

UL2L - UrbanLinks 2 Landscape

Innovative open spaces -  
Best practice examples

April 2020

Schloss Dyck Foundation

[www.interregeurope.eu/ul2l](http://www.interregeurope.eu/ul2l)

An interregional cooperation project for  
improving natural and cultural heritage policies.

**Project Partners**

**Rhineland Regional Council (DE)**  
Schloss Dyck Foundation (DE)  
Umbria Regional Authority (IT)  
Kuldīga District Municipality (LV)  
Silesia Park (PL)  
Kristianstad Municipality (SE)  
Surrey County Council (UK)



European Union  
European Regional  
Development Fund

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## INTRODUCTION

The UL2L project's prime area of attention is, according to its long title "UrbanLinks 2 Landscape", the transition zone between the urban settlement and the landscape.

This is easily said, but in real life, when managing the growing or shrinking cities or when there is a need to find the best location for new uses, such transition zones are difficult to be found or to be identified and managed as such. The geographical, social, economic and historic contexts differ much. For many of those areas that could be considered as "urban links to landscape" there are also enduring expectations for (wishful or inevitable) changes, which often hinder agreements for their development both as a typical urban zone or as a purposely secured and designed transition zone or cultural landscape. Even more, the definition of "landscape" or "cultural landscape" differs much – across Europe but also from region to region.

However, the UL2L partnership was always convinced that transition zones (or urban links to landscape) offer several unique opportunities for sustainable urban, rural, and regional development policies.

To prove this and to learn from realised projects, good practices in the six countries and regions covered by the project partners were identified and then jointly studied during workshops and site visits, and intensively discussed with local experts and stakeholders.

These good practices are documented on the UL2L-website (<https://www.interregeurope.eu/ul2l/>) and some of them can also be found on the Interreg Policy Learning Platform in a wider context (<https://www.interregeurope.eu/policylearning/good-practices/>).

Not all these good practices here refer to the safeguard or development of zones that can undoubtedly be characterized as transition zones or urban links to landscape. The exchange of experiences between the partners confirmed that many dissimilar sites (not transition zones) deliver services that are repeatedly associated with transition zones too. This includes "traditional uses" such as housing and commercial use, and "newer use forms" such as green and blue infrastructures or urban farming, just to mention a few. The range of good practices serving the future development of urban links to landscapes is much wider and worthwhile to be explored.

Accordingly, the design of this study was discussed and modified within the UL2L partnership (mainly within the project's Working Group). The initial approach was limited to transition zones and the initial core areas of interest, which were health care services, urban gardening/farming and ecosystem services. The desktop study widened the scope of good practices: to other regions and

countries, to areas that cannot be classified as urban links to landscape and to topics that go beyond the main UL2L topics.

Based on the above, this report is a collection of short narratives with the highlights of the identified projects. The authors hope that the paper will work as a kind of an inspirational think book.

There is no doubt that some of the projects, such as CopenHill for instance, will not work as a blueprint for (many) other locations. But all projects might at least inspire local plans for similar projects or dealing with similar resources and tasks or challenges. The projects persuasively demonstrate that additional positive effects can be achieved when there is creative thinking that goes beyond the fulfilment of the prime reason to develop a project and to use an open space. Combining different functions and creating hybrid sites results in additional benefits and/or open new experiences to all users.

Some of the projects presented here also show that local and regional heritage and traces of former use in a landscape can attractively be recovered and presented. There are also examples for completely new landscapes that add to urban and rural diversity and to the quality of life.

With the limited resources and strict regulations by the funding authorities, it was not possible to deliver academic research or in-depth studies. Thus, the stories written are based on material and information that was available in the internet and/or literature. Everybody who needs more details or wants to get in contact to the project developers finds the relevant information at the end of each case study.

## CREATING SURPRISING LANDSCAPES

Single projects can have an impressive and surprising impact on places and their communities. By adding new structures, the surrounding areas change. As distinctive landmarks those projects attract attention and generate identification when taking the spirit of the site and its history into consideration.

