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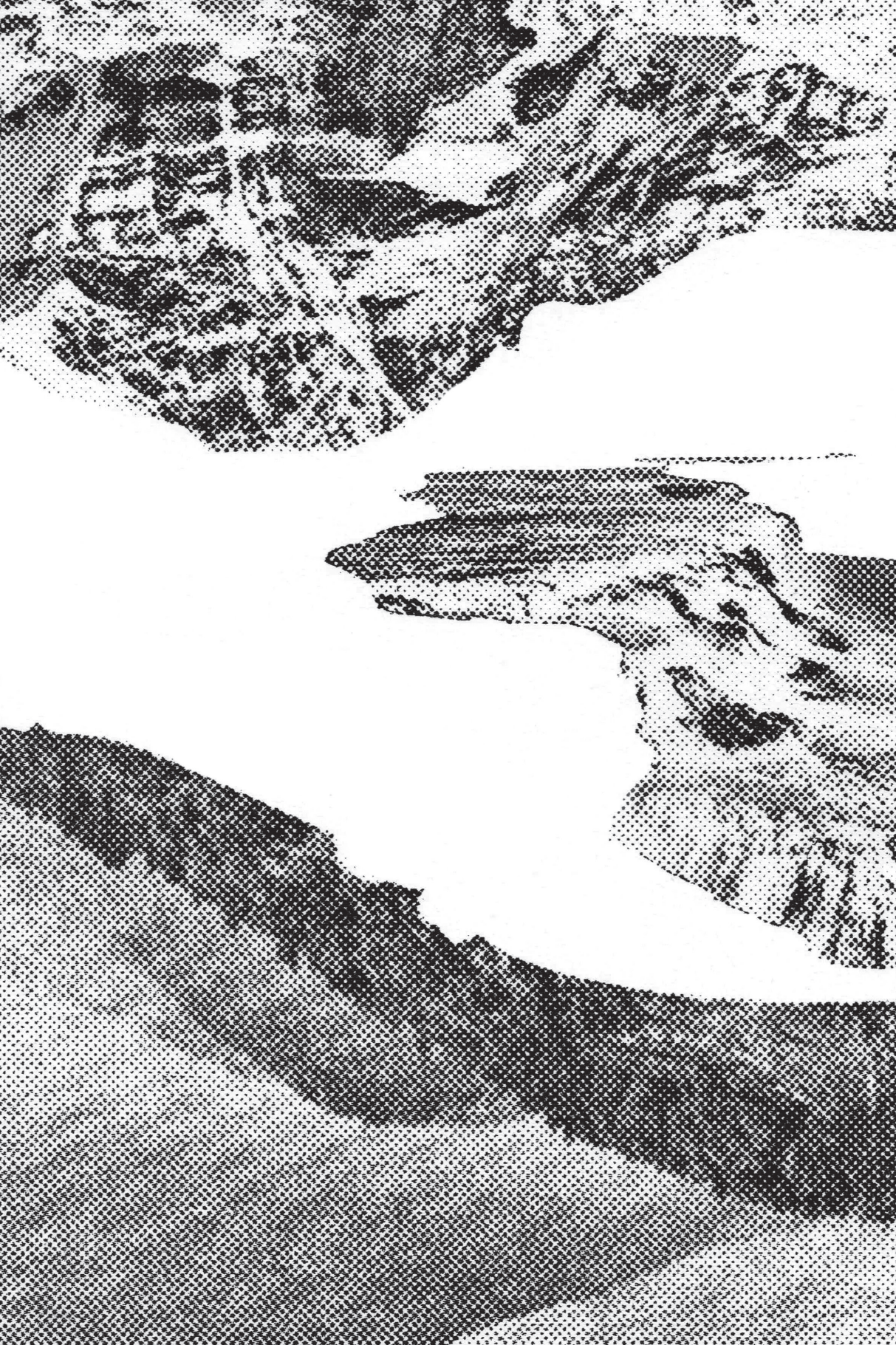
BRUSSELS
URBAN
LANDSCAPE
BIENNIAL

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rising waters

Shaping
Our Gardens,
Streets And
Urban Valleys

Brussels Urban
Landscape
Biennial



Shaping
Our Gardens,
Streets And
Urban Valleys

rising waters

Architecture Workroom Brussels,
Bureau Bas Smets,
JNC International,
Latitude Platform,
Taktyk

Brussels Urban
Landscape
Biennial

2018

An iconic edifice of the Brussels area, the Centre for Fine Arts is the embodiment of a covered urban landscaping system that has been placed in the valley of the Mont des Arts. Part of a city for decades and on a daily basis, it is home to the unique hustle and bustle of urban life. It is a place for constant comings and goings, but also a place for meetings and discussions, open to the inhabitants of the Brussels Region and visitors alike, in a region that is in constant evolution. Through a programme that is very closely linked to architectural, urban and social questions, we are rethinking what a city can be, and its new challenges. We are looking to get closer to an increasingly diverse public, so that everyone can find a space in which local issues, not to mention Belgian and international ones, can be brought to the table.

For the second edition of the *Brussels Urban Landscape Biennial* (BULB), BOZAR is delighted to play host to the exhibition and a multitude of linked activities; demonstrating the new style of biennial event this has now become. The exhibition *Rising Waters — Shaping Our Gardens, Streets And Urban Valleys* takes a closer look at the, at times alarming, situation of water management and its cycles in the Brussels Region, and investigates new ways of introducing long-term concrete solutions to the continued development of the urban landscape and its inhabitants.

BOZAR is once again staging this exhibition at the initiative of the Ministry of the Environment and the Quality of Life. We hope that there will be future editions to awaken awareness and stimulate fascinating debates on the numerous questions raised by the urban environment in which we live: Brussels and the construction of its territory, at the heart of Europe.

Water turns this 'blue' planet into a unique and liveable ecosystem, especially for humans. But it also represents one of the biggest and most visible threats: there is too little, too much and too polluted water. With global warming, the frequency and intensity of heavy rainfall and periods of drought increases, like this summer. This requires a transformation of our cities and landscapes to ensure they can cope with those extreme fluctuations in rainfall and temperature. The task is essentially simple: we have to make room for water throughout the city. A city like Brussels, built over brook valleys and the marsh of the Senne, must once again be able to work like a 'sponge'. By slowing the drainage of water and allowing more water to infiltrate into the soil, we avoid heavy rainfall leading to flooding, and we provide a reservoir in periods of drought.

As with the transition to renewable energy or to a circular economy, it is much easier to formulate and decide what needs to be done than to actually implement it. We have come to live in the illusion that there will always be an additional technological or infrastructural solution, and we therefore do not have to adjust our living environment and lifestyle to respond to major changes and challenges. Today, it is clear that the space needed for a healthy and resilient water system can only be made in places where we now have gardens, streets, parking lots, squares and parks. There is no other space. The transition to a water-sensitive city therefore

requires a new generation of street, neighbourhood and urban projects, for which vision, examples and forms of cooperation must be developed and tested in practice.

A biennial is ideal for making cultural change possible. From Rotterdam to Bordeaux, and more and more explicitly in Brussels, biennials for architecture, urban design and landscape present themselves as workshops to develop new visions and projects, and as forums for social debate and coalition building around the future of the city. As engaged cultural free spaces, they push forward policy, practice and civil society. For example, this exhibition does not present a *best of existing* projects concerning city and water. During the past few months, Atelier BULB invited four renowned Brussels landscape design offices to explore which new urban water projects are necessary and possible. Their vision and proposals to prepare the Brussels valleys, neighbourhoods and streets for the changing climate, form the core of this exhibition. Along with international reference projects, works of art, graphic material, and documentation of current policies and projects, they create a narrative and agenda for the future. More than just a retrospect, *Rising Waters* offers a preview and a *call to action*.

Introduction Exhibition

Shaping Our Gardens, Streets And Urban Valleys

rising waters

01. Faced with the increasing risk of floods and their associated impact on the quality of life for inhabitants, there is a need for a more innovative approach to water management which must also be integrated into urban planning. On the one hand, there are still many projects underway aimed at improving water quality, with a primary objective of meeting local and international quality norms. On the other hand, climate change, fed by periods of both intense rainfall and drought, is creating a whole new scale of problems for our cities. Over the past decades there has been an over-reliance on engineering works ‘protecting’ our urban areas through complex drainage systems and underground reservoirs for flood waters. However, over the past centuries, the growing city has covered, forgotten and even destroyed large portions of the natural water network fed by marshland, streams and rivers. It is now incontestable that the technical solutions are no longer sufficient, and it is necessary to rediscover these aqueous systems within our modern cities. However, this redefining of the urban landscape will require continued support, working in close partnership with local authorities, experts, citizens and landscape architects. The multitude of projects in the parks, the residential areas, the streets, the public spaces and the landscaped axes has now become the new playing field for furthering this approach.

