Ramification

Edited by Céline Baumann
Museum im Bellpark

The Ramification of Thought

Since 2021, and specifically with its exhibition series on architecture, the Museum im Bellpark has concerned itself with contemporary architecture practices. The communication of the questions and challenges that drive these contemporary architects stands in the foreground of this undertaking. The selected studios displayed their methods and practices throughout the Museum im Bellpark's exhibition spaces, representing the challenges and opportunities they encounter in their field.

The current edition—the exhibition project "Ramification" by and with the landscape architect Céline Baumann—is the first to focus on the discipline of landscape architecture, which has recently taken on a new urgency. As designers of our environments, landscape architects are constantly engaged with pressing social and ecological themes, such as ever-denser building practices, the conscientious use of resources, and the cultivation of biodiversity. In the face of impending ecological collapse, a growing movement of landscape architects, activists, feminists, and environmentalists are pleading for alliances between humans and non-human beings. They call for the respectful and sustainable design of our environment, for design that takes ecological realities into account and makes possible a harmonious coexistence. But how can we, as private individuals, contribute? How can landscape architects engage more sensitively with the landscape in order to allow for symbioses within ecosystems? Which natural rhythms and forms can inspire us in this?

The exhibition project "Ramification: An Exhibition on Contemporary Landscape Architecture" reveals the potential of "ramification" as a concep

I believe that every project should be reconsidered from this central perspective, acknowledging the complex interplay of these elements as part of the socio-ecological transition.

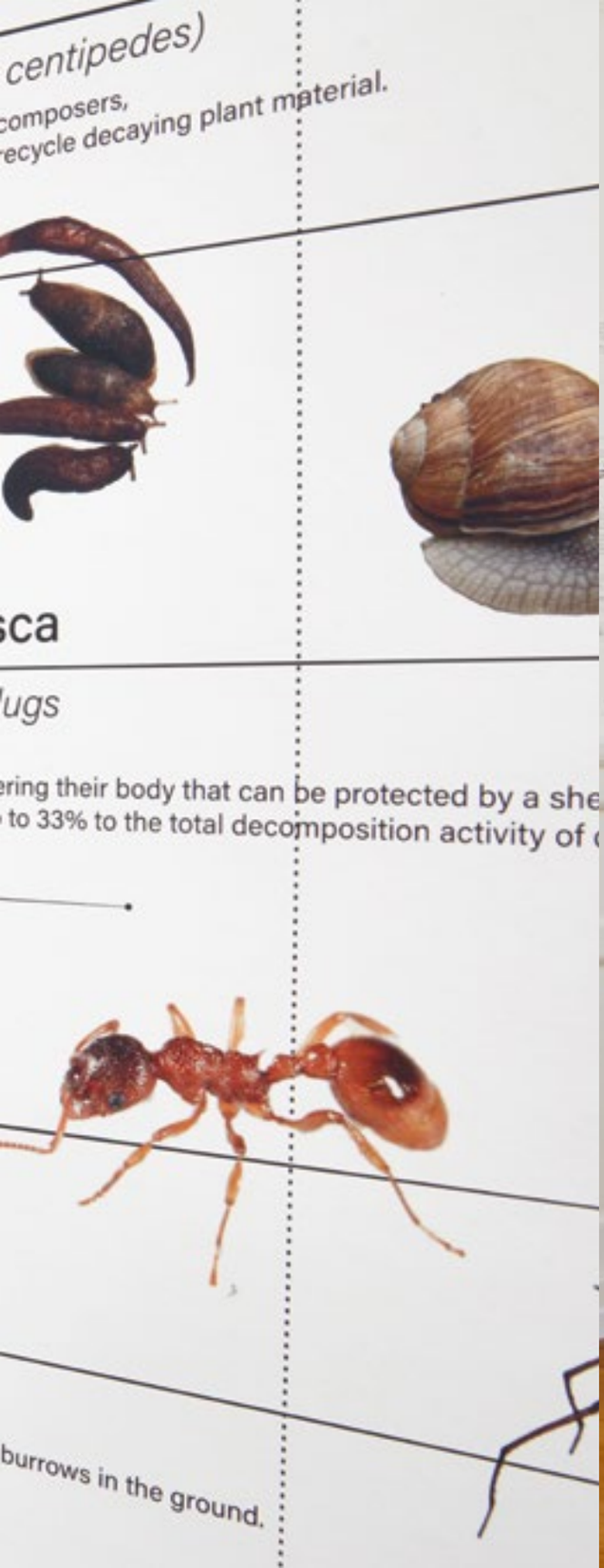
Céline Baumann: I sense a significant shift in our field of practice nowadays. Previously, the emphasis was merely on creating spaces for people to play and enjoy their surroundings. Nowadays, however, we are increasingly expected to design what are called in German *Lebensräume*—living spaces—not only for people but also for other living beings.

Paola Viganò: The way I approach this begins with considering natural elements, like valleys and rivers, as subjects in their own right. This marks a fundamental perspectival shift for me, and is exemplified by my attempts to see the world from the river's point of view. For instance, the Vesdre in Belgium, perceived by many as a calm and domesticated river, can catch people off guard with sudden, violent floods. People feel betrayed, but it's just how the river operates. By beginning to treat natural elements as subjects, we initiate a different kind of dialogue in which the territory is no longer merely a resource or an object onto which we project our desires and intentions but instead something possessing its own logic and rationality. Understanding this rationality—at various scales—can be challenging. Integrating it into decision-making and design is crucial to me. It represents a significant departure from conventional project approaches. We are not yet fully equipped to engage with this logic or to incorporate enough knowledge into our design processes. Thus, rethinking how we approach projects and extending this process over the long term is essential.

Céline Baumann: You mentioned the shift from viewing natural elements as objects to recognizing their agency as subjects. This perspective extends to animals, plants, and even rivers. A growing movement has emerged that claims to grant rights to natural elements. Activists like those associated with Extinction Rebellion are pushing for ecocide to be recognized as an international crime. Additionally, various places around the world have begun granting legal rights to ecosystems, watersheds, and even rivers. A prominent example is the Whanganui River in New Zealand, which was granted legal status as a living entity in 2017. Given this context, Georges, I'm curious about your perspective on whether the Aire River should be granted legal recognition and rights.

Georges Descombes: I don't want to answer directly but will instead approach the topic from a different angle. I have increasingly tried to focus on the strict operational aspects of a project or design. However, broader considerations often emerge from these specific problems. For instance, when I use my pencil to address a practical issue—such as how to design a river—it often leads me to much larger considerations. While we weren't explicitly discussing life, our work is in general deeply influenced by an obsession with it. I am increasingly trying to delve deeper into such questions. I believe that we work within a cultural landscape that is significantly shaped by human activity, including agriculture. This aspect is often neglected in interdisciplinary teams. The landscape we inhabit is largely man-made, and it's crucial to consider this cultural dimension when discussing ecological and interdisciplinary approaches. Engineers

often focus solely on aspects like granulometry, hydrology, soil composition, and other technical details. With the Aire River project, we aimed at building a real interdisciplinary team. But for me, apart from certain experiences with individuals from places like Berkeley or parts of our team, it is disheartening that we haven't evolved into truly transdisciplinary groups. Jean Piaget, the philosopher, described a transdisciplinary team as one that transcends and transforms itself through collaboration. If an engineer, a landscape architect, and a biologist don't change through their joint efforts, that's a significant issue, though not a dramatic one. It's actually quite rare for such a transformation to occur. Similarly, when it comes to understanding concepts like life, I believe everything is in constant motion. Nothing is fixed. We are continuously in the flow of time, materials, and people. Twenty or thirty years ago, biologists spoke of climaxes and equilibria, but today, they emphasize constant transformation and disturbances. Nothing is stable. I refer to the Aire restoration project as "the river that came by accident." We didn't set out to impose a grid and then fit the river into it. Instead, we attempted to design a river and discovered in the process that a grid, which may seem rigid and normative, was actually the best way to offer freedom to the river. Rather than creating a specific form, we provided a framework and allowed the river to shape itself within it. In urban planning history, the grid is a paradoxical tool. The urban grid, whether Roman or American, offers a structure which life can interpret and adapt freely. You see how life has played out within these grids, adapting them in various ways. Contrast this with



exploration narrows, we must recognize that today's architects often operate within a very limited framework, in which their intellectual contributions are minimal. We need to push and fight to expand our scope of reflection and redefine what it means to be an architect.

Céline Baumann: This is very challenging in practice, as the existing framework is often already set. There is usually a brief with clear expectations, and pushing beyond that brief can be very difficult.

Paola Viganò: In this context, perhaps exploring the concept of life can help us expand our thinking. When dealing with life, we can't confine our perspective to a purely mechanical chain. Closing the discussion on emancipation, I find the concept of solidarity particularly enticing. Specifically, when working at a territorial scale, the issue of water is a compelling example. Water inherently brings up the question of solidarity between upstream and downstream areas. What happens downstream is directly affected by conditions upstream, and this is too often overlooked. This is why understanding the watershed is so fundamental—it serves as a bioregional framework. I'm not advocating for geographical determinism; the watershed isn't the sole defining factor, our territories operate in complex ways. For example, in your project, Jana, you show a section with an underground car park and a layer of earth and greenery, which is a big part of what we call nature in the city. Rivers, while influenced by gravity, also include artificial features like canals that can alter their natural flow, sometimes even working against the slope. The extent of artificial modifications to our environment means we can't fully revert to traditional

watershed concepts. In the Alps, for instance, rivers have been diverted from their natural paths to meet human needs, illustrating the deep impact of artificial changes. This complexity necessitates a revised understanding of solidarity, which should also be considered when addressing forests, soil quality, and other aspects of our shared existence. These alliances are often lacking today. For example, in the Vesdre region, it took time to fully comprehend how upstream actions affect downstream conditions, and to understand that solidarity isn't inherent but rather needs to be constructed. It's not merely about being kind; it's about functional interdependence. Understanding this is essential for future design. Emancipation, whether it pertains to a river, an animal, or a person, is important, but I believe that ecological and social transition cannot succeed without a redefined concept of solidarity. Solidarity is a structural component of this transition.

Céline Baumann: Jana, speaking of solidarity, it is quite obvious that in your projects you want to make the invisible aspects of the soil visible. This is also a form of emancipation. With this work, you are highlighting what's happening underground, showing the interface between sealed and unsealed soils, car parks, and natural environments. You illustrate how plants, mold, and worms all contribute to soil life. I am interested in how this research influences your work as a landscape architect. You mentioned that there is often a lack of knowledge or representation of what lies beneath our feet. Since this project is ongoing and your research is continuous, how do you see this knowledge feeding back into your practice? Have you observed any shifts as a result of the appli-

shift, and it's genuinely exciting. I understand it, and I want to embrace this approach fully.

Céline Baumann: You could argue that doing nothing is also a form of gardening; it's part of the gardener's practice. Gilles Clément discusses this concept in his idea of the "Third Landscape," where he explores how allowing natural processes to unfold can be a valuable approach. This perspective encourages us to observe the spontaneous vegetation that grows in overlooked places, such as the edges of facades or among rocks. There are many more topics we could explore, but before we close this discussion, I would like to invite any questions from the audience.

The discussion is opened up to the audience. Cristina Fusco and James Melsom ask questions.