These new spaces serve multiple functions by considering environmental and educational aspects as well as touristic and cultural development. The sites can directly enhance those activities by their infrastructure as well as encourage social and cultural activities in their surroundings.

## Creating surprising landscapes

### **Amager Bakke or CopenHill Copenhagen, Denmark**

In autumn 2019 the "cleanest waste-to-energy power plant in the world" has been opened in Copenhagen, Denmark (where else?).

As a new urban landmark, it is topped by an artificial ski slope that is open all year round and thus is a new and unique, manmade urban landscape.

CopenHill, also known as Amager Bakke, is a power plant located on an industrial waterfront.



The new plant can convert 440.000 tons of waste into clean energy annually. It was designed by BIG as public infrastructure with a double function as tree-lined hiking trails and ski slopes were placed on its roof along with the tallest artificial climbing wall in the world on its facade. The ski slope is made of a specific plastic material like grass which is sprayed with an environmentally friendly oil to make it greasy or even snowy.

As a power plant, CopenHill is so clean that the investors and the architects turned its building mass into a new focus for the social life of the city delivering a blueprint and proof for hedonistic sustainability: a sustainable city not only being better for the environment, but also more enjoyable for its citizens.

The design for the 41.000 square-meters CopenHill "ski plant" won an international competition in 2011 and work started two years later. It is hoped the building will help Copenhagen meet its goal of becoming the world's first carbon-neutral city by 2025.

CopenHill is distinguished by its wedge-shaped form, sloped green roof and blocky facade composed of 1,2 meters tall and 3,3 meters wide aluminium bricks that are stacked like gigantic bricks. The bricks function as planters, which will help to create a green façade.

Inside it is filled with the latest technologies in waste treatment and energy production", capable of incinerating 440.000 tons of waste to make clean energy that will deliver electricity and district heating for 150.000 homes. This machinery is all arranged in height order, which forms the building's sloped rooftop and ski terrain.

CopenHill's ski slope measures 400 meters and runs from the 90 meters high building to its base, with a 180-degree turn halfway down the ski track. Visitors ascend it via a platter lift, carpet lifts and a glass elevator that offers views inside the plant.

The building also welcomes non-skiers – incorporating a rooftop bar, cross-fit area, 85 meters high climbing wall and 490 meters long hiking and running trail within a lush garden. This garden is hoped to create a vibrant green pocket in the city for birds, bees, and flowers, while absorbing heat, remove harmful air particles and minimise stormwater runoff.

CopenHill is completed with ten floors of administrative space and an education centre for academic tours, workshops, and sustainability conferences. These facilities are all naturally lit by glazing that slots in between the aluminium bricks.

The building's original design incorporates an artwork in the chimney, releasing a ring of vapour every time one ton of fossil carbon dioxide is released into the atmosphere.



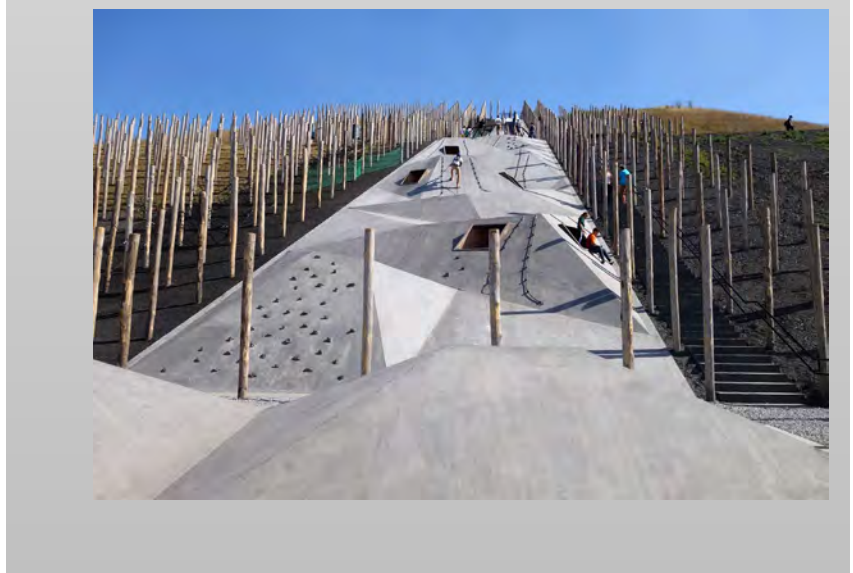
Year:	2011 - 2019
Status:	Plant opened in 2017, ski slope opened in October 2019
Client:	Amager Resource Center (ARC)
Design:	BIG Bjarke Ingels Group
Images:	1 – 3: BIG
Sources:	<a href="https://big.dk">https://big.dk</a>   <a href="https://www.copenhill.dk">https://www.copenhill.dk</a>   <a href="https://de.ramboll.com">https://de.ramboll.com</a>