Sculpting the form of the valleys through which it flows, a waterway draws and creates a dynamic system which spreads over a vast area, including its tributaries, from the source itself to the delta and coastal estuaries. Rivers have always supported inhabitants through providing a means of transport, fertile soil ideal for agriculture, or even strong currents to be used as an energy source. Whilst demographic growth in urban areas leaves less and less space for the natural water cycle to occur, it is also creating

01.01

The trio of Danish artists 'Superflex' (Rasmus Nielsen, Jakob Fenger et Bjørnstjerne Christiansen) depict a critique of the rising tide of consumerism that has overrun our daily lives. Stripped of any human presence, this 20-minute video, first presented at the South London Gallery (UK), combines humour with a disturbing atmosphere. A work that marks the slow destruction of a site as the water comes rushing in. *Flooded McDonald's*, film, 20 min, Superflex, 2009

02.01

The Brussels hydrographic network is part of the Senne River basin, whose source is close to the commune of Soignies and flows for about 100km until it joins the River Dyle in Zennegat. Whereas the Canal appears at Seneffe, crosses Brussels and Willebroek and finally flows into the Escaut at Wintam in Flanders. In the Brussels-Capital Region, it is their tributaries that shape the valleys from which the urban fabric rises, including the sewerage network and two wastewater treatment plants, as well as the distribution network whose clear water supply comes almost entirely from Wallonia.

The Senne basin, rivers and catchment areas, hydrographic network, hazards and risk of flooding, potential rainwater infiltration areas, topography, drainage and water supply network of the Brussels-Capital Region, series of maps, print, Architecture Workroom Brussels, 2018 (source: Bruxelles Environnement, SBGE-BMWB, Vivaqua)

02.02

In Brussels, incidents of heavy rain, steep slopes, an increase in impermeable ground surfaces and an inadequate drainage network are failing to contain runoff waters, creating an increased risk of flooding, and disrupting the balance of the natural water cycle. The negative impact of non-integrated water management from the source is particularly felt at the bottom of the valleys, with an impact on the ecological quality of rivers and groundwater.

Brussels Water Management – A Landscape of Problems, print, Architecture Workroom Brussels, 2018

02.03

The *Pacco-test* was implemented in order to allow everyone to control water quality in the city and to be able to intervene in the event of worrying pollution levels. The development of an innovative device to measure water quality became a social urban experience that brought together people from the community, politics, the world of business, the 'maker community' and the scientific sector. This allowed the formulation of an innovative vision of water policy: collective environmental management. This prototype is part of an experimental process that is still being fine-tuned.

Pacco-test, prototype, City Mine(d), 2016

02.04

The control of groundwater is conducted through sampling and artificial groundwater re-permeation. Since the end of the 1980s, groundwater aquifers have been regularly monitored under the entire surface of the Brussels region. In 2012, no fewer than forty-eight piezometers (an instrument used to measure the compressibility of liquids) make up a network for measuring underground aqueous phenomena.

On the surface and since 2015, the *POOL IS COOL* organisation – a platform made up of citizens and experts – has been developing its own research in parallel in order to assess open-air swimming opportunities in the Brussels Region, but also to raise public awareness of issues related to the biodiversity of the local environment.

Quality test samples, glass and water vials, IBGE, 2018 *Soon we will swim together under the blue sky!*, bathing cap with silk screen print, POOL IS COOL, 2017

a greater need for landscaping services. Climate change, and the associated extreme weather events, are forcing us to rethink the way in which we build our cities and the ways in which we consume, treat, store and drain our water within urban spaces.

The transition towards a "united valley" will require new approaches and working methods. Water management cannot stop at a border (national, regional or local) nor at the edge of a neighbourhood or private land. It requires collective action. Trans-national coordination is needed, in addition to local cooperation between the different parties involved: public authorities and network operators, residents directly affected by water problems and, of course, all those who benefit from the water in their daily lives. Water is everyone's business; a source of problems as well as a provider of solutions. It is about collectively transforming it into an opportunity to create a better understanding and management of water across urbanised areas, aiming for a united valley.

02. In Brussels, floods are a frequent phenomenon, being caused by periods of exceptionally intense rainfall (particularly in summer) as well as hard soil sealing, due to an increasing urbanisation. The drainage system, partially in disrepair and insufficient in scale, and the lack of a network separating clean and dirty water, increases the risk of overflow as well as increasing the volumes that need to pass through treatment plants. Waste products, discharges and substances which leak into clean water and seep into the ground are polluting our waterways, lakes and underground aquifers and putting the balance of entire ecosystems in danger. The Senne River is one of the most effected, suffering the mounting repercussions of insufficient ingress and retention of the rainwater runoff into the lakes and reservoirs feeding the river. Actions to improve the quality of the entire hydrographic basin will have to focus on the tributaries in the surrounding hills, designating the valley as the defining element of the urban space.

03.01

The rainwater tank is on the second floor on a mur mitoyen in Forest (Brussels) and has a capacity of 510 litres. It is replenished by rainwater that falls on the roofs of the two neighbouring households. After storms, the buffered water is slowly released: one half feeds a storage tank in Eric and Anne's basement and the other half refills the inflatable tank located under the patio of François and Pernilla's garden.

This rainwater tank was designed in the frame of *Hot d'Eau*, a collaborative design project developed into a series of workshops organised by Latitude Platform. It operates as pilot for other similar situations in Brussels and elsewhere. *Making a visible source, together*, photograph, Bruno Dias Ventura, 2018

03.02

Storm water retention tanks, storage tanks, rain gardens, ponds, natural pools, constructed wetlands, wetlands, rainwater flowerbeds, trees, watercourses, drainage ditches, swales, infiltration trenches, parking spot dams and water retention paving, trenches, roofs. These are the samples of objects that are spreading across the Brussels landscape, all of them created for slowing, retaining, and processing the region's rainwater.

Objects, 18 drawings printed on paper, Latitude Platform, 2018

03.03

Inhabited by these *objects*; streets, squares, parks, industrial, commercial and household lots turn into devices that can detain, retain, and process (rain) water as much as possible before adding it to the supply system or allowing it to flow into the waste system. They are the urban *elements* of Brussels that outline what transformations each recurrent space type and the space handler should undergo in relation to the treatment of water.

Elements, 6 drawings printed on paper, Latitude Platform, 2018. Elaboration from Ranzato, M. Aragone, A., and Verbeiren, B. (eds.) (2017) *Wet City Elements. Elementary Design*, 1 (originally worked out at the Faculty of Architecture La Cambre Horta, ULB)

03.04

The proliferation of wet city elements across the landscape of Brussels is progressing rapidly. Square kilometres of urban space (both in the public and private domain) and a multitude of land owners are involved. This exceptional product stands as an *imaginary force* of a shared urban care for water: it is this common understanding that water is an invaluable resource that holds the fragmented socio-ecological geography together.

Brussels' Wet City Elements, map printed on paper, Latitude Platform, 2018. Elaboration from Ranzato, M. Aragone, A., and Verbeiren, B. (eds.) (2017) *Wet City Elements. Elementary Design*, 1 (originally worked out at the Faculty of Architecture La Cambre Horta, ULB)

03.05

Shrinking, expanding, splitting, multiplying, hybrids, pairing, objects and elements that slow, retain and process water in the Maelbeek valley, specifically in Place Flagey and the surrounding area, can take many forms. Beyond technical aspects, new partnerships and synergies thrive alongside hard work of individuals, corporations, public institutions and other parties. This new (obsessive) practice of water care is unfolding, redefining the conception, form, and experience of the urban scape. *Water vs. Urban*, drawings printed on paper, Latitude Platform, 2018. Elaboration from Ranzato, M., Marcon, A., Conz, S., Siyu, L., and Yang, Z. (2017) 'Brussels' Visible Water' in Ranzato, M. (ed.) *Water vs. Urban Scape*. Berlin: Jovis, pp. 185-201 (originally worked out at the Faculty of Architecture La Cambre Horta, ULB)

03.06

The key development for the Maelbeek basin is its evolution an urban landscape of visible water, once again: drainage ditches and watercourses across urban areas and along the streets; stormwater retention tanks, storage tanks, and rain gardens in households; detention trenches, and detention roofs in industrial and commercial lots; infiltration trenches and parking spot dams, and swales by the street sides; detention paving, infiltration trenches, rainwater flowerbeds, and natural pools in the squares; constructed wetlands, wetlands, and ponds in the parks; trees everywhere. The geography of the Maelbeek surface water mirrors that of a city entirely focused on managing its water.

Endless Maelbeek, drawing printed on paper, Latitude Platform, 2018

Latitude Platform

Every Space Counts

Every Space Counts is our adage to speak about the value of the entire inhabited space of the Brussels Capital Region when water is called into question. It resounds the more known *Every Drop Counts*¹. However, it reverses the perspective while amplifying the field of vision regarding water. The standpoint flips and becomes the one of water. What is the potential intake of Brussels' urban landscape if we would strive for this precious resource? The mobilisation that the socio-ecological physiography of the region can provide to detain, retain, and process water is put under investigation. After all, rainwater still falls around the Brussels Capital Region out of our (human) control. Every centimetre of the region is a potential catalyst. Every spatial handler is a potential stakeholder.

Every Space Counts is a project by Latitude Platform based on the postdoctoral research of Marco Ranzato at the Faculty of Architecture La Cambre Horta (ULB) with the support of the Institut Bruxellois pour la Recherche Scientifique, under the grant Prospective Research for Brussels 2012. During the research, Latitude Platform has supported the progress of the academic investigation. *Elementary Design 1 – Wet City Elements* and *Water vs. Urban Scape* are the two mainstays of this academic research that Latitude has reworked to bear the abovementioned adage.