Cristina Fusco: Jana, I want to discuss something you mentioned about the topsoil. With so much talk about unsealing surfaces, I've been contemplating how we can establish guidelines that prioritize life and recognize the significance of these small layers of soil. I wonder what will happen if we continue to seal surfaces as we do today. Is there still hope for regeneration? Can you expand on this idea? How can we better integrate these crucial layers into our planning and design processes?

Jana Crepon: In our work, we have come to realize that about two thirds of our projects involve working on rooftops, and that up to 90 percent of our work is actually focused on regenerating industrial, traffic, or parking spaces, and similar areas. In this sense, I find hope, because these spaces can be revitalized if we allow nature to take over. What excites me at the moment is the

new way of thinking about traffic and urban space, particularly in places like Amsterdam, where there is a strong movement to eliminate cars from the city and transform parking spaces and roads into parks. These projects are incredibly exciting to me. Biologists are conducting fascinating research in urban areas, studying where life is settling and what fosters life. For instance, they have discovered abundant species of bacteria living beneath asphalt—species we didn't even know existed and which could potentially be pathogenic. It's remarkable to see that life thrives everywhere, even in unexpected places. I find it increasingly interesting that it's not just about the beautiful trees or flowers, but also about these remarkable organisms that inhabit all these spaces. We need to consider the full range of biodiversity, not just the more prominent or visually appealing species. For example, I find the previously mentioned idea of using fish as decoration quite shocking. Instead, we should pay attention to all organisms, even the smallest ones, like springtails, which are less than a millimeter in size. A specialist on these creatures shared with me how crucial they are to the ecosystem. It's important to appreciate that all these different organisms play a vital role and are equally significant.

James Melsom: Georges, while you talked about transdisciplinarity, I was reminded of an anecdote you once shared. It was during a panel discussion—possibly with a doctor—where someone questioned why you were attempting to restore wetlands through your design. The concern was whether this would bring back malaria. I am curious about your thoughts on this idea of rolling back systems to an earlier historicism and

New Wilderness

Our planet has been fundamentally altered by human action for millennia. In the past centuries, however, the rapid surge of global population and reckless economic growth have driven change at an unprecedented pace. The scope of such a shift has been charted by geographers Erle C. Ellis and Navin Ramankutty, who have developed a cartography of "anthropogenic biomes" that proposes a revised view of the natural biomes—usually associated with forests, deserts, and other ecological communities devoid of human presence—by "putting people in the map."[1] The picture they produced is revealing, and shows that two thirds of the planet have been altered by human actions, while dense urban settlement covers more than 10 percent of the globe. The still mostly unspoilt landscapes remaining are mostly barren and remote places, either too dry, too cold, or too steep to be successfully commercially exploited. This trend is, furthermore, accelerating, and besides some ostentatious current developments like the New Administrative Capital in Egypt, Neom in Saudi Arabia, or California Forever in the United States,[2] the majority of global expansion is constituted of nondescript suburban and rural sprawl.

While it is uncontested that the effects of urban expansion, industrial production, and intensive agriculture pose a large threat to original ecosystems, and that some

1 Erle C. Ellis and Navin Ramankutty, "Putting People in the Map: Anthropogenic Biomes of the World," *Frontiers in Ecology and the Environment* 6.8 (2008): 439–47.

2 "The World is in the Midst of a City-Building Boom," *The Economist,* March 7, 2024.

highly valuable habitats have almost completely vanished from the surface of the planet, those conditions also offer new opportunities of adaptation for retaliating flora and fauna, species willing to conquer the most hostile man-made places. Pioneer trees on brownfields, ruderal landscapes along train tracks, non-native species spreading along the highways, spontaneous herbs growing between pavement cracks—this fragile but forceful unplanned vegetation is accommodating itself to the harshest places. The specificity of this nature is that not only does it thrive within our anthropogenic biomes but also that it comes uninvited, establishing itself without prior planning or cultivation. Writers and academics have dedicated many books to the topic in recent years. The geographer Matthew Gandy, for instance, celebrates spontaneous urban flora and fauna, which he calls the Natura Urbana.[3] The anthropologist Anna Tsing invites us in her online feral atlas "to recognize 'feral' ecologies, that is, ecologies that have been encouraged by human-built infrastructures, but which have developed and spread beyond human control."[4]

Indeed, the singularity of these novel ecosystems resides in their ambiguity: they are strongly related to human action but, paradoxically, they are not the result of human will. And although such ecological communities have often been judged accidental, they should not be considered isolated occurrences but instead as symptomatic of the adaptation of the natural world in reaction to

3 Matthew Gandy, *Natura Urbana—Ecological Constellations in Urban Space* (Cambridge, MA: MIT Press, 2022).
4 "Feral Atlas," accessed August 18, 2024, https://feralatlas.org/.

our overwhelming predominance. Their scale and spread are proportionate to the scale and spread of human action. This specific kind of nature has been, until now, confined to the margin of our built environment. It deserves today not only to be acknowledged for its unique qualities but also to be fostered.

A New Wilderness Hides Beyond Third Nature

Nature is multifaceted and, in turn, different people give to that word different meanings. Indeed, not every nature is the same and, as Kate Soper puts it, the word's "complexity is concealed by the ease and regularity with which we put it to use in a wide variety of contexts."[5] What is the distinction between a primary forest, a cereal field, an urban park, and spontaneous vegetation growing on a vacant lot? Levels of biodiversity differ, degrees of human uses vary, aesthetics will inevitably be controversially discussed. While efforts to classify nature will always be incomplete and entail a certain amount of subjectivity, by "limiting and filtering the visible"[6] we can develop a better understanding of these new kinds of emerging ecological conditions.

Landscape historian John Dixon Hunt has convincingly proposed to order nature according to its relation to human intervention, and proposes dividing it into three categories.[7] His First Nature is composed of all the eco-

5 Kate Soper, *What is Nature?* (Oxford: Blackwell, 1995), 1.
6 Michel Foucault, *The Order of Things* (London and New York: Routledge Classics, 2002), 147.
7 John Dixon Hunt, *Greater Perfections: The Practice of Garden Theory* (Philadelphia: University of Pennsylvania Press, 2000), 32–75.

systems that are still intact and have emerged devoid of human interference. Primary forests are certainly the most iconic example of such spaces, together with moorlands, steppes, tropical forests, and desertic areas. Second Nature is made up of the agricultural landscape and encompasses all the land planted, ploughed, or scythed in order to serve human needs. This includes cereal fields, market gardening, fruit orchards, fodder production, and silviculture. Lastly, his Third Nature covers all the places that are cultivated by men, not for utility but rather for convenience and aesthetic purposes: it encompasses gardens, parks, and spaces associated with the use of horticulture. This Third Nature represents, for Hunt, the most distinguished form of natural artifact, a claim that gracefully serves the broader agenda of the landscape architecture historian, but leaves me unsatisfied, as anthropogenic landscapes do not really seem to fit into any of Hunt's three categories. They are neither garden, nor primary landscape, and neither have they been purposefully cultivated.

To find a more satisfactory definition of anthropogenic ecologies, we need to turn to Ingo Kowarik, a German botanist from the Institute of Ecology at the Technical University of Berlin, which pioneered the study of adventitious vegetation and played a seminal role in the establishment of the field of urban ecology. Indeed, the Institute was particularly prolific during the Cold War, when the ecologists of West Berlin found themselves isolated in an enclaved territory and turned, in this isolation, to the city, thereby laying the groundwork for urban ecology throughout Europe. This led Kowarik to later revisit

and amend Hunt's categories.[8] To him, the First Nature of pristine landscapes and primary forests represents a type of "old wilderness." The Second Nature, of silviculture and agriculture, is then redefined as "traditional and cultural landscape," whereas the Third Nature is reduced to the definition of "urban greening" or "functional greening." The term *functional greening* is somehow vexing, but it also represents an understandable position from the viewpoint of ecologists, who are often dismissive of the observed artificiality and usual lack of biodiversity of parks and gardens. The fourth type of nature described by Kowarik includes urban-industrial sites, described as a "new type of urban-industrial forest (emerging) by natural colonization processes"[9]—these he designates as "new wilderness."

First Nature (Hunt) Old Wilderness (Kowarik)	Second Nature (Hunt) Traditional and Cultural Landscape (Kowarik)	Third Nature (Hunt) Urban Greening (Kowarik)	ø (Hunt) New Wilderness (Kowarik)
• Primary ecosystems • Untouched • Desirable • High biodiversity • To be protected	• Fields, orchards, silviculture • Domesticated • Useful • Low biodiversity • To be cultivated	• Parks and gardens • Domesticated • Pleasurable • Low biodiversity • To be enjoyed	• Urban or industrial sites • Feral • Useless • High biodiversity • To be destroyed

Comparison of Hunt's three natures and Kowarik's four natures

8 Ingo Kowarik, "Wild Urban Woodlands: Towards a Conceptual Framework," *Wild Urban Woodlands,* ed. Ingo Kowarik and Stefan Körner (Berlin: Springer, 2005), 9.

9 Ibid., 11.

Spontaneous Flora Blossoms in an Urban Context

Weeds creeping through pavement joints, pioneer trees on disturbed ground, lichen crawling on buildings' facades, wildflowers growing along the road's edges, flimsy herbs by the train tracks, mosses in tunnels … We are surrounded within our urban landscapes by spontaneous vegetation. This adventitious flora takes opportunity of any ecological niches available in order to live an untamed existence. The conditions provided by our urban environments are often very harsh, composed of sealed surfaces or at best rocky dry soil, with almost no humus cover. Along train tracks, which are sprayed yearly with insecticide and whose sole surviving plant communities are therefore a specific mix of annual plants and sedums belonging to ruderal landscapes, there are unexpected refugium and, thanks to the track's linearity, an ecological connection of territorial scale. At best ignored, at worst fought against by the spraying of pesticides and other chemicals, urban nature hosts an inconspicuous but incredibly abundant biodiversity. In return, it provides habitat for insects or birds, collects and breathes rainwater, mitigates heat islands, and last but not least might also reward the watchful passerby with joy.

One of the main critiques directed at this spontaneous flora is that it is not composed of indigenous plants. The threat often associated with exotic vegetation is connected to the invasive character of some of its representatives. While some aliens are notoriously invasive, like the infamous Japanese knotweed, it is important to remember that only around 10 percent of all exotic plants in Switzerland are invasive or potentially invasive,[10] and that therefore the discourse on non-indigenous plants would benefit from a certain nuance. It also seems self-explanatory that tropical vegetation, used to dry and overheated contexts, is well suited to thrive in dry, rocky, water-poor, and highly disturbed urban environments. Those urban weeds also present an incredibly high amount of biodiversity, and form a "planetary garden"[11] that landscape architect Gilles Clément praises as multicultural vegetation. Many actions have, in recent years, raised awareness of this type of urban biodiversity and, in the words of the Swiss biologist Christoph Kueffer, "urban areas are paradigmatic places for an ecology of the Anthropocene and for a transformation of society toward a sustainable future."[12]

There are more and more voices pleading for the creation of a breathable cityscape, where unsealed soil lets rainwater be filtered by the ground to reach the water table, where it is gulped by thirsty vegetation and where consequent evapotranspiration can be achieved. Today there are quite literal experiments to "garden the city" by cutting, slicing, breaking, or even smashing asphalt to allow the emergence of a vegetation, either planted or spontaneous.[13] The ecologist Norbert Kühn goes further to interestingly propose adding to spontaneous nature a mix of planted seeds including sage and valerian, in order

10 Fabian Heussler and Beat Fischer, "Ein kleiner botanischer Überblick der Schweiz," *Flora CH* 19 (Sonderausgabe 2024): 4.