## Creating surprising landscapes

### **Adventure Mountain be-MINE Beringen, Belgium**

The adventure mountain is part of the touristic and urban development project “be-MINE”, that aims to breathe new life into the coal-mining site in Beringen, the largest industrial heritage site in Flanders.

The former mining city asked to add new function to the 60-meter rubble mountain, and to redevelop the old industrial buildings into a cultural hotspot where the social and economic history of the city can be experienced in a playful way.



The spectacular scale of this site – regarding both the height of the heap as well as its industrial heritage – is unique in the relatively flat surrounding landscape of Limburgian-Flanders. The design consists of three parts that create a unity with the mountain and its past: a pole forest as a landmark, an adventurous play surface on the flank of the mountain and a coal square on the top of the heap. The spine of the ensemble is a straight stair that provides access to all levels. At night, a light line along the stairs makes the topography of visible.

The topography of the landscape has regained structure and is made visible by a pole forest: 1.600 timber poles are anchored in the northern flank of the heap. The rounded poles refer to the mining past; they were used for supporting the underground mining shafts. A part between the poles has been dedicated to an adventurous play course with balancing beams, climbing nets, hammocks, a labyrinth, and a rope course.

Wedged in between the pole forest lies a prismatically shaped play surface. The surface consists of sloped, horizontal, and vertical crossings, inspired by the underground mining shafts. This tectonic landscape offers space to many play options, and is scattered with tunnels, climbing surfaces and ‘giant stairs’. Its highlight is the more than twenty meters long slide.

All integrated play-elements in both the pole forest and the prismatic play surface have one thing in common: they challenge children physically, to play together and use their motor skills.

Increasing height and difficulty levels ask for collaboration and mutual encouragement, until one reaches the top. This is an immaterial reference to the hard work of the old mineworkers, who had to trust one another unconditionally.

On top of the heap, at 60 meters, a 'Coal Square' reflects both the past as the present character of the heap. The square is sunken and visualises the presence of the 'black gold'. Its sunken position provides shelter from the strong winds at the top of the hill. In the middle of the square the horizon will not be visible anymore, directing full attention to the clouds above. The sloped edges of the Coal Square can be used for seating and contain historic information on the site and the surrounding mining landscape. Visitors can take a stroll on the raised slope and enjoy the panoramic views on the surrounding Limburg mining landscape.