Elementary Design 1 – Wet City Elements is a transdisciplinary exploration on scenarios of micro-scale water-flow decentralisation for the Brussels Capital Region.² This work builds upon the Landscape Elements Water Management Strategy, an elementary cognitive strategy deployed to tackle the present complexity of the landscape and unfold the potential intake that each landscape component can

provide with regard to water³. The five main stages of the strategy (*Preconditions/Scenario/Guiding Model/Mapping and Computation/Area-Flow-Actor Sheet*) have made it possible to work out a *démontage* of Brussels and draw up a taxonomy of its landscape types or elements (streets, squares, permeable public spaces, industrial and commercial lots, household rooftops, and private gardens). The goal was to hypothetically reorganise water inflows and outflows, supplies and discharges related to each single element via the incorporation of micro-scale water-flow solutions—or *objects*—that detain, retain and process water; to identify the practices or recurrent sequences of actions that the handler(s) of each prototypical element is required to take in order to make the new engines for water operational; to visualize the by-product of the reiteration of objects, elements, and practices at the scale of the region; to appreciate the macro implications of this elementary operations on the water budget of the Brussels Capital Region. *Wet City Elements* does not exclude systemic solutions per se. Focusing on the single basic element, it produces a know-how to reinvest and reinterpret when looking for synergies among the various parts of the landscape.

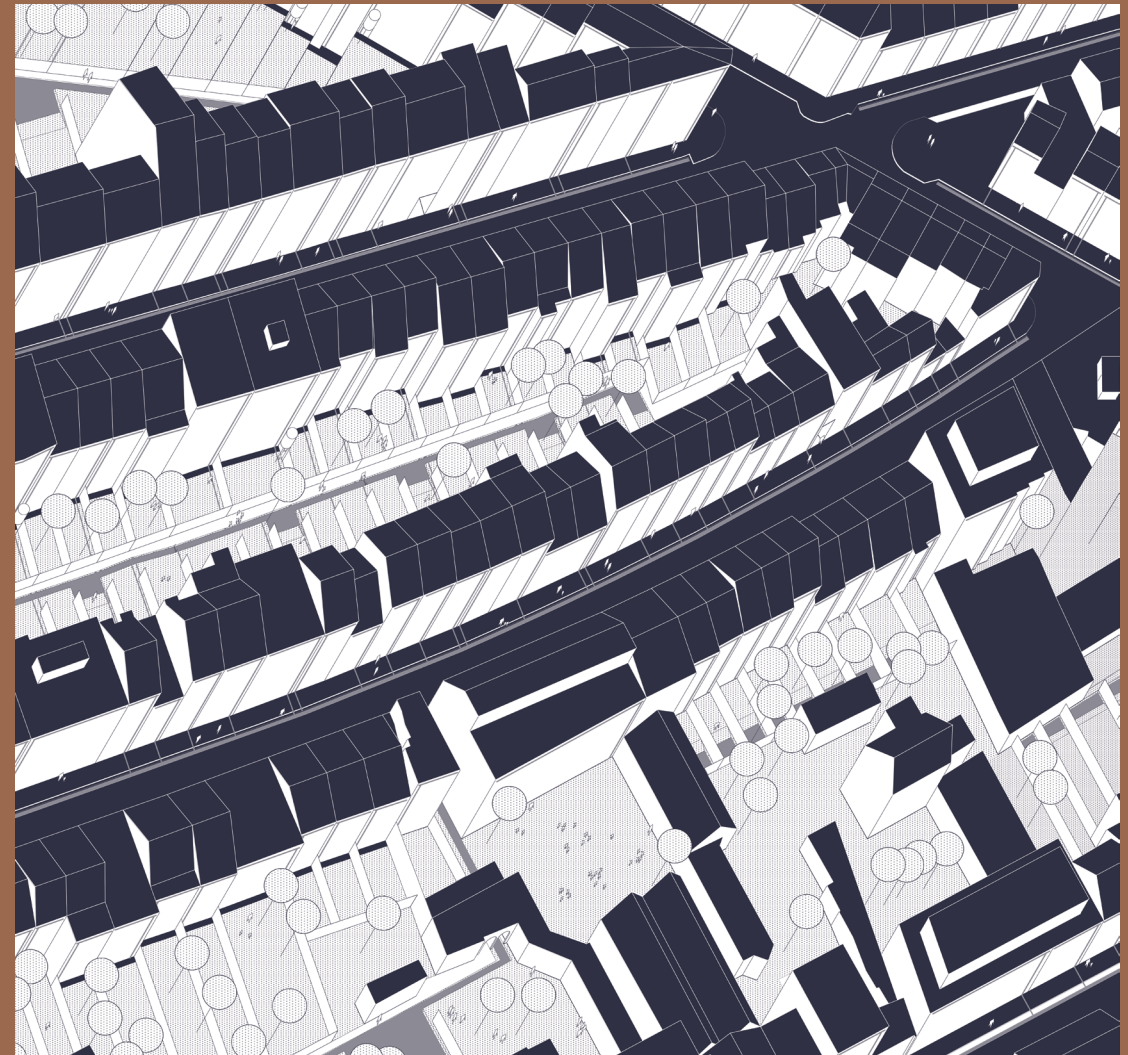
Water vs. Urban Scape is a book and a research on the current urbanisation and the present and potential arrangement of its waters.⁴ It is inspired by the international workshop *Water vs. Urban Scape? Exploring Integrated and Decentralised Arrangements of Water in the Brussels Capital Region* mastered by Latitude Platform and held at the Faculty of Architecture La Cambre Horta (ULB) in July 2013. This work explores potential future water-urban arrangements of the Maelbeek Valley, one of the six watersheds crossing and giving form to the landscape of Brussels. The glorious bodies of water of a bygone era (rivers, fish ponds, wetlands, etc.) function as inspiration at most. The urban/colonised-nature—to recall the notorious expression 'second nature' by Cronon (1991)⁵—of the Maelbeek is deemed

Latitude Platform

to be the abundant hand that feeds the imaginary. Through design, its socio-ecological physiography is reinterpreted to explore water-urban arrangements that are complementary and sometimes alternative to the existing underground, invisible, centralised, monopolistic ones. By contrast, visible, decentralised, heterogeneous, inclusive, socially-diversified water arrangements populate the Maelbeek like parasites, giving shape to new forms of living with water. These tableaux stand for the true cultural shift that the incorporation of water at any level of the Brussels landscape brings with it.

The exhibition conceived for *BULB* reinterprets the abovementioned works—*Elementary Design 1–Wet City Elements* and *Water vs. Urban Scape*. Latitude Platform aims at striking the imaginary of the visitor displaying objects, elements, and practices for the detention, retention and processing of water at any level of the Brussels-scape and their interlinkages across the scales. The first part, *Brussels' Wet City Elements*, shows the 'project of water' for the recurrent landscape components alone. It then describes what is the potential intake that they can provide altogether at the regional scale. The second part, *Water vs. Urban Scape*, shows how the diverse socio-ecological

components can synergise on a transect of the Maelbeek Valley. The complex 'project of water' multiplies pervading the entire watershed of the Maelbeek and beyond. The urbanised landscape of Brussels proves not to be 'wrong'. It is on the contrary a great canvas that could be activated by the pervasive 'project of water' and its assemblages of objects, elements, and practices. Do not forget: *Every Space Counts*.



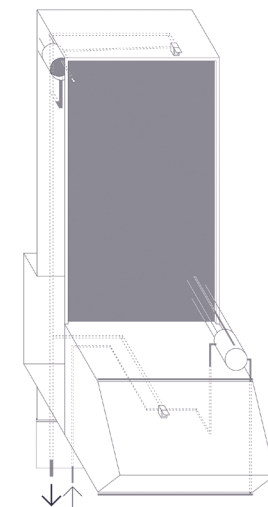
1 Schultze, T., Tjallingii, S.P. (eds.) (2008) *Every Drop Counts: Environmentally Sound Technologies for Urban and Domestic Water Use Efficiency*. Delft/Osaka: TUDelft/UNEP.

2 Latitude Platform (Andrea Aragone) offered support to the implementation of the scenarios. To know more about this research, see Ranzato, M., Aragone, A., and Verbeiren, B. (eds.) (2017) *Wet City Elements*. *Elementary Design*, 1.

3 To know more about this research, see Ranzato, M. (2017) 'Landscape elements as a basis for Integrated Water Management', *Urban Water Journal*, 14(7), pp. 694-703.

4 Ranzato, M. (ed.) (2017) *Water vs. Urban Scape*. Berlin: Jovis, pp. 320.

5 Cronon, W. (1991) *Nature's Metropolis: Chicago and the Great West*. New York: W. W. Norton.





New Ukkelbeek Valley

Situation:

The Ukkelbeek Valley, a network of streams that have disappeared beneath the streets, and a forgotten terrain.

Historically, the landscape of the Ukkelbeek Valley, along which lies the ancient village of Uccle, consisted of a sequence of ponds, meadows and wetlands through which the Ukkelbeek stream meandered, while an agricultural landscape covered the plateaus on either side. A network of sunken paths linked the inhabited bottom of the valley and the cultivated plateaus. Transit traffic mainly passed along the ridges on either side of the floodplain.