11 Gilles Clément, *Manifeste pour le Tiers paysage* (Montreuil: Sujet/Objet, 2004), 18.

12 Christoph Kueffer, "Plant Sciences for the Anthropocene: What Can We Learn from Research in Urban Areas?" *Plants People Planet* 2 (2020): 286–89.

13 "Jardiner la Ville," accessed August 13, 2024, https://www.wagon-landscaping.fr/index-jardiner-la-ville.

to make it visually more attractive and thereby to rise its level of acceptance amongst local citizens.[14]

To achieve such goals, it is also important to consider that soil is not only a surface but also crucially has a depth where roots extend, earthworms roam freely, and moles dig holes. To consider urban soil not only as a surface but also as a volume is indeed vital to acknowledge soil life. In Switzerland, while aboveground construction is strictly regulated, underground structures, such as parking garages, are not controlled, and often stretch to the furthest limits of their plots, preventing water filtration or root growth and reducing the potential for life to expand below as well as above ground. The proposal to impose a cap on underground structures within the context of new construction projects, in order to mitigate urban heat islands, was recently rejected in Zurich.[15] This measure, had it passed, would have offered a real chance to leave enough open ground for new trees to fully develop themselves, with a sufficient layer of soil creating the needed conditions for plant and insect life.

The Emergence of New Ecological Niches

While active production sites are typically fenced-off areas that do not—or if so, only marginally—hold ecological potential, decommissioned quarries and extraction centers often offer the most interesting occurrences of emerging ecologies. At the edge of Basel, where I live, in the

14 Norbert Kühn, "Intentions for the Unintentional," *Journal of Landscape Architecture* 1.2 (2006): 46–53.

15 Gabriela Neuhaus, "Die Aushöhlung," *Hochparterre* (June–July 2024): 24–26.

French city of Huningue, there is fallow land on the decommissioned site of sand and gravel extraction. The quarry was in use between the 1930s and the 1970s and now presents, after decades of inactivity, an impressive amount of biodiversity. There, prairies meet layers of shrubs, as well as ubiquitous brambles, and already well-established pioneer trees, including birches and poplars, are present. A visit to this location with students a few years ago generated great excitation amongst the group. Somehow, the students could feel the novelty of what was happening there: a novel kind of nature, neither intentionally planted nor belonging to any primary ecosystem. Their excitement was contagious.

Nested in the meanders of the Sarine River, the *décharge de la Pila,* near Fribourg, is one of the biggest landfill sites in Switzerland and was used up to the 1970s to deposit household and industrial waste. The hill, twenty meters in height, holds a volume of 270,000 cubic meters of discarded scrap. The landfill was later discontinued, covered up with fresh soil and densely planted, with the aim to give to the dump the appearance of nature and with the hope it would thereafter soon be forgotten. Alas, the Pila landfill returned to the news in the 2000s, when it appeared that leaks of toxic materials from the disposal of a large number of condensers had led to an extremely high concentration of highly toxic and carcinogenic PCB components, poisoning the river ecosystem and leading to a ban on fishing in the area. As of today, some works on the banks to prevent leakages into the river and groundwater have been implemented, and a proposal to sanitize the landfill by excavating two thirds of the material is still in

the works.[16] The Pila has given shape to a singular anthropogenic geology. While it now looks natural, the hill comprises an anthropogenic concentration of waste and materials, which are slowly decomposing, emitting chemical vapors, and leaking all sorts of noxious components into the soil and water. The landfill was active around the same time as the gravel quarry in Huningue, which itself produced between 250,000 and 300,000 cubic meters of materials. As "the construction of a landscape somewhere is related to transformation elsewhere," it is tempting to imagine that excavated material dumped in the Pila landfill was replaced by fresh gravel from the Huningue quarry, producing an archetype of what Jane Hutton calls a "reciprocal landscape."[17]

Twentieth-century coal production has created very significant types of post-industrial landscapes in the north of France and Belgium in the shape of the *terrils,* artificial hills composed of the waste of the coal-mining industry. The twin terrils of Loos-en-Gohelle, a mining site that ceased activity after World War II, are, at 187 meters, iconic features of the landscape of this otherwise modest town. During a recent visit, I observed that while an emerging vegetation stabilized the slope, there were also fruit trees. Some urban legends indicate that the fruit trees might have grown from the seeds of miners' apple cores. Whether this is accurate or not, the story is nevertheless revealing of the still very close association between the site and its industrial history in the collective imaginary. The

16 "La Pila," accessed August 13, 2024, https://www.fr.ch/dime/pila/historique-de-lancienne-decharge-de-la-pila.

17 Jane Hutton, *Reciprocal Landscapes: Stories of Material Movements* (London: Routledge, 2020), 3.

artificial hills were once considered a plague upon the landscape; the work of landscape architects like Jacques Simon has been influential in supplying it with a new legitimacy. During an action in 1989, Simon used plaster to draw the words "gardez moi"[18] (keep me) onto one of the schist piles of the terril of Autun, in the north of France, raising awareness of the importance of this industrial heritage. The darkened slopes of these landscape forms have been, over the decades, slowly covered with tenacious pioneer vegetation.

Introducing Wildness in the Urban Environment

The emergence of this new wilderness provides the opportunity to shift the focus of what is traditionally associated with nature in our urban-industrial environments. Bridging the divide between nature and culture, city and landscape, humans and non-humans, these contemporary conditions offer the opportunity to reconcile urban development with ecological values. Anne Whiston Spirn is a pioneer of such approaches—she considers the city as an ecosystem in its own right, reading it through its natural components, soil, air, vegetation, and water, in her book *The Granite Garden.*[19] Tellingly, at the time it was published, the book provoked bemused reactions, as Spirn herself relates:

18 Jeanne-Marie Sens and Hubert Tonka, *Jacques Simon, tous azimuts sur les chemins de la terre, du ciel, du paysage* (Paris: Pandora éditions, 1991), 28.

19 Anne Whiston Spirn, *The Granite Garden: Urban Nature and Human Design* (New York: Basic Books, 1984).

"'What's your book about?' people would ask me. 'About nature in the city and about how differently we would design cities if we thought of them as part of nature rather than separate from it,' I would answer. A puzzled frown would invariably appear: 'Nature in the city? What nature?' Then an expression of dawning realization, 'Oh, you mean trees and parks!'"[20]

While parks and gardens stem from a long and valuable tradition of urban planning and landscape architecture, they require ceaseless maintenance, watering, fertilizing, and pruning. They are also too often conceived as a mere "urban greening"—to paraphrase Kowarik's dismissive words—and designed in order to be easy to maintain. This includes the choice of evergreen trees to avoid the trouble of taking care of falling foliage in autumn; the trimming of shrubs with mechanical hedge trimmers in ways oblivious to species type, age, or specific maintenance needs; and lawns planted with species of reduced growth unable to reach more than a couple of centimeters in height. In contrast, spontaneous flora appears without sowing or seedlings, taking advantage of any ecological niche available, as tiny or meager as it might be. It has the potential to render valuable ecological services including storing rainwater and releasing it into the atmosphere, creating local cooling islands and welcome shade, increasing biodiversity, offering habitat for insects, birds, and small mammals, cleaning the air of dust, degrading chemical components, producing oxygen, counteracting soil compaction, and increasing soil biodiversity. All of those benefits deserve today to be fully acknowledged; they offer the chance to shape resilient ecosystems beneficial not only to human species but also to other living beings.

But how can we not only study, but also foster the establishment of those untamed and feral landscapes? Some attempts have been made, for instance, to highlight material movements and landscapes of extraction, as in the iconic project of the Île Derborence in Lille, France, where the construction materials generated by the construction of the Euralille masterplan from OMA, composed of a train station, a mall, offices, and housing towers, were collected within a huge kind of concrete container, allowing for what Gilles Clément describes as a primary forest to grow on top of the rubble pile. While the attempt of Clément "to deliberately include a 'wild space' within the urban landscape as a novel synthesis between an aesthetics of disorder and recent advances in ecological science"[21] has at times been criticized for its lack of actual biodiversity, and was later partly hidden by the trees planted at ground level in order to raise its level of acceptance by neighbors, the monolith and its enigmatic presence are still fascinating today. As a child growing up in Lille, I saw the structure being built and was looking forward to this new facility, which I assumed at the time would be a climbing wall. With time, I have learnt to appreciate the symbolic gesture of the project.

20 Anne Whiston Spirn, "Urban Nature and Human Design," keynote lecture presented at the conference, "The Place of Nature in the City in Twentieth-Century Europe and North America," December 1, 2005, published in *GHI Bulletin* 39 (Fall 2006): 45–64.

21 Matthew Gandy, "Entropy by Design: Gilles Clément, Parc Henri Matisse and the Limits to Avant-garde Urbanism," *International Journal of Urban and Regional Research* 37 (2013): 259–78.

This new wilderness, resulting "both from cultural and natural processes,"[22] surprises by its novel character. It does, admittedly, emerge from human intervention, but it is also unintended, spontaneous, and wild—not in the sense of pristine but rather in the sense of rebellious and feral. To that extent, it also entails a broader societal meaning. As Jack Halberstam writes, "while the wild is tethered in our imaginations … to one particular version of nature, wildness is not limited to the natural world, and it has an extensive life elsewhere too—in aesthetics, politics, theory, and desire."[23] This novel type of ecology claims the rebellious ability of nature to live its own independent life, a life not of service to the dominant species, but rather an unfettered life at the margin of human activity. Fostering it enables the possibility of creating a place where we can not only nurture life in general, but also and more especially encourage an emancipated kind of life, whose "value does not depend on the usefulness of the non-human world for human purposes."[24] This offers the tremendous potential to shape an innovative and hopeful approach to our contemporary landscapes, one both ecologically conscious and devoid of nostalgia.

22 Ingo Kowarik, "Wild Urban Woodlands: Towards a Conceptual Framework," *Wild Urban Woodlands,* ed. Ingo Kowarik and Stefan Körner (Berlin: Springer, 2005), 12.

23 Jack Halberstam, *Wild Things: The Disorder of Desire* (Durham, NC: Duke University Press, 2020), ix.

24 Paola Viganò, *Le jardin biopolitique: Espaces, vies et transition* (Geneva: Métis Presses, 2023), 137. "La vie, sous ses diverses formes, a une valeur intrinsèque et cette valeur ne dépend pas de l'utilité du monde non humain pour les fins humaines." Translation is the author's own.

