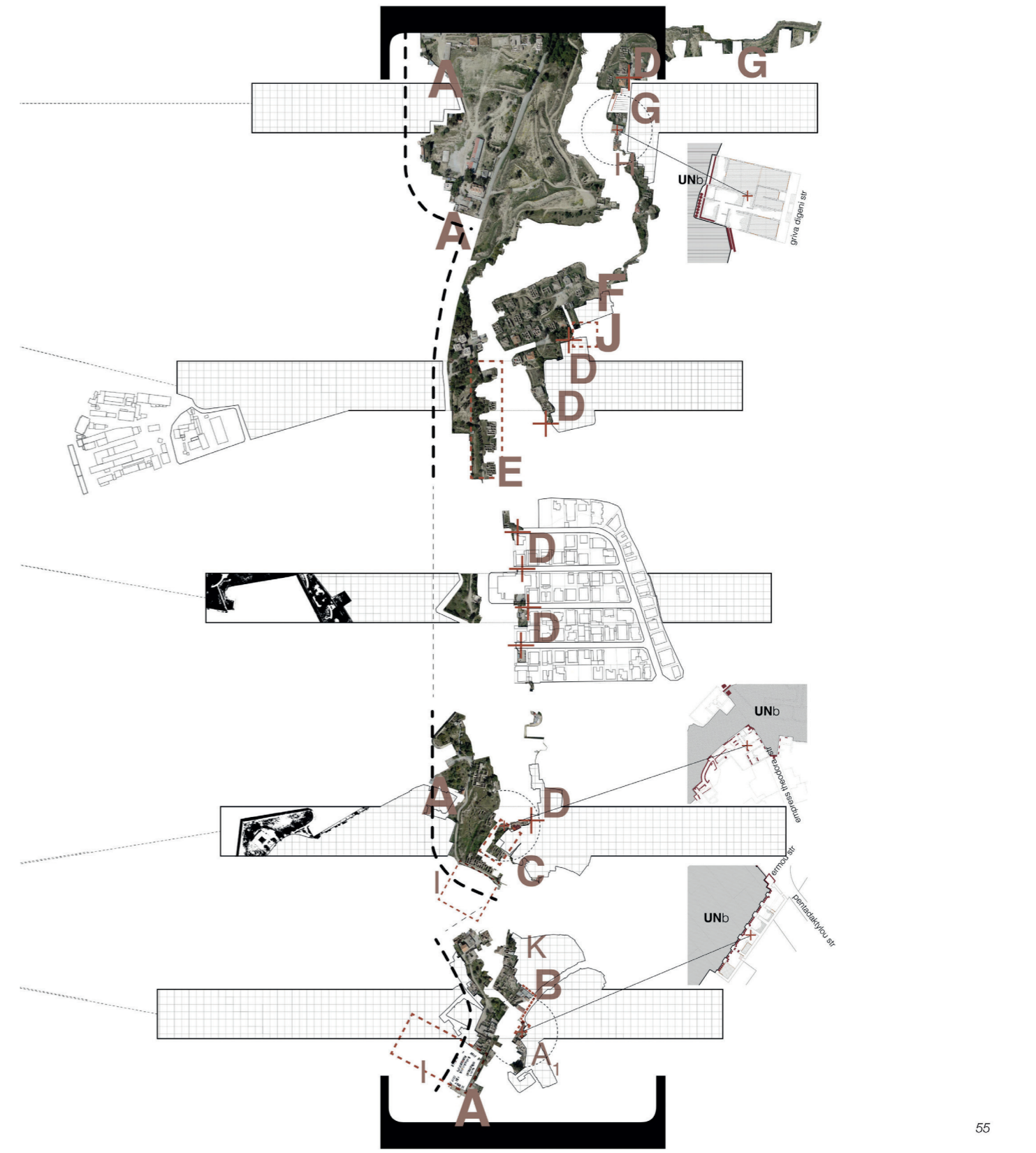
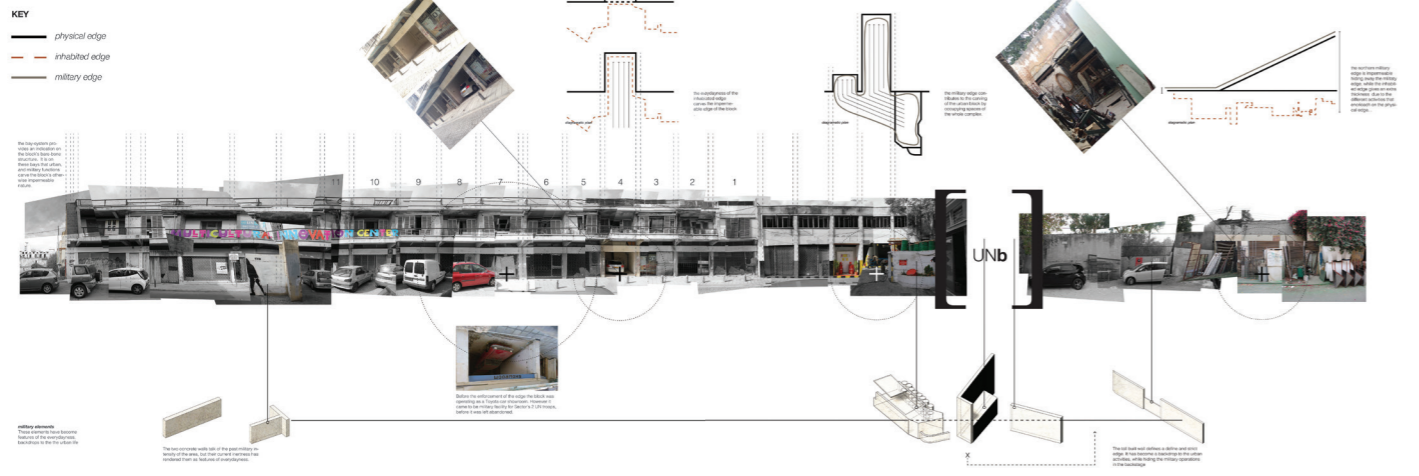
### Nicosia Buffer Zone



#### Unfolding the facade: The Liminal Circus

In this liminal circus different acts come to interplay, however their act is not just taking place in front of indifferent/ impermeable backdrops. They come to alter it, to play with it, to tease it. As in a circus, what makes the stage is the apparatuses that support the act; here the ex-Troika showroom sets the podium for everydayness - of the neighbourhood, the military, the passerby, the spectator.

The liminal circus provides an ambiguous reading on the edge. The urban act re-adjusts the edge conditions blurring the possibility for definite edge conditions. In some cases military and urban functions seem to defy the physical edge, while there are points where the physical edge becomes the threshold between the inhabited and the military edge. In the latter situation both military and urban activities seem to thicken the physical edge.





### Agios Sozomenos