Over the course of the 19th and 20th centuries, urbanisation developed along new avenues and causeways, going against the grain of the topography and the logic behind the first core settlements. The effect of this has been to erase perceptions of the valley from the image of the new neighbourhoods, while gradually replacing the natural hydraulic network with a single unified network channelling all the waters together into the sewer. And yet, under the asphalt and the bricks of these new residential neighbourhoods, the waters of the Ukkelbeek continue to flow unnoticed, making occasional appearances through the frenetic pace of urban life that has taken root in the valley.

Proposal:

The JNC – Petizon team proposes a set of complementary strategies for an alternative management of rainwater, while revealing a new urban landscape for the Ukkelbeek Valley.

This landscaping work along the course of the Ukkelbeek Valley is developed in three complementary strategies:

1 Filter Gardens *Or how to reintegrate the water cycle into the city.*

Strategy:
infiltration at block level.

The approach is based around a series of blocks on the plateaux on either side of the Ukkelbeek Valley, by developing infiltration gardens, adapting to the context and the different typologies of the urban fabric. Five typologies have been identified: continuous terraced blocks, semi-detached blocks, blocks of detached residential buildings, blocks of detached empty buildings, and industrial blocks. The implementation of a participatory process involving the inhabitants of each block would then allow collective decision-making for the implementation of a vast project of shared gardens at the end of each block, which would contribute to a shared living experience while offering hydraulic solutions on an appropriate scale.

Filter gardens consist of a combination of green roofs and communal gardens within blocks made up of hollows and troughs. The total capacity of the *FILTER GARDENS* should allow for absorption and contain 70% of so-called ‘normal’ rains, as well as exceptional rains (with a return time of twenty years), with a discharge to the sewer of less than one litre per second. This benchmark, which takes into account the latest observations of the evolution of rainfall events in recent years, is the one currently proposed by Brussels Environment.

2 New Urban Streams *Or how to maximise biodiversity and ecological potential in public spaces.*

Strategy:
collection of runoff water through a green and blue network.

This second approach takes place around a network of public spaces made up of streets and some urban parks connecting

the Uccle plateau and the Ukkelbeek Valley. This has gradually covered up the old hydraulic network, once made up of valleys, embankments and sunken paths which allowed runoff water to flow into the Ukkelbeek. Today, the hydraulic network has gradually been transformed into an urban infrastructure of wide asphalted streets, covering a sewer network mixing wastewater and rainwater.

The objective of *NEW URBAN STREAM*, which follows in the footsteps of this old hydraulic network, is twofold: on the one hand, it aims to restore into the public space a network of plant gullies that can absorb, slow down and partially infiltrate the rainwater, which in stormy weather flows down both sides of the Ukkelbeek Valley; on the other hand, it seeks to offer a network of linear green spaces, aiming to ecologically reconnect the natural spaces that have been fragmented by urbanisation, in order to support a better biodiversity through the urban fabric.

3 New Wasterscapes

Or how to restore access to water as a common right in a shared space, while raising public awareness of solidarity in water management.

Strategy:

Raising clear water from the bottom of the valley in quality public spaces, allowing water to express itself in all its forms.

This third approach, complementary to the first two, focuses on the bottom of the Ukkelbeek Valley, both on public spaces and adjacent private spaces, as well as on certain institutional sites. The Ukkelbeek may have almost completely disappeared from the landscape of the bottom of the valley, but it still flows beneath several layers of urbanisation, more or less disconnected from the unitary network that it runs alongside for the length of its course.

The objective of these *NEW WATERSCAPES* is to bring the Ukkelbeek stream back into the open through a new urban space at the bottom of the valley, collecting the waters of the blue network developing on either side of the latter. We propose the redevelopment of the Rue de Stalle, Avenue De Fré segment, thus allowing the Ukkelbeek to regain its rights in the public space (including the right of the Haute Ecole de Bruxelles De Fré, the square in front of the Moulin Rose, the squares of Les Héros and Marlow, the site of the Moulin Blanc, the Raspail Park...), while allowing it to expand following the flow of meteorological events, offering the public the full range of functions and services—playful and recreational, educational, ecological and climatic—provided by water in an urban landscape.

Water Catchers

design
strategies for
emerging
landscapes

Aims and Objectives

The topography in Forest is regularly exposed to flooding, events that reveal what is generally invisible. The threat of water becomes a subject, an opportunity for the emergence of an ambitious and collective project. In order to adapt to the projected rainfall forecast by 2100, rainwater management capacity in Forest, currently focused on the streets in the 'lower' part of Forest, will need to be multiplied at least fivefold and cover all its drainage basins, including the 'upper' part of Forest. This mainly 'technical' and quantitative challenge can rapidly become a lever and a major opportunity to act on a specific landscape at the entrance to the Brussels Region. Following the example of the Design for London approach, included as a reference project in the exhibition, we consider the meeting point between the Forest hillside, a remnant of the Soignes forest, and the Senne Valley, as a possible showcase for landscape innovation in Brussels, seen every day by thousands of passengers using national and international rail networks.

Hypothesis

The hypothesis of the *WATER CATCHERS* project is to test the degree to which Forest's open spaces can evolve towards management of surface rainwater, support for nature and new uses of space.

Methods

The methodology followed starts from a detailed analysis of the existing situation, and begins by zooming out. An intermediate scale of intervention is proposed that is neither that of

neighbourhood contracts, nor that of metropolitan strategic studies. Based on the historical, geological, climatic, spatial and planning specificities of the area, four landscape typologies were quite quickly identified. For each one of them, there is a confirmed concrete impact of the research, a project promoter exists, a public or private actor can become a partner, groups of stakeholders have an interest in the space... In order to be able to act immediately and prepare the ground for 2100, three strategies are proposed.

Proposals

Water mesh

One of the current approaches at communal level—in particular with the 'Tracé de l'eau' project (taktyk, 2016)—is to start with open-air rainwater management in public spaces. This preface to a full 'water mesh' is a strategy that could over time be extended to all streets. As has been highlighted, in case of heavier thunderstorms, this approach would be insufficient to manage the rainwater discharged into public spaces. Three types of spaces requiring complementary strategies are therefore necessary; we consider the *WATER MESH* to be the web binding these together.

Sponge parks

At the top of the Forest hillside is an unusual urban phenomenon, a system of parks set in the slope over an area of around fifty hectares. We have questioned the evolution of this space: how can we enable the infiltration of water into a soil that is particularly deep and sandy here? How can we expand the potential of the panoramic view over the Senne Valley, make more of the pleasure of the slope? How can this woodland heritage evolve? A 'sponge park' evokes ideas of rediscovering water in many different forms... water as a trace, water as an environment, water contributing to playful experiences. This hypothesis is relevant for fifteen heritage parks in Brussels.

Taktyk

Porous dam

We are convinced that some of the abandoned railway tracks can define new and unusual linear landscapes. Crossing the Forest hillside, the no. 124 railway line acts on the surface as a barrier to water coming down from the upper town to the lower town, and beneath the surface as a place for water to seep between the sandy and clay layers. How can we turn this particular characteristic into a lever for a landscape project? The feasibility study for the 'parc des deux rives' spanning the two sides of the railway track (taktyk, 2017) began this process of reflection, the railway infrastructure which today is considered as creating an urban divide, can tomorrow become a support for biodiversity, multiple forms of mobility, can at times host urban programmes, new and original facilities. On a more regional scale, this hypothesis concerns many railway lines that act as both urban and hydraulic barriers, in particular line 28.

Cooling marsh

At the foot of the hillside, the "productive town" is built on the old marsh. It forms a very large heat island, mainly impermeable and mono-functional, which discharges dirty water into the Senne and contributes in no way to the "park city". The "productive" town lies at the entrance to Brussels, along a corridor of prevailing winds. How can we take advantage of this opportunity? Industrial and logistical activities could become a basis for industrial water recycling to generate air cooling along the valley. The idea of a 'cooling marsh' has particular significance in the continuity of the Metropolitan Landscapes study, which examined this typology of landscape through the prism of energy.