Projects

1
Living Soil
Inside Outside
2023–ongoing

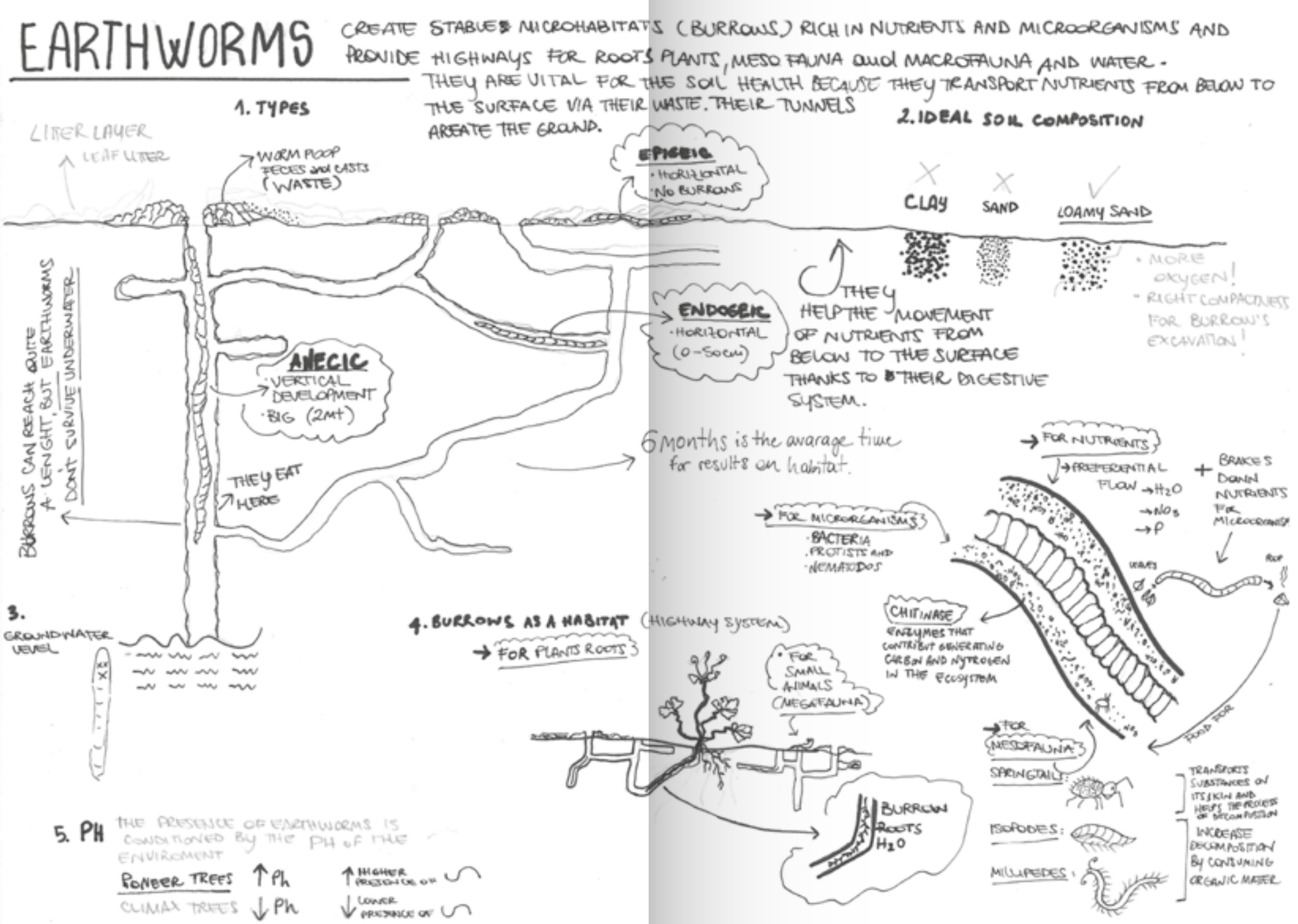
Soil is one of the most biologically rich habitats on earth, more diverse even than the aboveground realm. Fungi, algae, bacteria, springtails, beetles, earthworms, and moles (to name just a few key organisms of the soil) together create the conditions for an exceptionally rich ecology, bringing immeasurable benefits. The soil plays a vital role in mitigating climate change by regulating temperature, producing oxygen, storing carbon and nitrogen, purifying water, and preventing erosion. In the built environment, much of that soil is sadly buried deep under excavation material, suffocated by dense paving layers, polluted by road salt and other chemicals, compacted by movement of heavy traffic, and impoverished by conventional maintenance methods.

How can landscape architects and designers contribute to a turnaround that would result in the nature-inclusive handling of urban soils? Inside Outside argues that to protect, restore, and support this hidden biodiversity, it is essential to make it visible both to stakeholders and the general public. With the project “Living Soil,” Inside Outside provides an accessible visual language that is able to inspire, inform, and drive a new approach to soil biodiversity, supported, funded, and activated across the board. The drawings presented are not perfect, scientific representations of underground life, but rather part of an ongoing process of scientific discoveries and the result of a fascination with the intricacies and complexities of the most dynamic three-dimensional system in the natural world.

Jana Crepon: At a certain point in our landscape projects, we realized that the underground was absolutely invisible in our work. Landscape architects usually design spaces above ground, and when we drew sections we usually colored everything that’s underground in black or filled it with a hatch. When we started to draw the roots of trees, we realized the lack of understanding of the underground world. We became aware that we didn’t really know much about roots or anything else going on underground. For us, the *Wurzelatlas* was a kind of revelation. It’s a very beautiful book from the 1980s, and the only one that shows the roots of trees in a precise way and illustrates how trees react to different conditions.

As we learned more and more, we decided to represent the soil, and how it lives and breathes. In the process, we also discovered just how much life there is underground. In fact, there are more organisms in a spoonful of vital soil than there are people on Earth. Imagine the underground as a vast ecosystem—complex, dynamic, and rich in biodiversity. When we talk about bringing nature into our cities, the soil is the starting point. What we show here is just a part of the project’s process, and it is far from finished. We are still at

1.1 Section of one square meter of soil showing the interaction between above- and belowground life forms; the blue squares represent magnifications of the section



1.2 Soil succession and human interferences: earthworms

2
La Frontière, Vaud, Switzerland
Cyril Verrier
2023

In Cyril Verrier's documentary (63 min., director's cut), we follow the biologist Sylvie Viollier in her work on the implementation of ecological infrastructures, specifically in agricultural ecosystems composed of both cultivated fields and mixed woodland. We watch as Viollier oversees the planting of a series of hedgerows meant to ensure the continuity of the bocage and provide food and shelter for small mammals. We see that compromises are made, to allow the passing of agricultural machinery. The viewer discovers that if one is attentive to the smallest phenomena, it is possible to observe significant changes in biodiversity, such as the return of butterflies that had once disappeared. Through the testimonies of the farmers involved, we learn that synergies between animals, plants, and farms mean that the land can be cared for, dispensing with the chemical substitutes that have been fostered by the maximalist approach on which today's agriculture still largely depends. The film intimately reveals how to reconcile issues as seemingly incompatible as profitability and biodiversity.

2 Project Team

Director: Cyril Verrier
Biologist: Sylvie Viollier
La Frontière president: Ferdinand Baumgartner

2.1 Outdoor school underneath a mighty oak tree

2.2 Children taking part in the activities of La Frontière by collecting hay

2.4 New development on the edge of agricultural land contributes to the fragmentation of the landscape

2.5 Intensive agriculture field does not provide living space for fauna and flora
← 2.3 Fence being planted with shrubs to create a valuable ecological infrastructure along a road's edge

3
The Biopolitical Garden
StudioPaolaViganò

3.1 Vesdre Watershed Strategic Scheme, Belgium, 2022–2024
3.2 Place Marie Janson, Brussels, Belgium, 2019–2023
3.3 Plateau de la Gare, Tournai, Belgium, 2019–ongoing

The metaphor of the garden has a long history within biopolitical thinking, and Paola Viganò identifies its renewed urgency in our current era. Her research, which reimagines Foucault's concept of the biopolitical as an emancipatory tool, provokes us to think anew about the role of space in the process of improving the quality of life for all forms of life. A garden is designed for plants to grow and is a strong metaphor for human growth as well, a reminder of practices of selection and exclusion, but also a place of devoted care. The Biopolitical Garden is, like all gardens, heterogeneous and varied, a place of diversity and coexistence. It is a reservoir of possibilities for the emancipation of humans and non-humans alike, a place where a profound redefinition of interactions among them can occur. It is a social and an ecological space at the same time.

In the three Belgian projects depicted here, biopolitical issues surface with clarity: in a vision for the Vesdre Valley after the catastrophic flood of 2021; in the Place Marie Janson in St. Gilles, Brussels, a socio-ecological prototype of climate change adaptation and new social demands; and in the Parc Crombez-Rue Royale in Tournai, a place of marginalities and social fragilities, designed for all. Viganò's hypotheses regarding the ecological and social transition as a biopolitical project broaden the picture and reformulate the priorities of design research. They provide a new direction for our eye and for our imagination: the Biopolitical Garden is imagined as an affirmative biopolitical space, collective capital, a fundamental support, and a powerful agent.

3.1.1 Vesdre Watershed Strategic Scheme, Pepinster, detail

3.1 Vesdre Watershed Strategic Scheme

Paola Viganò: This is a map of the Vesdre Valley, a watershed between Belgium and Germany. In the west, you have the city of Liège, and in the east, the city of Aachen. In 2021, this valley experienced a major flood. The lower part of the valley was completely submerged, with the Vesdre River occupying all the plain. Unfortunately, many towns, activities, and people are situated in this part of the valley, which, “coincidentally,” is also where the most vulnerable segment of the population resides. Together with the University of Liège, which has expertise in climatology, economics, planning, economics, sociology, and more, we were asked to create a vision for the valley’s recovery. It’s not just about rebuilding what was destroyed by the flood but also about envisioning a new future for the valley. We used this room to showcase our vision on the windows, as if we were inside the valley itself.

In the future, the forest should fulfil its historical role in the area as a peat bog and sponge bog. As it is, these functions have been severely compromised by conifers. This spruce forest, which is not the type of vegetation native to the area, undermines the soil’s ability to absorb water. Restoring the peat in the upper part of the valley will help to reduce run-off. Simultaneously, on the opposite side of the valley, once rich agricultural land has lost its diversity over time. The traditional bocage, fruit trees, and other features have diminished, resulting in a much poorer landscape and soil erosion that leads water to rapidly flow down to the lower part of the valley.

You can see that the valley is complex, with a challenging topography illustrated by this model, which serves as a tactile reflection of the territory. The model allows us to physically engage with and understand its intricacies, such as how water navigates through it and how we coexist with it. For me, these windows onto the future represent an effort we should all make to envision it. They symbolize two aspects of the future: on the one hand, the one that is inevitably coming and that we can partially influence, and on the other, the strategic framework that allows us to shape this future. This work is crucial for sharing our vision with various communities, residents, politicians, and others who have contributed to its development. This scheme could and will remain just a drawing if not acted upon. To truly enhance what is presented, it requires a collective effort. As urbanists, architects, and landscape architects, we ask ourselves if we can help turn this collective vision into a reality that benefits everyone, and that leads to a tangible transformation of the territory. We are considering forming an association to advance this vision and ensure it contributes to a concrete transformation of the valley. Discussing adaptation to climate change and socio-ecological transition can be challenging—these concepts are often difficult to grasp and make concrete. To succeed in the transition, we will need open and collective laboratories.

3.1.2 Vesdre River

4
Plaine de France, Grand Paris, France
Altitude 35
2017–2019

The Plaine de France is a territory characterized by a close and complex relationship with the nearby metropolis of Paris. This composite area is constituted of urban settlements, agricultural land, business centers, metropolitan parks, and logistics zones arranged in an anarchic way. Roads, railways, airports, and energy infrastructure, all converging toward Paris, greatly fragment a landscape the beauty of which is discreet: there are no rivers worthy of an Impressionist painting, no powerful topographical features, no valleys, no hillsides, and no large national forests. But in the largely urbanized region around Paris, the versatility of the landscape of the Plaine de France is coveted, both by investors and developers.