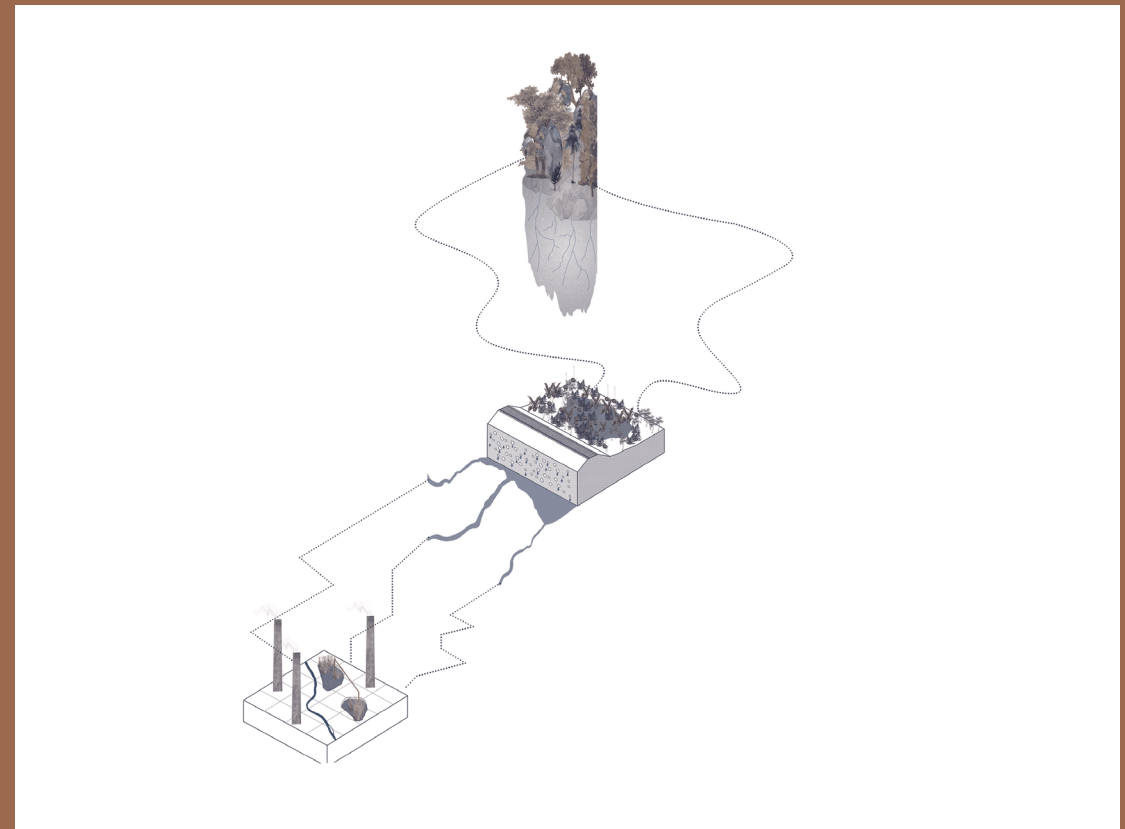
Results

The research through the project identifies different landscape typologies, develops action strategies that prioritise action on "latent" landscapes, such as railway network infrastructures and industrial areas, and which call for the

required adaptation of currently "frozen" landscapes, such as Forest's listed parks, into prototypes of innovative open spaces. The research examines conditions for the relevant replication of these strategies on a regional scale and identifies those stakeholders likely to be affected by this proposal.

Lessons

This exercise, which is neither academic nor commissioned, is far too brief to bring about real tangible results. It contributes above all to the public debate, to sharing an enlightened aspiration and, we hope to much-needed action on the Brussels landscape. The *WATER CATCHERS* proposal takes advantage of this rare freedom of reflection. Through a reading of neglected spaces, infrastructures, parks and roads, it identifies an assortment of landscape typologies that have neither been questioned nor linked together in the past. While this robust spatial model may not strictly correspond to regional planning tools (blue and green networks, rain, leisure...), it represents in fact an ambitious roadmap shared by the Forest commune. The strategies examined for each typology aim to be replicable. To do so, we propose the outline of a toolbox for water management at regional level, which will of course have to be amended over time. In this pre-operational perspective, the *WATER CATCHERS* proposal is based on possible synergies among stakeholders, in the resources and the actions that we have begun to identify. BULB's approach today, in 2018, comes at the right time for Brussels, to stimulate the desire to go further, to generate pilot projects and innovative and fertile partnerships between public players, players from civil society and the private players directly concerned.



Bureau Bas Smets

Augmented
landscapes

In search
of a Biospheric
Urbanism

*"We are not inhabitants of earth;
we inhabit the atmosphere"*
Emanuele Coccia

1 Brussels And Its Waters

In the course of the last two decades, the natural network of streams and marshes in the Brussels area has gradually been transformed into a technical system of pipes and storm basins. The central river, the Senne, has found itself buried under the city centre, while most of its eight tributaries have been channelled. The river's annual fluctuations between its riverbed and its floodplain have been replaced by a constant and minimal water course, with an ever-accelerating evacuation. While channelling the water has allowed a technical control of its flow, its capacity to renew groundwater reserves has largely been lost. Rainwater and runoff are no longer a source of life, but have become a factor in flooding. The urban sprawl continues to reduce permeable areas, increasing the volume of water that needs to be evacuated. A different model for inhabiting the territory must be developed, one that can reduce the risks of water, while allowing us to exploit its resources.

2 Geology And Meteorology

In 1926, Vladimir Vernadski developed the notion of the "biosphere" as the outer layer of planet Earth, created by plants. Thanks to the Earth's gravitation, the biosphere functions as a closed system, fed by solar radiation that plants transform into terrestrial energy through photosynthesis. The biosphere is distinct from the mass of the Earth, and represents a geological force capable of transforming the planet.

The space inhabited by mankind is limited to a thin layer of the biosphere, located between the substrate and the atmosphere. Too often, urbanisation has taken into account neither what lies below, nor what is above the built layer. Urbanisation needs to be redefined as an intelligent interface between the geological realities below and the meteorological impacts from above. Like a plant which sends down its roots into the soil to better capture solar energy, so Man should be able to settle intelligently in the underground of his territory to better take advantage of the meteorological elements above, such as the sun, rain and wind.

3 Molenbeek Prototype

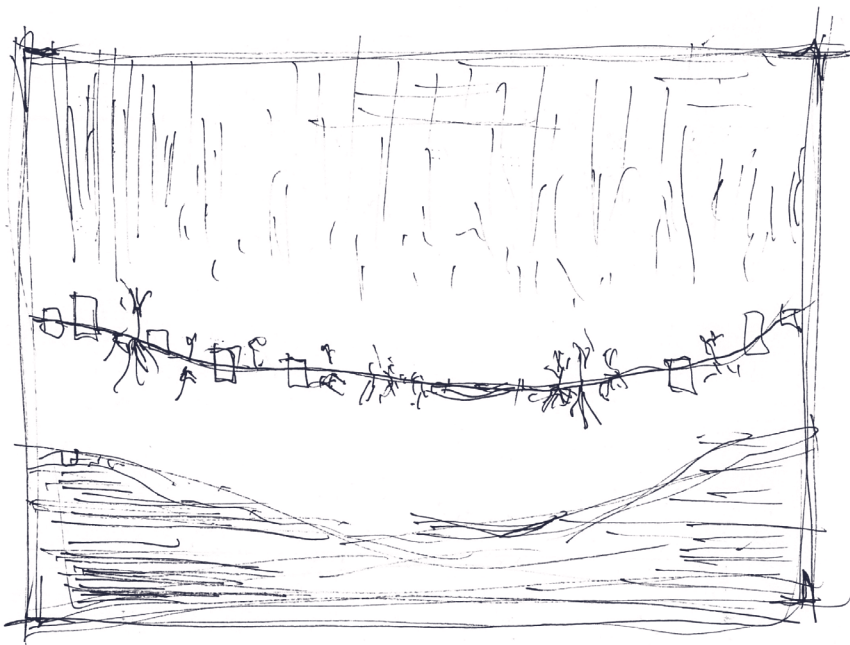
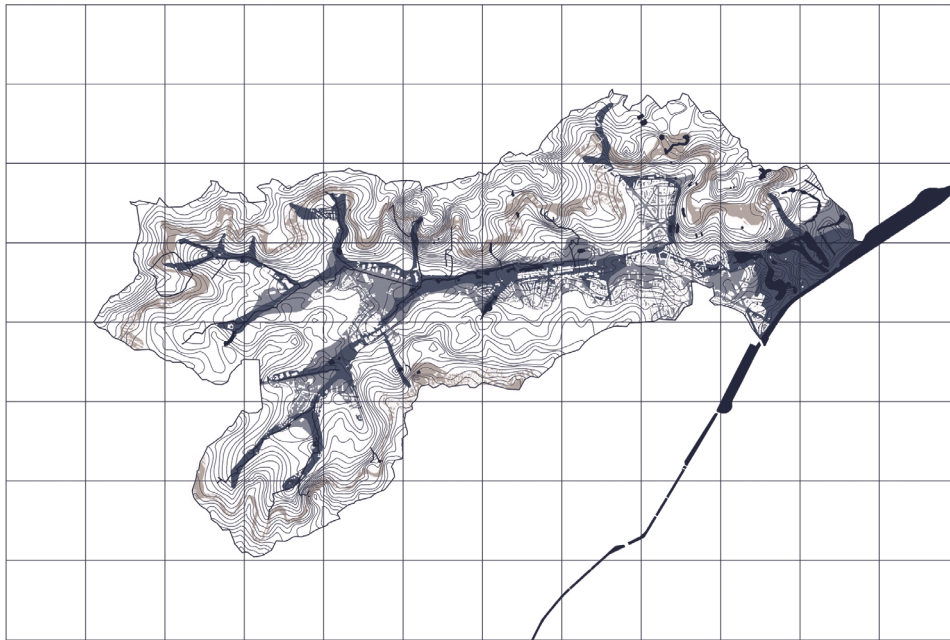
The Molenbeek, one of eight tributaries of the Senne, has its source in Flanders, and crosses four communes of Brussels before flowing into the Senne. Defined by the terrain, the drainage basin is the area that collects all the rain that falls there.

A study of the geological composition of its subsoil reveals three very different layers: first in the valley, the central river runs along a clay bed to which all the basin's rainwater is drawn; then, along its periphery, a layer of alluvium forms a very fertile soil; finally, going up towards the ridges, a sandy layer allows the infiltration of water into the slopes.

A specific approach for each of these strips would maintain the quality of its ecosystem while allowing the design of an urban project responding to the needs of population growth. We propose a long-term transformation for a radical change in 2100. The actions that would be focused on these three strips, drawn along the drainage basin like three horizons, would allow for the emergence of a new urbanism rooted in the geological layer in order to better respond to climate issues.

The Clay Riverbed

The ancient floodplain is marked by an impermeable clay cover, formed by



sediment deposits. This strip should be dedicated to the storage and natural purification of water. No new building should be allowed, and existing buildings should not be repaired. The creation of riverine forests, marshes and wet grasslands would restore a wetland ecosystem and prevent flooding. Hydroponic agriculture could optimise water storage. The existing parks along the Molenbeek would be integrated into a large linear park system, linked by foot and cycle paths.

The Alluvial Borders

This strip is characterised by silty alluvium deposited by the river over time. The alluvium makes the soil extremely fertile, providing an opportunity to develop urban agriculture. As a transitional space between the main riverbed and its urban surroundings, this strip could have an important community and social dimension. Outdoor sports facilities and new public buildings on stilts could be built there, taking into account the risk of flooding.

The Sandy Hillsides

Located on the hillsides, this strip corresponds to the outcrop of a geological layer made up of fine sands and gravel. Particularly permeable, it plays a key role in the renewal of groundwater reserves and in supplying the Molenbeek. Current urbanisation has failed to take into account the infiltration capacity of this strip. A new construction programme could be designed that would allow an increase in living space, while reducing the construction footprint.

This strip could focus on the construction of higher buildings, freeing up permeable surfaces on the ground. Planting green strips along the contours would capture rainwater and infiltrate it into the soil. The vegetation would filter runoff water and capture pollutants. Such a system would also reduce soil erosion and the overloading of the sewerage system.

4 Biospheric Urbanism

Like so many other cities, Brussels grew up around a river, on land that the river had shaped. The fertile soil fed its inhabitants, while water connected them to the territory beyond. The transformation of the city into a metropolis led to an expansion of the building footprint. Water was pushed back, and the soil was made impermeable. Today, the design of the metropolis must rethink its cohabitation with water and its substrate.

A new "Biospheric Urbanism" must position itself between geology and meteorology. The Molenbeek drainage basin project is an illustration of this urbanism between the sky and the earth, improving the eco-systemic performances of the landscape while increasing its living space.

03. **Everyone has a role to play in the reintegration of water in the urban landscape. Whereas retention of rainwater traditionally occurs via large scale works within the infrastructure (such as storm water basins), there is a need for alternative and complementary approaches (such as rainwater harvesting tanks), or those linked to individual buildings and land (such as a green/living roofs). For Latitude Platform, every centimetre of space counts as every drop of rainwater counts. Combining the analysis of ground permeability with information on its usage has allowed them to analyse the entire surface of the Brussels Region as if it were being used to drive storage, retention and treatment of rainwater. This hypothesis has led them to imagine, within the Maelbeek valley, what would happen if rain was a tangible object that fell on the landscape and lived within the urban environment in the manner of a transmitted virus. New partnerships, in particular social and ecological, and *aspects of the urban wetlands* would come to the fore as part of a real collective drive for water.**

04. **The "Blue Network", launched by the Brussels Region in 1999, aims to recognise the importance of water within its territory, notably through the reconnection of watercourses, lakes and wetlands which all form part of the historical hydrographic network. The meandering waterways, between which Broucsella ('bruoc' meaning 'swamp', and 'sella' meaning 'habitation') was built in the Middle Ages, led to the rural village becoming the prosperous city we know today. Over the past centuries, the natural watercourses gradually disappeared from the landscape, for sanitary and economic reasons. The Senne, which was transformed into a canal to help ease navigation, helped drive the development of trades and commerce which led to the industrialisation of the city. In order to support the continued development of urban activities, the covering of the Senne and the construction of the canal were conducted in parallel to projects for water drainage and distribution networks, at a time when this posed a threat from both a sanitation and flooding point of view. It is only with today's increasing ecological knowledge that the restoration of historical networks is now recommended. This represents a real impetus for the completed projects and future operations. This can only happen within the constraints of integration into the social and spatial realities of the modern city, where inevitably both the natural and artificial are combined.**

04.01

In 1878, Scottish author Robert Louis Stevenson travelled by canoe down the canals linking Antwerp and Paris in a journey that would culminate in one of his first travelogues. In the first part of his account, Stevenson describes the heavily industrialised areas that marked the Belgian landscape at the time. A century later, Peter Lombaert travelled down the Senne by kayak and condemned the appalling levels of pollution in the rivers.

An Inland Voyage, Robert Louis Stevenson, CreateSpace Independent Publishing Platform, 2014 (or.1878)

Descente de la Senne, Peter Lombaert, with images from "TV Brussels: compilatie afvaart van de Zenne", film, 21 mins 40secs, Coordination Senne & Escaut sans frontières, 1998

04.02

First dug in the 16th century, the Willebroek Canal attracted industry to the region and contributed to the economic and demographic growth of the country. Three centuries later, it was extended towards Charleroi then Antwerp, thus connecting Brussels to the sea. For sanitary and urban planning reasons, and in order to fight against flooding; swamps and ponds were gradually drained, rivers were turned into open-air sewers, then covered, before finally ending up as the reduced and fragmented water network that we know today.

The evolution of the Brussels river system, set of maps, print, Architecture Workroom Brussels, 2018 (source: Bruxelles Environnement)

04.03

Être galet is a work made up of objects found and assembled by the artists on the bank of the River Rhone. These are fragments of man-made materials (polyurethane foam, siporex, polystyrene, light concrete, etc.), which, once carried and reshaped by the river, blend in with the small stones. The domestication of the river—in particular through its system of dams and locks—has curtailed its strength, reduced the speed of the waters, and its capacity to form new pebbles. Like fossils, the real pebbles bear witness to a river landscape that no longer exists. The artificial stones are therefore paradoxically the “real” stones of the contemporary landscape of the Rhone.

Être galet, found objects, Andrea Caretto & Raffaella Spagna, 2011

4.04

The landscape of the Rhone Valley depends to a large extent on something that we never see because it lies underground. A tube made of mud bricks (adobe), the traditional building technique of typical houses of the Rhone Valley, is the keystone of the vast invisible infrastructure (pipeline) managed by SPMR (Société du Pipeline Méditerranée Rhône), connecting Marseille and Lyon underground, and shaping the landscape of the Rhone Valley.

Essai de rectification_tuyau en terre crue, clay, sand, gravel, rice straw, Andrea Caretto & Raffaella Spagna, 2011

05.01

The Water Square is a project that was developed in close collaboration with the local community: many stakeholders such as students and local residents took part in three workshops which examined the possible uses of the square, the desired atmosphere, and the way in which rainwater would impact it.

Three pools collect the rainwater: two shallow pools collect water for the nearby environment as soon as it rains, while a deeper pool only fills up when it rains over a longer period. After rain, the water of the two shallow pools flows into a system that gradually infiltrates underground. The groundwater supply is therefore maintained, even during dry periods.

Waterplein Rotterdam, De Urbanisten, photograph, Ossip van Duivenbode, 2013

05.02

The JNC-Petizon team proposes to create a new urban landscape through a valley whose river has long since disappeared beneath the streets. The challenge of this landscape project is threefold: to reintegrate the cycle of water into the city by infiltrating at a city block level; to maximise the ecological potential of public spaces through a green and blue network; to restore access to water in public spaces by enabling clear water to surge up from the bottom of the valley.

New Ukkelbeek Valley, model, video mapping and sound installation, JNC International in collaboration with Landscale, Yannick Jacquet and Thomas Vaquié, 150 x 400cm, 2018

05. In its current fragmented and reduced form, Brussels' hydrographic network can no longer fulfil its full natural role of promoting increased biodiversity and the essential processes of evacuation or, conversely, retention of water during rainstorms. The JNC - Petizon team has proposed the development of a technical system which is complementary to the natural network, and which would operate like a machine, protecting the Ukkelbeek valley from floods and increasing the quality of water, all whilst creating new urban areas. The Ukkelbeek River has long since disappeared underground, but the historical river network can still be traced through the path taken by certain roads and urban parklands. This landscaping approach aims at reintegrating the water network into the city by uncovering the positive elements of the slopes and riverbeds of the historic valley. This approach elicits a very different conception of what a city can be, demonstrating that freeing up space for a technical system can actually lead to a radical improvement in the quality of urban environments.

06. Whereas the traditional approach to water management led to the "everything in the gutter" approach for rainwater and wastewater, current methods seek ways in which innovative solutions can be integrated into sustainable city construction. The area being built upon, watercourses and natural defences are all considered holistically. The planning of urban and landscaped environments is essential in achieving the objectives, in terms of quality and quantity, of subterranean and permeable surface waters fixed by European directives. This would also create a reduction in the risk of floods, outside of extreme events. Ambitious, integrated projects are required. Alternative approaches are already being drawn up, and encouraged, on the one hand by government programmes such as the Water Management Plan (PGE) by the Brussels-Capital Region or the Regional Urbanism Rules (RRU), and also through the raised awareness, and involvement, of citizens thanks to the valuable work conducted by numerous local associations active in the field.