The project aims at revealing the potential of this discrete territory and its landscapes. A series of targeted local actions enable the emergence of four territorial strategies:

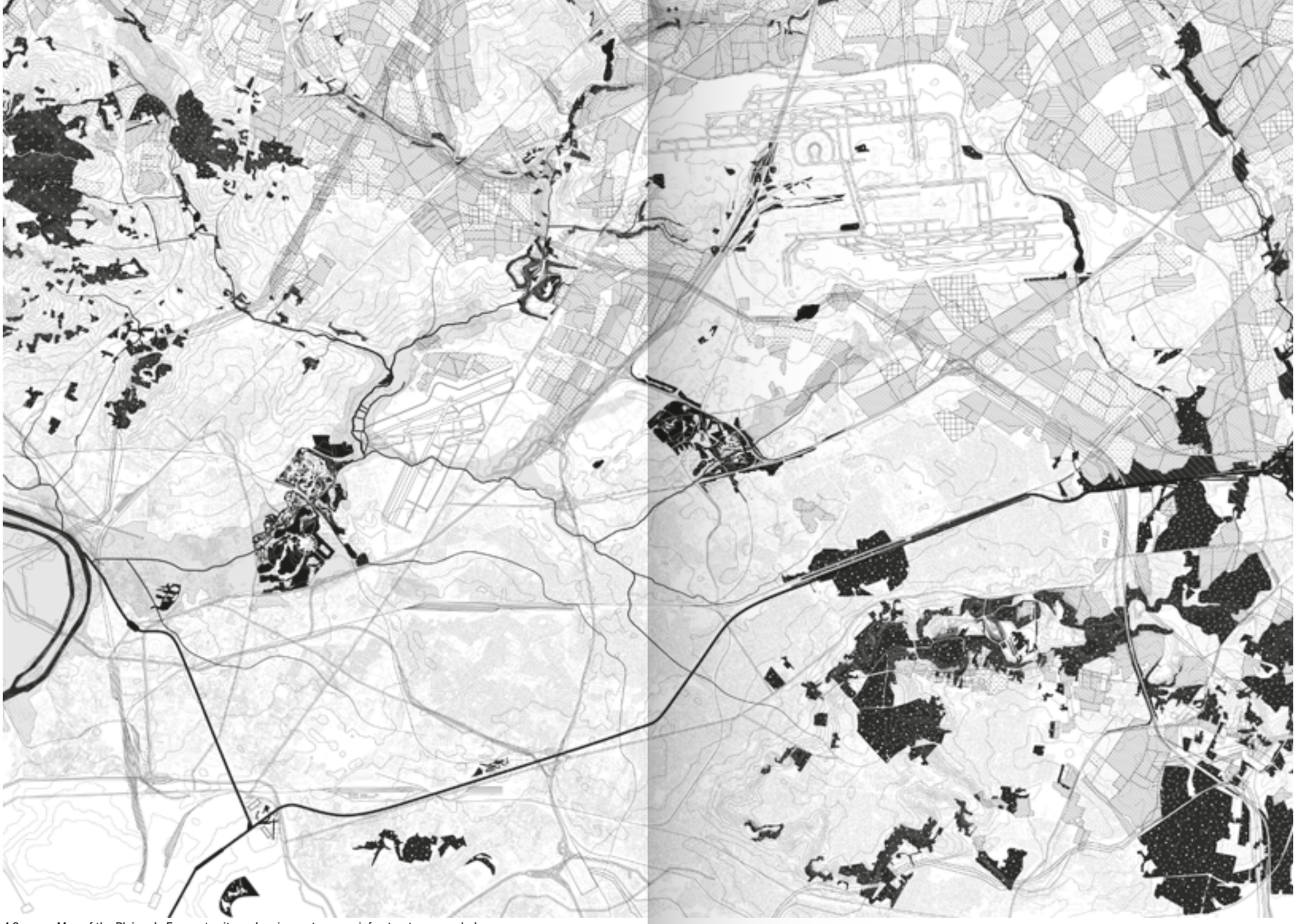
· The establishment of a network of open spaces flowing along the existing infrastructural lines
· The requalification of suburban residential neighborhoods that currently turn their backs to the landscape
· The creation of structuring elements able to guide future developments
· The constitution of a funding plan that would enable the financing and maintenance of a new network of public spaces

4 Project Team

Altitude 35: Clara Loukkal, Benoît Barnoud
Client: École nationale supérieure de la nature et du paysage de Blois

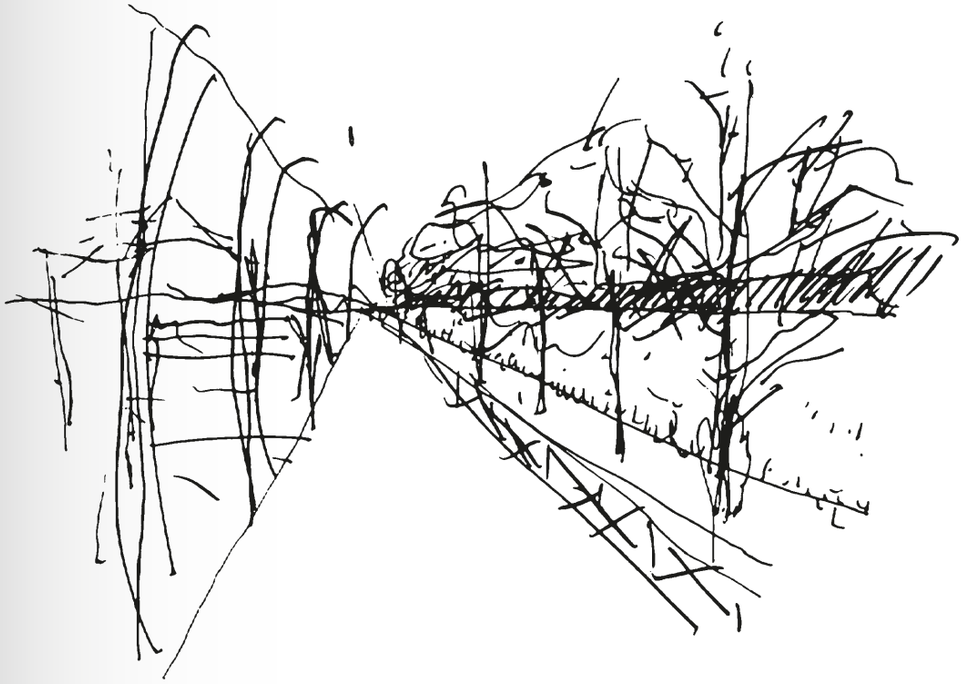
4.1 Poplar grove next to Roissy airport, Mitry-Mory

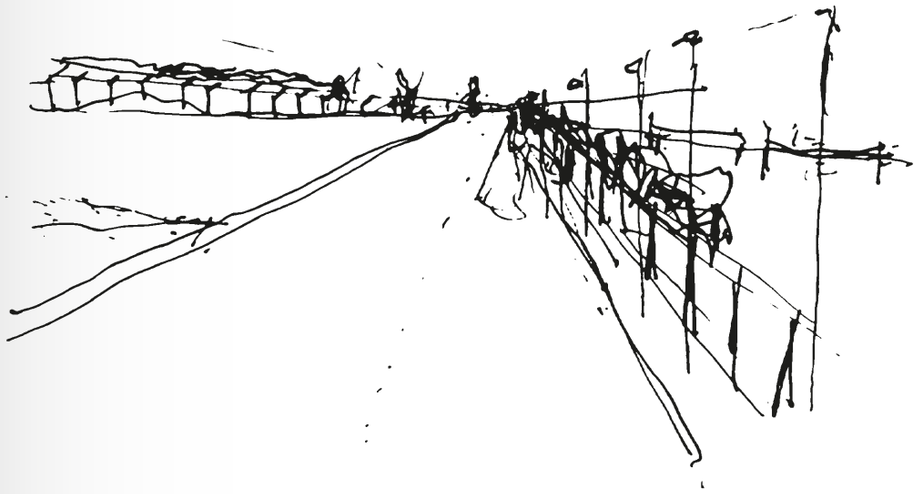
4.2 Crossing of the TGV (high-speed train), Tremblay-en-France



4.6 Map of the Plaine de France territory showing waterways, infrastructure, wooded areas, main parks, and the two airports of Le Bourget and Roissy

4.9 Preliminary landscape sketches





5
Inner Garden, Zurich Leutschenbach, Switzerland
mavo Landschaften
2010–2024

What does the transformation of Zurich Leutschenbach, from a mainly industrial area to a residential district, mean for the landscape of this urban fragment located between Leutschenbachstrasse and Hagenholzstrasse? This question was resolved by mavo Landschaften with their Inner Garden project, a fine mesh of public passageways that extends the existing open spaces with a new landscape typology. This Inner Garden is woven into the existing urban structure, spanning several plots and offering not only urban corridors but also a wide range of recreational opportunities. To define the specific spatial character, the divergent needs of the neighborhood, as well as the public requirements for an ecologically and socially qualitative outdoor space, had to be taken into account. Twelve rules were developed to ensure that the Inner Garden is able to take shape over a long span of time and by the actions of a wide variety of agents. As a pilot project, a section of it was realized alongside the WolkenWerk development. This allowed for the review of important principles in the design process, planning, and realization. The useful conclusions that resulted will enable the various owners of neighboring plots to independently expand sections of the Inner Garden in the future.

5 Project Team

mavo Landschaften: Martina Voser, Isabelle Duner, Christopher Opialla, Valentin Hofer, Andrea Ferles, Thalia Poziou, Kobe Macco, Thies Brunken
Client general strategy: Amt für Städtebau, Grün Stadt Zürich
Client “Innerer Garten West”: Einfache Gesellschaft “Innerer Garten Leutschenbach West”

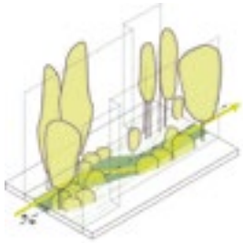
5.1 View of the first realized part of the project, alongside the WolkenWerk development

5.2 View of the first realized part of the project, alongside the WolkenWerk development

5.3 Inner Garden within the context of the Zurich Leutschenbach district
→ 5.4 Detail

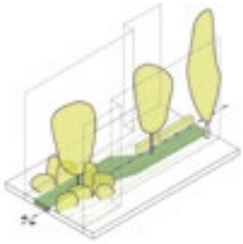
ATMOSPHERE

THE INNER GARDEN IS CHARACTERIZED BY AN INTIMATE GARDEN ATMOSPHERE.



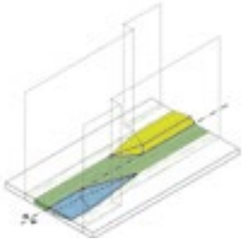
OCCUPY THE CENTER AND INTERRUPT THE CENTRAL AXIS

THE MOST ABUNDANT PLANTING IS CONCENTRATED IN THE CENTER OF THE INNER GARDEN, ALONG THE PATHWAY. VEGETATION AND PATHWAYS ARE ARRANGED IN A MEANDERING MANNER, SO THE CENTRAL AXIS IS INTERRUPTED.