07. In order to build a more resilient city, changing gardens, streets and town squares will not be enough. It is essential to ensure the inclusion of larger urban spaces, parks, infrastructures, unused land and dormant city areas, which represent a significant opportunity to create new landscaping corridors on a regional scale. The hydrographic characteristics and the traces

06.01

The Water Management Plan aims to respond to the challenges of water management in Brussels. On the basis of the latest findings, it sets the environmental objectives to be met at local and regional level. The plan is updated every six years. It can moreover be consulted by any member of the public, who can draw up a list of comments for submission to the regional authorities. Many local associations in the region in particular have taken part in discussions concerning certain issues in the document. *Plan de Gestion de l'Eau de la Région de Bruxelles-Capitale 2016-2021* (PGE), print, Brussels Environment Water Department, 2017

06.02

In the wake of repeated flooding incidents in the town of Berchem-Sainte-Agathe, an innovative solution is being considered to counter the consequences of impermeable soils and inadequate drains. A process of cooperation between the commune, the region and its residents is being organised in order to develop a proposal for a New Urban River, which aims to connect the rainwater network to the blue and green networks by creating a new riverbed to channel clear water towards the Molenbeek. *Le projet de Nouvelle Rivière Urbaine du Cognassier à Berchem-Sainte-Agathe*, interviewees: Daniel Delvaux, Eric Mannes, Dominique Nalpas, film, 4 mins, Architecture Workroom Brussels, Jonathan Ortegat, 2018

06.03

Florence underwater, from (well above) head to toe. In 1966, behind this dystopian, almost provocative image, lies the memory of a decisive natural disaster that, in a way, provided the backdrop for the historical creation of a group of Florentine architects, Superstudio. The flooding of the birthplace of the Renaissance was experienced as a traumatic event, a paradigm change in the relation between Italians and their cultural and territorial heritage. *Salvataggi di centri storici italiani (Italia vostra)*, collage, Superstudio, 1972

07.01

Through the Design for London approach, Greater London has set landscaping at the heart of its development plans. The aim is to create a green infrastructure that mitigates the impact of climate change and meets local demand for landscape features. The success of this approach depends on significant investment in the involvement of strategic planning professionals, and in the setting up and monitoring of multi-stakeholder projects. *Lea River Park: a combination of spatial, property and programmatic opportunities in East London has made it possible, with a limited budget, to rediscover a forgotten valley through the creation of a 235ha network of parks*, illustration, 5th Studio, 2007

07.02

During a research workshop, whose content is included in the workbook on display, the model was a decisive tool, that can be read in at least three ways: the first is to assess its fragments as the prototypes of emerging landscapes; the second is to consider them as samples that evoke the implacable elements of each landscape; the last is to assimilate them as a global network that invites visitors to understand the interconnections and desired interdependence between each space. *WATER CATCHERS – Sponge Parks, Porous Dam, Cooling Marsh, Water Mesh*, conceptual model, cardboard, plaster, copper wire and plexiglas, Taktyk, 160x280x60cm, 2018

07.03

WATER CATCHERS, drawing printed on paper, Taktyk, 2018

07.04

A careful observation of the open space typologies in Forest leads Taktyk to develop four landscape typologies of reference. Climate change adaptation strategies are tested for each of them, next to a toolbox for water management at regional level, which will have to be amended over time by exploring other opportunities. In this pre-operational perspective, the *WATER CATCHERS* proposal is based on possible synergies amongst stakeholders, resources and actions that Taktyk has begun to identify in the course of this research. *WATER CATCHERS – Design strategies for emerging landscapes*, drawing printed on paper, Taktyk, 2018

07.05

Regional mapping has three objectives: it firstly quantitatively measures the spatial footprint of the identified landscape typologies; secondly it proposes a fresh vision of the potential of empty urban spaces within the first ring, and shows the importance of railway networks and parks; and finally, it recommends the inclusion of the productive town in the mapping of water, green and nature networks. *WATER CATCHERS – Regional replicability*, drawing printed on paper, Taktyk, 2018

07.06

The *Workbook* records all the main steps of the research process, as well as the resources consulted to conduct it. Its aim in the exhibition is to show the use of a daily tool employed in the work of Taktyk. *WATER CATCHERS – Workbook*, publication, Taktyk, 42 x 29,7cm, 2018

of industrial and cultural heritage can be used to develop locally adapted solutions. Through their research, Taktyk started thinking about these spaces which, once interwoven across the city, become a sizeable resource, capable of absorbing problems linked to the rainwater cycle. The proposal identifies different topological landscapes (the railway infrastructure, industrial zones, historical parks) in the Forest hillsides as well as strategies for climatic adaptation tested on this scale. Finally, they have also looked at the conditions required to reproduce this on a regional scale and have created an evolving toolbox which identifies the possible partnerships which could create immediate opportunities for pilot projects resulting in synergies between 'city park' and 'productive city'.

08./09. A better understanding of the valleys, inhabited areas and built-up areas will create the foundation upon which tomorrow's urban planning will be based. Population growth and environmental conservation, both inevitable in urban areas, create conflict and a need for negotiation. Rather than focus on the difficult debates between urban growth and spaces dedicated for nature, Bureau Bas Smets suggests using the forces of urbanisation and population growth to build a new urban planning method which effectively donates a structural space which maximises the permeability of the ground, stimulates the biodiversity of waterways and reduces the consumption of natural resources. Bureau Bas Smets has created an alternative model for living, through a landscaping proposal covering the Molenbeek basin in its entirety. The geographical scope of the project places high-density buildings on the outskirts and clears a central wetland in order to offer new recreational and commercial possibilities for an adapted and shared usage. The proposal focuses on the interface between climatic effects and the geological aspects of the valley, with an objective of creating a new "Urban Biosphere".

10. What role will water have in Brussels in the future, not only as a driver of local urban and landscape development, but equally as a key factor in positioning the European capital as a model city, from one of the most densely constructed areas of the continent? The answer will not only be found in technical solutions for water management, nor in a purely local solution, but also in private and public spaces. Methods for capturing, retaining or filtering as well as solutions covering entire plots and construction planning for built up areas are the key constituents for starting new

08.01

Realised for the exhibition *Agora 2017 – Augmented Landscapes* in collaboration with landscape architect Bas Smets, Christian Barani's filmed sequences dive the visitor in the Molenbeek valley. In search of a resilient territory, the film suggests that the city's capacity of transformation could stem from a precise projection of the landscape, that stays however ungraspable in its entirety. The image of a metropolitan city emerges from the linear structure of the valley generated by its parks, forests, swamps and farmland.
BRUXELLES 50°N – 4°E, film, 10 min 55secs, Christian Barani & Bas Smets, 2017

09.01

In the United States in the 19th century, Frederick Law Olmsted invented the 'parks system' by connecting natural elements around city centres into one continuous park. The example of Minneapolis, as in many other American cities, shows that these park systems are now at the centre of the urban sprawl, helping to solve hydrology problems while providing a qualitative green space. Providing for parks has made it possible to create coherent and connected spaces offering opportunities to multiple users, while combining aesthetic and ecological functions. The links that now exist on both a small and large scale follow a philosophy of inclusion and accessibility that is firmly rooted in the urban character of everyday life.
Parc system of Minneapolis, Minnesota, United States, satellite image, print, unknown, 2018

09.02

Geological map of Belgium – Brussels-Nivelles, drawing printed on paper, Bureau Bas Smets, 2001

Ferraris map of Brussels in 1777, drawing printed on paper based on historical map, Bureau Bas Smets, 2018

Satellite view of the Brussels-Capital Region, drawing printed on paper, Bureau Bas Smets, 2018

09.03

The capillary hydrography of Brussels' territory, drawing printed on paper, Bureau Bas Smets, 2012

Brussels, a city of secondary valleys, drawing printed on paper, Bureau Bas Smets, 2012

Eight catchment bassins as eight linear parks, drawing printed on paper, Bureau Bas Smets, 2012

09.04

Research on potential landscapes of the Brussels metropolitan region enables us to create a new vision of the future. This is structured around the four underlying landscapes that define the territory: the Valley of Parallel Infrastructures, the Network of Constructed Parks, the Protected Forests and Productive Fields and the Landscape of Tributaries. Together, they form an exemplary landscape that plays an active role in the development of the city.
The Exemplary Landscape of Brussels, drawing printed on paper, Bureau Bas Smets, 2016

09.05

Valley of Parallel Infrastructures, drawing printed on paper, Bureau Bas Smets, 2016

Network of Constructed Parks, drawing printed on paper, Bureau Bas Smets, 2016

Protected Forests and Productive Fields, drawing printed on paper, Bureau Bas Smets, 2016

Landscape of Tributaries, drawing printed on paper, Bureau Bas Smets, 2016

09.06

Principle of Biospheric Urbanism, drawing printed on paper, Bureau Bas Smets, 2018

Aerial view of the territorial project for the Molenbeek catchment bassins, drawing printed on paper, Bureau Bas Smets, 2018

09.07

Principles for the development of the 3 zones, drawing printed on paper, Bureau Bas Smets, 2018

09.08

A study of the geological composition of the Molenbeek catchment basin reveals three different layers. In the valley, the central river runs along a clay bed to which all the rainwater is drawn. Around it, a layer of alluvium forms a very fertile soil. On the hillsides, a sandy layer allows the infiltration of water. These three strips, drawn along the catchment basin like three horizons, allow the emergence of a new urbanism rooted in the geological layers in order to better respond to climate issues.
Masterplan of the Molenbeek catchment bassins by 2100, drawing printed on paper, Bureau Bas Smets, 2018

The Clay Riverbed, drawing printed on paper, Bureau Bas Smets, 2018

The Alluvial Borders, drawing printed on paper, Bureau Bas Smets, 2018

The Sandy Hillsides, drawing printed on paper, Bureau Bas Smets, 2018

09.09

The Clay Riverbed: A linear park with ponds and wetlands, drawing printed on paper, Bureau Bas Smets, 2018

09.10

The Alluvial Borders: Urban agriculture and public amenities, drawing printed on paper, Bureau Bas Smets, 2018

09.11

The Sandy Hillsides: Parks and plantations on the permeable soil, drawing printed on paper, Bureau Bas Smets, 2018

planning methods. However, it should not be forgotten that civil and political partnerships at different levels within the region, also have an essential role to play in the effective execution of the different proposals. Awareness and collaboration are two of the keywords to the success of the forthcoming visions and proposals.