USING VEGETATION TO DEMARCATE LIMITS

THE INNER GARDEN'S VEGETATION IS DEFINED BY A MIXTURE OF TREES, PERENNIALS, AND SHRUBS.

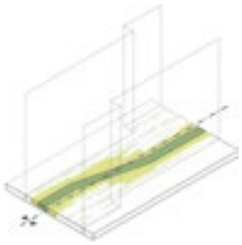


TOPOGRAPHY

TERRAIN MODELING NOT ONLY ALLOWS PLANTING ON UNDERGROUND STRUCTURES BUT ALSO CREATES ECOLOGICAL DIVERSITY, PROMOTING A CONTINUOUS GARDEN LANDSCAPE.

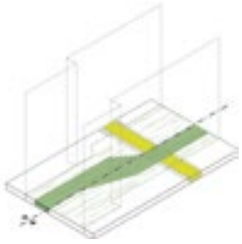
PATHWAYS

THE PATH THROUGH THE INNER GARDEN ACTS AS AN ADDITION TO THE EXISTING FINE-MESHED NETWORK OF PATHS. SPATIALLY, IT SHOULD NOT APPEAR AS A LINEAR AXIS. THEREFORE, THE PATH SHOULD BE KEPT AS NARROW AS POSSIBLE AND MEANDER WITHIN THE MINIMAL WIDTH.



MINIMAL CLEARANCE PROFILE AND PATH STABILIZATION

WITHIN THE GARDEN CORRIDOR, WHICH IS AT LEAST 10 METERS WIDE, THE PATH SHOULD BE CONSTRUCTED WITHOUT OBSTACLES AND WITH A MINIMUM WIDTH OF 1.80 METERS.



PATH AND CROSSINGS

THE PATH OF THE INNER GARDEN REMAINS CONTINUOUS, EVEN AT CROSSING POINTS. THE ENTRANCES ARE NOT PART OF THE INNER GARDEN BUT THRESHOLDS DESIGNED AS AN ENTRY INTO THE GARDEN.

MATERIALIZATION

DIFFERENT SURFACES SHAPE THE INNER GARDEN AND INFLUENCE ITS VARIOUS USES. UNIFORM CONCRETE SLABS ENSURE THE CONTINUITY OF THE PATH AND OBSTACLE-FREE ACCESS. SAND, GRAVEL, OR CRUSHED STONE DIFFERENTIATE BETWEEN INTENSIVE AND EXTENSIVE USES.

PATH THROUGH THE INNER GARDEN WITH CONCRETE SLABS

CONCRETE SLABS, SUITABLE FOR WALKING AND DRIVING

JOINT PLANTING BETWEEN SLABS

LONG AND HOMOGENOUS CONCRETE SLABS FORM THE PATHWAY. ALL JOINTS WITHIN THE 1.8-METER WIDTH ARE FILLED, WHILE FURTHER OUT, THE LONGITUDINAL JOINTS ARE WIDENED IN ORDER TO PROMOTE DRAINAGE AND ECOLOGICAL DIVERSITY.

SAND, GRANULOMETRY 4/8

GRAVEL, GRANULOMETRY 11/16

VARIOUS SMOOTH, GREY GRAVEL SURFACES AND VARIOUS GRAIN SIZES ARE USED, DEPENDING ON THE LEVEL OF USE AND PUBLIC ACCESS, WITH THE FINEST GRAINS IN AREAS OF INTENSIVE USE AND THE COARSEST GRAINS IN LESS-FREQUENTED AREAS.

5.5 The guidelines for the development of the Inner Garden are based on the following principles: atmosphere, pathways, materiality, vegetation, topography, and furniture

→ 5.6 View of the first realized part of the project, alongside the WolkenWerk development

VEGETATION

THE APPEARANCE OF THE INNER GARDEN IS CHARACTERIZED BY CONTINUOUS LUSH PLANTINGS AND IS ENRICHED BY A COEXISTENCE OF CULTIVATED GARDEN PLANTS AND NATURALLY GROWN, "EXTENSIVE" SUCCESSION VEGETATION, WHICH BELONG TO THE CURRENT IDENTITY OF THE SITE. BOUNDARIES SHOULD BE DEFINED BY VEGETATION, AND FENCES SHOULD BE AVOIDED.

PLANTING SUGGESTIONS

TREES

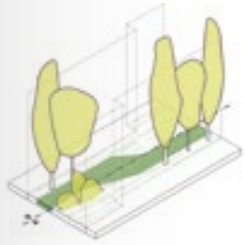
EXTENSIVE: POPULUS, ALNUS, BETULA, FRAXINUS, SALIX
CULTIVATED: PRUNUS, LIQUIDAMBAR

SHRUBS

EXTENSIVE: PRUNUS, SALIX, VIBURNUM
CULTIVATED: PRUNUS, SYRINGA, EUONYMUS, LIGUSTRUM

SUCCESSION VEGETATION AS AN IMPORTANT PART OF THE INNER GARDEN

CONSIDERING THE TRANSFORMATION OF THE AREA IN FAVOR OF ECOLOGICALLY DIVERSE HABITATS, SUCCESSION VEGETATION SHOULD BE UNDERSTOOD AND USED AS AN ESSENTIAL PART OF THE INNER GARDEN.

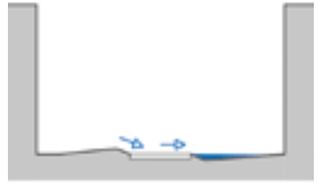


CONTINUITY OF TREE PLANTING

TO ENSURE VISUAL CONTINUITY, A MAXIMUM GAP OF 20 METERS BETWEEN TREES ALONG THE INNER GARDEN IS DEFINED.

TOPOGRAPHY

IN THE INNER GARDEN, THE AIM IS TO ACHIEVE URBAN AND ECOLOGICAL DIVERSITY. A LARGE PROPORTION OF PERMEABLE SURFACES AND TOPOGRAPHICAL MODELING CREATE A VARIETY OF WET-TO-DRY HABITATS. SEALED SURFACES AND UNDERGROUND STRUCTURES WITHIN THE INNER GARDEN SHOULD BE MINIMIZED.



DIVERSE HABITATS THROUGH TOPOGRAPHY AND SURFACE CHARACTERISTICS

IN FAVOR OF HIGH ECOLOGICAL DIVERSITY, TOPOGRAPHIC MODELING SHOULD BE EXECUTED WITH SLOPES. THE SOIL SHOULD BE DESIGNED TO BE AS PERMEABLE AS POSSIBLE, AND DRAINAGE SHOULD PRIMARILY OCCUR THROUGH INFILTRATION.

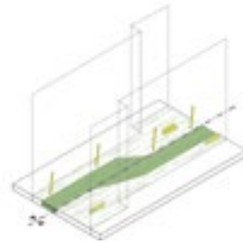
DRAINAGE, INFILTRATION, RETENTION

INNER GARDEN SURFACES SHOULD BE AS PERMEABLE AS POSSIBLE. UNDERGROUND STRUCTURES SHOULD BE MINIMIZED. RAINWATER SHOULD BE ALLOWED TO INFILTRATE ON SITE AS MUCH AS POSSIBLE, WITH THE PATH DRAINING INTO THE JOINTS ALONG ITS EDGE. ANY NECESSARY RETENTION AREAS SHOULD BE PLACED AS MUCH AS POSSIBLE ALONG THE INNER GARDEN.

FURNITURE

UNIFORM FURNITURE ELEMENTS EMPHASIZE THE RECOGNIZABILITY AND CONTINUITY OF THE INNER GARDEN.

ALTHOUGH PUBLICLY ACCESSIBLE AND PART OF THE SURROUNDING NETWORK OF PATHS, THE INNER GARDEN STANDS OUT FROM THE PUBLIC OPEN SPACES OF ITS SURROUNDINGS—ITS ATMOSPHERE APPEARS MORE INTIMATE AND SECLUDED. THE FURNITURE SHOULD REFLECT THIS ATMOSPHERE.



FURNITURE SUGGESTIONS

BENCH WITH BACKREST

BENCH WITHOUT BACKREST

WASTE BIN

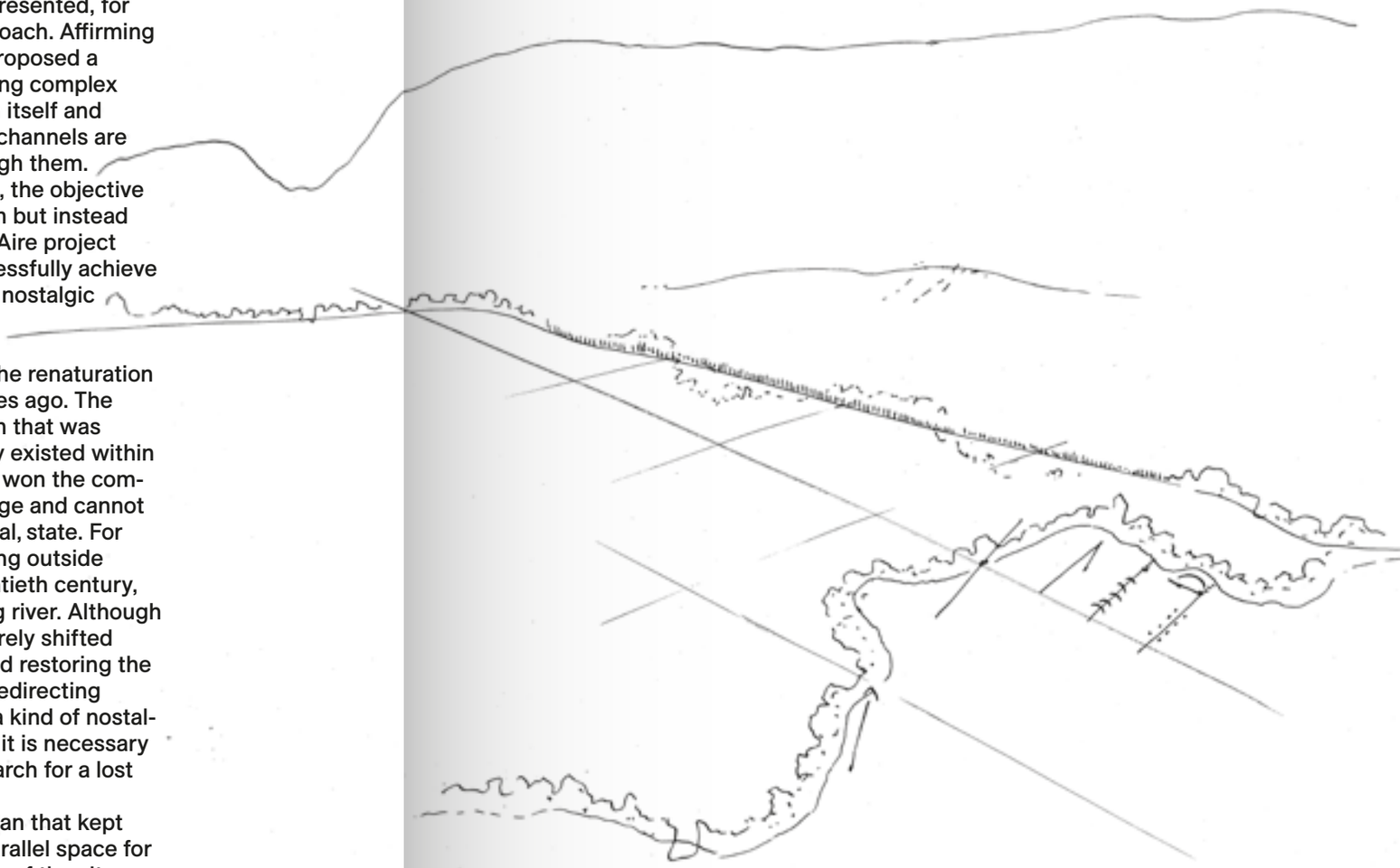
STREETLAMP

6
Aire River Renaturation, Geneva, Switzerland
Superpositions
2000–2023

The Aire River runs south of Geneva, through valleys dedicated to farming. From the late nineteenth to the mid-twentieth century, the river was progressively canalized, and in the 2000s, the Canton of Geneva launched a competition to renaturate the waterway and its surrounding landscape. The implicit idea of the competition brief was to restore the river to its original shape, which represented, for Superpositions, the winning team, a conservative approach. Affirming instead that any project shifts a given situation, they proposed a grid of channels allowing the river to flow freely, creating complex interfaces on which riparian vegetation could establish itself and support the riverine ecosystem. The diamond-shaped channels are gradually eroding and evolving as the river flows through them. This project is exemplary of process-based restoration, the objective of which is not to forcefully create a complex river form but instead to prompt it to naturally develop its own riverbed. The Aire project demonstrates how a river restoration project can successfully achieve both ecological and social goals without resorting to a nostalgic approach.

Georges Descombes: I would like to introduce you to the renaturation project of the Aire River, which we initiated two decades ago. The guiding principle of the project was: “Something began that was already there.” I might even say that the design already existed within the landscape; the site itself essentially guided us. We won the competition with the belief that any project produces change and cannot simply represent a return to a former, so-called historical, state. For this project, it is important to note that frequent flooding outside Geneva, common from the nineteenth to the mid-twentieth century, led to the creation of a canal to bypass the meandering river. Although the canal was highly efficient and well-designed, it merely shifted the problem elsewhere. The competition brief proposed restoring the river to its original shape by destroying the canal and redirecting the water flow to its former meanders. It represented a kind of nostalgic return, based on the well-anchored conviction that it is necessary and possible to go back to a state of pure nature. A search for a lost paradise was, in fact, the narrative behind all this.

Challenging the brief, we instead proposed a plan that kept the existing canal, transformed it, and then added a parallel space for the river. In the process, the canal became the memory of the site, a reference line giving the visitor the possibility of understanding the before and after of the project. We kept only the footprint of the canal, reducing its original depth from 3 to 1 meters. It became a river garden, designed as a public space and a stage, allowing people to observe and engage with the environment. It is intended to attract



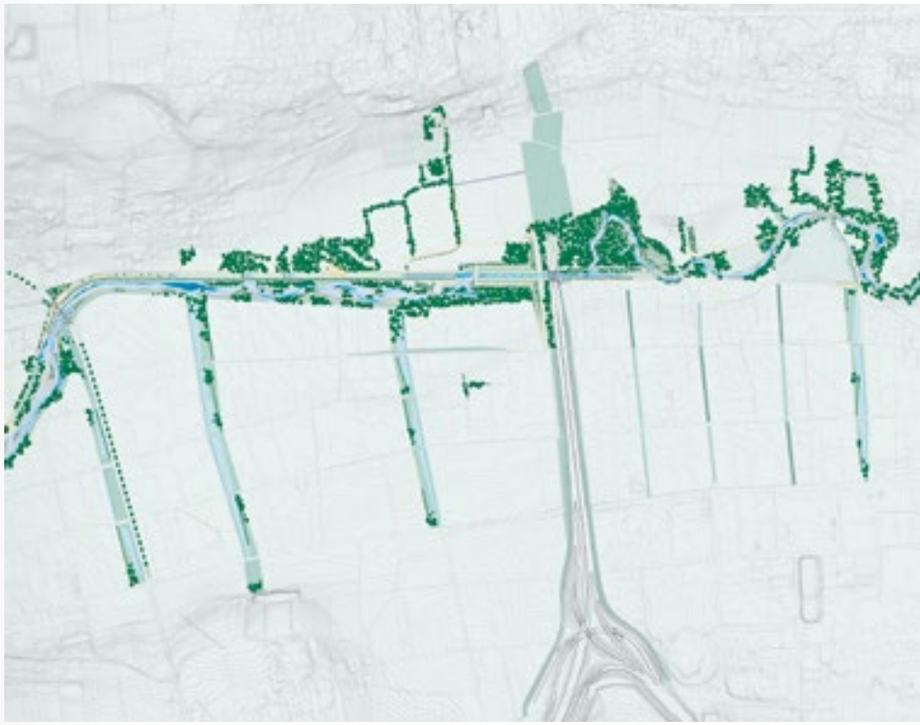
6.1 Preliminary sketch

visitors, through familiar features like fountains or pergolas, and it's also a way of guiding people, inviting them to see and understand our efforts themselves. In the competition drawings, and to create the new riverbed, we took up the amplitude of the former meanders as the necessary dimensions for the new space of the river. Unfortunately, under the pressure of the local farmers, this space was reduced by one half, and proved thereafter to be too narrow.

Our project attempts to propose an alternative path, by which urgent ecological shifts are incorporated into a larger cultural change. We are living in a time of unprecedented climate disasters, pollution, and resource extraction—it is a time in which we are confronting the question of the basic habitability of Earth. What can we do in such moments? We aimed to provide the river with more space, which is a promising approach to managing water, making it cleaner and more vibrant. The team for this project was diverse, including a biologist, a hydrologist, a landscape architect, and other specialists. This diversity led to a vocabulary challenge: what a biologist describes or understands as landscape may differ significantly from an architect's perspective.

We faced a significant challenge with this project, which took two decades to complete—we started in 2000 and initially planned for completion in 2015 but instead finished in 2023. With such a prolonged timeline, the risk is either that one repeats the same ideas or, on the contrary, that one constantly changes them, which can lead to a lack of coherence. I do not enthusiastically use the term minimalism to describe architecture, but we aimed for a design characterized by austerity, restraint, and calm. Our goal was to do the least possible, which is not necessarily equivalent to the smallest possible. Instead of imposing a predetermined shape, we provided an initial impetus to the river, allowing it to co-design itself.

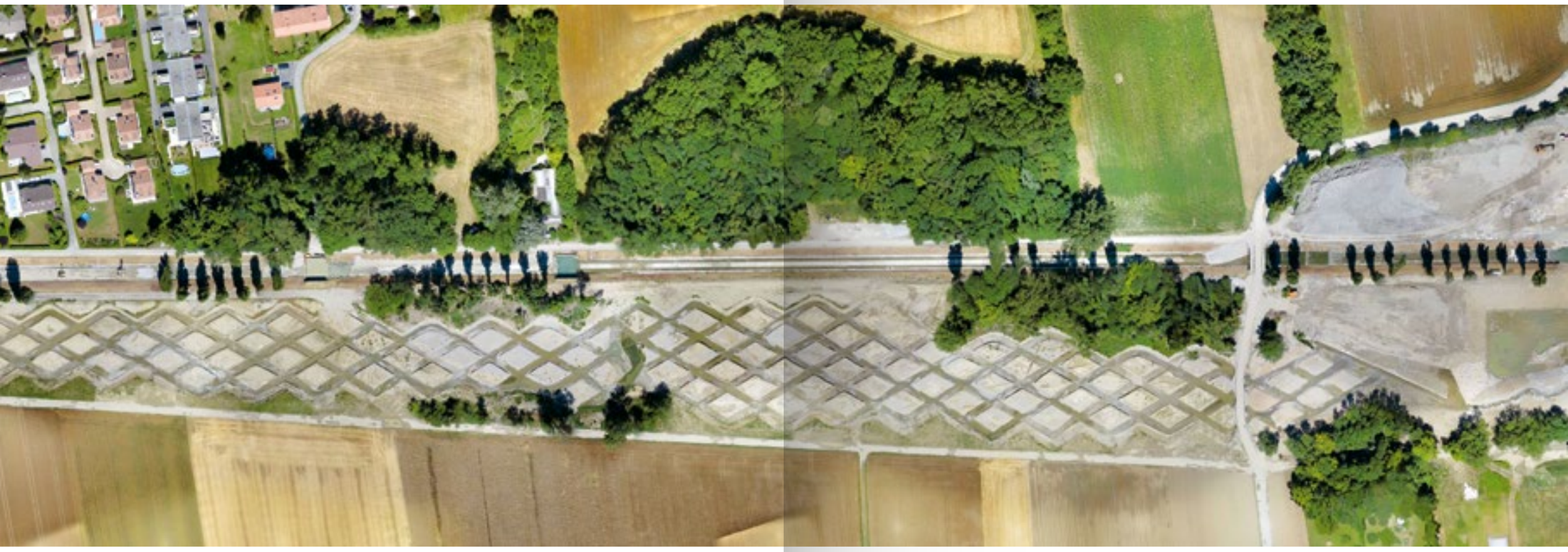
In an earlier stage of the process, we proposed space for the water to flow freely. The challenge is that the river shapes itself around flood conditions. When you have varying widths, 15 meters in one area and 100 meters in another, for example, the same volume of water loses its erosive power. This leads to a very gradual process of morphogenesis in the riverbed, and it takes time. This is why, in the next phase of realization, we searched for a way to accelerate the process of morphogenesis. Drawing inspiration from French physicist Pierre-Gilles De Gennes's work on percolation—a phenomenon where liquid permeates a porous material—we studied the diagrams scientists use to record this process. They often depict a geometric shape through which water flows unpredictably. Inspired by this concept, we developed our design, crafting a shape that enables water to navigate an unknown and uncharted path. We also collaborated with Mathias Kondolf from the University of California, Berkeley; he is a renowned fluvial geomorphologist who also advises the Swiss government. With his oversight, we were granted the opportunity to test our approach. Although the hydraulic engineers initially dubbed the project a "chocolate delirium," because the diamond shape of the



6.2 Site plan

6.9–6.12 Timeline of the project showing the river sculpting its way through the rhomboid structure

6.9 01/2014
6.10 07/2014



6.11 10/2014
6.12 08/2015

→ 6.13 Bird's-eye view of the transformed canal and new Aire River

Céline Baumann is a French landscape architect. She founded her eponymous studio, based in Basel, in 2021, and operates in the fields of landscape architecture, urbanism, and curation. She aims through an intersectional lens to create dynamic open spaces informed by the interactive ecology between people and nature. This design work is complemented by a commitment to research, allowing her to explore the collective value of nature and its impact on individuals. Her work has been presented at insitutions including the Garden Museum in London, Triennale Milano, Cité de l'Architecture et du Patrimoine in Paris, Vitra Design Museum in Weil am Rhein, Matadero in Madrid, the Swiss Architecture Museum in Basel, and the Royal Academy of Arts in London, amongst others. She writes for the *Journal of Landscape Architecture, archithese,* and the *Architectural Review,* as well as for numerous independent publications. She has taught at the Karlsruhe Institute for Technology and the EPF in Lausanne, and she is currently guest lecturer at the ETH in Zurich, where she teaches a visiting studio of landscape architecture.