The challenge presented by water requires us to create a new cultural standard for urban transformation projects: like the many layers of a Russian doll, an interdependence of scale is required. In reality, small projects cannot guarantee a viable global network in the same way that a project on the scale of a city (or valley) cannot provide for the specific needs of individual parks or streets. Understanding the importance of the valley as the underlying structure of the urban landscape, it appears necessary to present projects and solutions which aim to resolve water-sensitive issues in a systematic and integrated way: from the water tank on a patio to the green roof, from gardens encircling inhabited areas to recreational fountains in public spaces, from river basins to lost rivers that have finally been uncovered. All of these elements, and no doubt others in the future, garner their strength from their synergetic capabilities and their role as effective and sustainable methods in a near future.

Faced with climate change, protecting open spaces dedicated to natural biotopes is essential within densely populated urban settlements in order to guarantee the future prosperity of living conditions. Urban projects that demonstrate their innovation and understanding of the challenges are required in order to develop a true expertise that enables to preserve the quality and quantity of waterways and groundwater aquifers, a first step towards attaining regional and European calls. It is now urgent to take ownership of water, to start a process of learning by doing, in all its forms and at multiple scales, in order to launch pilot projects that are capable of scaling up through a kind of viral transformation. No doubt the key to success for a sustainable city, resilient to the challenges of the future, lies in the combined effects of the application and accumulation of this ensemble of small projects.

10.01

In the wake of increased flooding risks and the impact on our residents' quality of life, water management that is innovative and integrated with urban development is essential. Technical solutions that were used in the past are no longer sufficient. Preserving the biodiversity that is essential to our environment requires innovative spatial strategies supported by proactive cooperation between different stakeholders at different levels of intervention in our gardens, plots, streets, residential blocks, public spaces and the major landscape axes that define our cities.

Illustration of the opportunities for integrated water management in Brussels, print, Architecture Workroom Brussels, 2018

10.02

In 2015, Henk Ovink was appointed by the Dutch Cabinet as the first Watergezant (the Dutch government's special envoy on water affairs). As ambassador for water, he is charged with raising international awareness of the major importance of water-related issues, particularly in urban areas. As indicated in the recent report of the Nederlands Planbureau voor de Leefomgeving (Dutch Federal Environment Plan Bureau), there is an urgent need for an integrated approach to water management in order to limit climate and water-related risks. *Portrait: Henk Ovink*, film, 4mins 47 secs, a Storyrunner production commissioned by Architecture Workroom Brussels, 2018

10.03

In an attempt to define an unstable landscape through the introduction of a rigid geometry, Oushoorn is working on an installation designed for the Thorntonbank wind farm, 19km off the Belgian coast. This long-term project stems from the artist's visual fascination with a specific moment experienced while cleaning a wheelbarrow containing water that was swirling around in the bottom. In order to capture and define this volume of water, he installed a metal grate and filmed the movement of the liquid. Pursuing his investigation, Oushoorn placed a metal grate in a chest of drawers, each one of which contained a grate with a different pattern. The unpredictability of water is confronted with the rigidity of what the human mind requires to put order into something it cannot organise. *Grid (Plan chest A1)*, metal and water, Gauthier Oushoorn, 2018

Biographies

Andrea Caretto & Raffaella Spagna

Andrea Caretto (Turin, Italy, 1970, degree in Natural Sciences) and Raffaella Spagna (Rivoli, Italy, 1967, degree in Architecture) explore the profound relationships linking human beings to other living organisms and inorganic matter developing projects that evolve over the long term. In the last years they have been working on the idea that the form of things (objects, organisms, society, landscape, artworks...) could be intended as an emergent property, expression of a relational and morphogenetic field with which the artist has to confront. They have been working together on a regular basis since 2002, exhibiting in public and private institutions in Italy and abroad.

Architecture Workroom Brussels

Architecture Workroom Brussels is a *think-and-do* tank for innovation in architecture, urban planning and other fields relating to spatial development. As a platform for project research and knowledge sharing, AWB contributes to wider societal debate, architectural practice, and urban planning and development. Brussels, a modest cosmopolitan city and the capital of Europe, is the ideal starting point for AWB (often also a laboratory) to fuel the (inter)national debate on the conception of the urbanised world in which we live.

Bureau Bas Smets

Bas Smets opened his office in Brussels in 2007. Today, the Bureau Bas Smets (BBS) employs eighteen architects, landscape architects and engineers and has carried out projects in twelve countries. BBS often works with scientists and artists who are seeking landscape projects capable of producing a climate through the use of plants. The bureau has won numerous prizes and competitions. In 2018 Bas Smets received the French Architecture Academy Award for Urbanism and Landscaping.

Christian Barani

Christian Barani builds a practice that combines the field of documentary with that of Visual Arts. His research is based on a performative device that engages a body / camera walking in space. He defines a rule of the game that composes with chance and improvisation and generates images without a-priori. No previous scenario. From this experience came a protean work of films, films made in space, performance projections and photographs.

Gauthier Oushoorn

Gauthier Oushoorn (1986) lives and works in Brussels. Oushoorn's practice originates from historical structures (wether or not controversial) and focuses on craftsmanship, location, impact (cultural and economic), but also on its relevance. This anthropological, sometimes archaeological approach gives the possibility of providing a new light to the subject and results in film, sculptures, interventions, publications, etc.

JNC International

Over the course of its fifty years of existence JNC (Joining Nature & Cities) International has developed an expertise in terms of urban analysis at a neighbourhood level, in Belgium and abroad, notably through blueprints of public spaces which always put the inhabitants and environment first. The work of JNC falls within the scope of sustainable development centred around three key pillars; urban and landscape integration, socio-cultural integration and integration of the environment.

Latitude Platform

Gathering scholars and professionals from different domains, Latitude Platform is a dynamic working group that aims at understanding space in its multiple dimensions focusing on emergences, space-place issues, the everyday, and the unexpected. Through the use of qualitative research, ethnography, participatory methods, research by design and scenarios, the platform has developed a methodology that combines precise spatial and environmental analysis with ad hoc understanding of social phenomena.

Superflex

Superflex is a Danish artists' group founded in 1993 by Jakob Fenger, Rasmus Nielsen and Bjørnstjerne Christiansen. Their projects are related to economic forces, democratic production conditions and self-organisation. Superflex has gained international recognition for this. They have had solo exhibitions all around the world, among others, like at the Kunsthalle Basel (CH), GFZK in Leipzig (DE), Schirn Kunsthalle in Frankfurt am Main (DE), the REDCAT Gallery in Los Angeles (USA) and the Mori Museum in Tokyo (JP).

Taktyk

The TAKTYK agency is a multidisciplinary agency established in Paris and Brussels which interacts as an urban planner in several different forms: project management, teaching, practical research, publication and exhibition. In Brussels, the agency is a platform for both reflection and action which questions the future role of metropolitan open spaces. Thierry Kandjee is an urban gardener and champions a holistic and performative approach to landscapes. Since 2018, he has held the Landscape chair at the La Cambre Horta Architecture Faculty in Brussels.

Exhibition 21.09–11.11.2018

Keynote Lecture 20.09

Symposium 21.09

Curated Walks 22.09

Garden Tales 22–23.09

RISING WATERS

Shaping
Our Gardens,
Streets And
Urban Valleys

BO ZAR

BOZAR — Centre for Fine
Arts, Brussels
21.09—11.11.2018

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Guest architects and landscape
designers: Architecture
Workroom Brussels, Bureau
Bas Smets, JNC International,
Latitude Platform, Taktyk

Guest artists:
Christian Barani, Andrea
Caretto & Raffaella Spagna,
Gauthier Oushoorn, Superflex

Exhibition design:
Francelle Cane

Graphic design:
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Production Manager:
Evelyne Hinqe

Technical coordinator: Nicolas
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Director of Operations:
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Director Arts & Policy:
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THOMAS & PIRON



Bâtiment

Appartements
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