Jana Crepon is a broadly experienced landscape designer working in Amsterdam since 1995. She graduated with a master's degree in landscape architecture from the TU Dresden and completed her education with studies at the Edinburgh College of Art. In 2007, she joined the design office Inside Outside, founded by Petra Blaisse, and was, together with Aura Luz Melis, appointed partner in 2021. At Inside Outside, Crepon leads the landscape design team, working on projects of different scales and scopes in Qatar, China, Taiwan, Italy, Belgium, the Netherlands, and the United States. Inside Outside specializes in landscape design and interior architecture. With "soft and flexible" architectural interventions in public buildings, parks, and private spaces they create new perceptions of place and time, giving visitors unexpected, ever-changing experiences. The studio's interventions are site-specific and innovative, and are underwritten by a strong social commitment and cultural awareness. By choreographing the movement of both viewer and object, and creating inviting effects that arouse curiosity and surprise (by adding color, sound and light effects, smell, and tactility), the studio combines traditional "landscape" methods with a contemporary mindset.

Julie Delnon studied art history and philosophy at the University of Zurich. Through curatorial and organizational engagements at the Fondation Beyeler, HeK Basel, and Liste Basel, she gained insights into the Swiss exhibition industry. She was co-founder and co-director of the art and action space Kein Museum in Zurich. In 2020, she worked in artist support at the young funding platform TheArtists, which aims to rethink gallery representation. For documenta fifteen, Delnon was appointed to the management team of the lumbung gallery. She is currently supporting Hilar Stadler, curator and museum director of the Museum im Bellpark, in the research, planning, and communication of temporary exhibitions.

Georges Descombes was educated in Geneva and Zurich, and at the Architectural Association of London. He has taught in Geneva for many years and was a visiting professor at the Harvard GSD, University of Virginia, and the Berlage Institute. Alongside his teaching activities, Descombes has lectured extensively in Europe and the United States. His main projects include the Parc du Lancy in Geneva, Swiss Path around the Lake of Uri, Bijlmer Memorial in Amsterdam, Parc de la Cour du Maroc in Paris, Confluence Parc and Quais de Saône in Lyon, Aire River Renaturation in Geneva, Groen Lint in Ostende, Materialkaai in Brussels, and the Dok Zuid Gardens in Anvers. Descombes is part of the team working on the exhibition "Where are you going glacier?" in Gletsch, within the Swiss Alps. Most of his projects are realized in association with the office ADR, in Geneva.

Clara Loukkal is a landscape architect and urban planner. She graduated with a master's degree in geography and spatial planning from Université Paris 1. Determined to transform territories through drawn projects, she continued her studies at the École de Paysage de Versailles. In 2017, she co-founded the landscape and urban planning office Altitude 35 with Benoît Barnoud. In response to the homogenization of cities and territories, the office leverages geography as a key driver for project development. This approach has received multiple distinctions: Altitude 35 has won the European competition Europan three times, and has been recognized as a laureate of the "Albums des Jeunes Architectes et Paysagistes" awarded by the French Ministry of Culture and the "Palmarès des Jeunes Urbanistes" awarded by the Ministry of Ecological Transition. Loukkal has taught public space projects at Université Paris 1 and project rhetoric at the École d'Architecture Paris-Est. In addition to her professional work, she currently teaches landscape architecture at the École de la Nature et du Paysage in Blois, France.

Hilar Stadler studied art history and film studies at the University of Zurich. He is director of the Museum im Bellpark, Kriens, Switzerland and curator of the Adolf Wölfli Foundation at the Kunstmuseum Bern. As a curator and author, he has been responsible for a number of projects on art, architecture, and photography, including "Las Vegas Studio: Images from the Archives of Robert Venturi and Denise Scott Brown," with Martino Stierli and Peter Fischli; "Simon Phipps: Finding Brutalism. A Photographic Survey of Post-War British Architecture," with Andreas Hertach; and the architecture series for the Museum im Bellpark, including presentations of works by Sergison Bates architects, London/Zurich; Sauter von Moos, Basel/Miami; and Loeliger Strub Architektur, Zurich, together with Gerold Kunz.

Cyril Verrier is a French filmmaker and visual artist whose oeuvre intricately explores the perception of the body—whether of the artist or the subject—as an accessory, actor, or driving force involved in a series of events with uncertain outcomes. In his films, the body engages in a succession of actions and reactions, rather than merely in a single performative act. His work delves into the necessity of experiencing relationships and phenomena, offering a distanced, skeptical, and critical view of contemporary societal values. Between 2018 and 2023, he directed the documentary *La Frontière,* which focuses on the reintroduction of biodiversity in the Nyon countryside. Through the lens of agriculture, the film questions our relationship with the landscape. This project exemplifies his commitment to exploring and understanding the interconnectedness of natural environments and human influence.

Paola Viganò is a full professor in urban theory and urban design at the EPFL Lausanne, where she directs the Habitat Research Centre and the Laboratory of Urbanism; she is also a professor at IUAV University of Venice. She received the Grand Prix de l'Urbanisme in France in 2013, the Flemish Culture Award for Architecture in 2017, and the Golden

Medal for Lifetime Achievement at the Milano Triennale in 2018. She is Doctor Honoris Causa at the UCLouvain in 2016 and received the Schelling Prize for Architectural Theory in 2022. Together with Bernardo Secchi, she founded Studio (1990–2014), and, since 2015, StudioPaolaViganò, which works on the urban, ecological, and social transition, designing urban and territorial projects and realizing public spaces in Europe. These projects include the public park in Dessel Nuclear Research Center; Place Marie Janson in Brussels, with VVV; the Plateau de la Gare in Tournai; the completion of the Zac de la Courrouze in Rennes; and the Flaminio neighborhood masterplan in Rome. StudioPaolaViganò recently realized the municipal plan of Lugano; served as a consultant of the City of Geneva for its municipal plan; and coordinated the strategic scheme for the recovery of the Vesdre Valley, Belgium, together with ULiège. Viganò's work has been exhibited at the Shenzhen and Venice biennales. *The Biopolitical Garden: Space, Life, Transition* (Actar 2024) is her latest book.

Sylvie Viollier is a biologist who practices her passion for the diversity of landscapes and natural environments. As a specialist in environmental sciences, she first worked as a landscape architect for the city of Bern, then delved deeply into agricultural issues, reflecting on biodiversity, landscape beauty, and well-being. After founding the office Paysage et Environnement, she and her team designed and implemented several ecological network and infrastructure projects. One such project is La Frontière, which spanned from 2014 to 2024 and aimed to shape and model new landscapes across eighteen municipalities in the Nyon region. The result is a landscape with vigorous, large trees, hedgerows running along crops and paths, and colorful, buzzing meadows. The network leaves a lasting impression of beauty, strength, curiosity, and spectacle. The film *La Frontière* captures the project's atmosphere. This large-scale initiative was accompanied by another project aimed at improving the perception of our urban landscapes and biodiversity in urban areas: the creation of Living Spaces, a rare educational project fostering an awareness of nature. Students and teachers plant and nurture a vital momentum toward a richly structured landscape, home to abundant nature around schools. All of these measures reflect the landscape, cultural, and historical specificities of the Nyon region and the Canton of Vaud. These achievements, we hope, will be followed by even broader and more original ones.

Martina Voser directs the office mavo Landschaften (Zurich) together with Isabelle Duner. They endeavor to find innovative approaches to the challenges of our time, and are always in search of site- and task-specific solutions in their diverse projects. Well-known projects include the Attisholz riverside park, the embedding of the Bondo protective structures, the Inner Garden, as well as the garden sequence in Zurich. Voser was appointed full professor of landscape architecture at the ETH in Zurich in 2024. She is regarded as one of the leading figures in Swiss landscape architecture and has won multiple awards for her work. Her projects are not only conceptually sound and visually impressive, but also sociologically and ecologically motivated. In addition to her excellent achievements in practice, over many years she has made a major contribution to the debate on technical and theoretical matters and professional policy. She is a committed teacher as well as a sought-after jury member, critic, and expert who sits on various committees and advisory panels.

Visiting Studio of Landscape Architecture, ETH Zurich (Céline Baumann, Cristina Fusco, Myriam Treiber)

This publication is based on the exhibition "Ramification: An Exhibition on Contemporary Landscape Architecture," staged at the Museum im Bellpark in Kriens, Switzerland, from April 21 to July 7, 2024. The show was curated by Céline Baumann with the support of Myriam Treiber, in collaboration with Hilar Stadler and Julie Delnon from the curatorial team at Museum im Bellpark.

Editor: Céline Baumann
Assistant editor: Myriam Treiber
Publisher: Museum im Bellpark Kriens
Graphic design: BANK™
/ www.banktm.de
Copy editing and translation:
Rachel Julia Engler

Credits: exhibition photos: SIK-ISEA, Martin Stollenwerk, courtesy of Museum im Bellpark Kriens, 2024; 1.1–1.6: Inside Outside; 2.1–2.2: Screenshots *La Frontière;* 2.3: Cyril Verrier, Sylvie Viollier; 2.4–2.11: Screenshots *La Frontière;* 3.1.1–3.2.4: StudioPaolaViganò; 3.2.5–3.2.10: Michiel De Cleene; 3.3.1–3.3.4: StudioPaolaViganò; 4.1–4.2: Altitude 35; 4.4: L'Institut Paris Region; 4.5–4.15: Altitude 35; 5.1–5.6: mavo Landschaften; 6.1–6.5: Superpositions; 6.6–6.12: Fabio Chironi; 6.13–6.15: Jacques Berthet; 6.17: Superpositions

This project was realized in cooperation with the ETH Zurich Department of Architecture, with the generous support of the Basel-Stadt Department of Culture and a contribution from Museum im Bellpark, Kriens. Every reasonable attempt has been made by the authors, editors, and publishers to identify owners of copyrights. Should any errors or omissions have occurred, please notify us.

The research-by-design project Living Soil is supported by the Creative Industries Fund NL.

ISBN 978-3-9523729-9-9

ETH zürich
DARCH
Kanton Basel-Stadt
Kultur

We are familiar with the idea of ramification from botany: in the case of the tree, aboveground elements like limbs and twigs visibly branch out in order to enlarge the overall leaf surface and thereby maximize processes of photosynthesis. The principle of ramification can also be seen in the realm of larger systems: for example, in the case of a watershed, where small tributaries flow into ever-larger rivers before reaching the sea.

Ramifications can cover larger areas without eliminating, or pushing out, what is already there, and can thereby connect otherwise isolated entities. And ramification is also a conceptual tool that offers insight—not only into the anatomy of a plant but also onto connections within and between landscapes. This publication presents the innovative perspectives of a select group of landscape architects, urbanists, and biologists whose practices share a forward-looking understanding of their disciplines and who have—knowingly or unknowingly—adopted the metaphor of ramification to think about landscape and make it possible, thereby, to design more sensitively and with a greater orientation toward the future.

With contributions by Céline Baumann, Jana Crepon, Julie Delnon, Georges Descombes, Hilar Stadler, and Paola Viganò. Projects by Altitude 35, Paris; Inside Outside, Amsterdam; StudioPaolaViganò, Brussels and Milan; Superpositions, Geneva; Sylvie Viollier and Cyril Verrier, Geneva; and mavo Landschaften, Zurich.