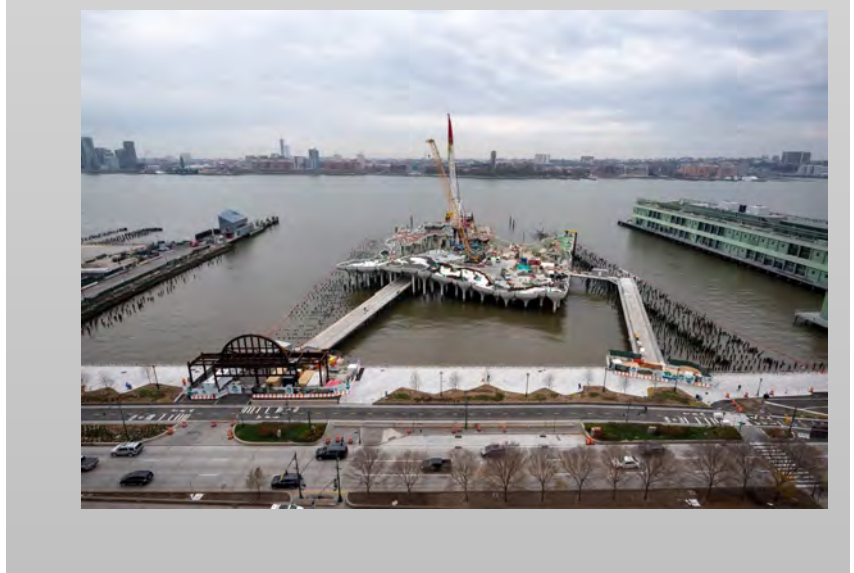
Year:	2015 - 2016
Status:	Completed
Client:	City of Beiringen
Design:	OMGEVING; Carve; Krinkels
Images:	1: Carve, Hannah Schubert; 2+3: Benoit Meeus
Sources:	<a href="https://omgeving.be">https://omgeving.be</a>   <a href="http://www.bemine.be">http://www.bemine.be</a>   <a href="http://landezine.com">http://landezine.com</a>

## Creating surprising landscapes

### **Little Island or Pier 55 New York, U.S.A.**

Little Island – also known by its initial name Pier 55 - is a new public park designed for New Yorkers and visitors of all ages to enjoy nature and art.

An innovative green space featuring open lawns and gentle pathways, community spaces and performance venues. It builds on the vision, legacy and remnants of Hudson River Park, the site where Titanic survivors arrived at safety after the tragic 1912 disaster.



This urban park will stand on 132 tulip-shaped pillars that rise from the Hudson River. The concrete foundations will range from 15 feet to 62 feet in height, creating what the architects describe as “an undulating support structure” for the landscape, which is intended to resemble a leaf floating on water.

When it will open in spring 2021, the 2.4-acre green space within Hudson River Park at West 13th Street will be peppered with 100 species of trees and shrubs.

The park’s rolling hills, tree-lined walking paths, and open lawns will provide visitors with classic views of the Manhattan skyline from a variety of vantage points.

All year, it will host arts, educational and community programming. Additionally, a 700-seat amphitheatre within the “floating” park oasis will feature a rotating program of live performances and educational workshops throughout the year.

Approximately 51 percent of the tickets for these offerings will be free or less than \$30 thanks to a lease agreement secured by media mogul Barry Diller, who is funding the project with fashion designer Diane von Furstenberg through the couple’s Diller-von Furstenberg Family Foundation.

The public park will remain open throughout the year for visitors to enjoy. While Little Island will be situated just off from West 13th Street in Manhattan’s Meatpacking District, the “floating” urban oasis will likely feel worlds away.

The project, which started with a budget of \$13 million has reportedly ballooned \$250 million.



Year:	2012 - ongoing
Status:	To open in 2021
Client:	Hudson River Park Trust (HRPT) & Pier 55 Project Fund (P55P)
Design:	Heatherwick Studio
Images:	1 + 3: Little Island; 2: Heatherwick Studio
Sources:	<a href="https://littleisland.org/">https://littleisland.org/</a>   <a href="https://www.timeout.com">https://www.timeout.com</a>   <a href="http://www.heatherwick.com">http://www.heatherwick.com</a>

## Creating surprising landscapes

### **Kö-Bogen II Düsseldorf, Germany**

Eight kilometres of hornbeam hedges, over 30,000 plants – Europe's largest green facade is complete. The facade is an essential element of the Kö-Bogen II commercial and office building by local ingenhoven architects. The new ensemble marks the conclusion of an extensive urban renewal project in the very heart of Düsseldorf. It also represents a paradigm shift: from an urban perspective, it signals a departure from the automotive era and a turn towards people-oriented planning.



And with Europe's largest green facade, it offers an urban response to climate change. Giving back as much green as possible to the city is a task that ingenhoven architects have been working on for decades and across different climate zones. With its supergreen® concept, the office is taking a comprehensive approach to sustainability.

Today, where an elevated motorway once dominated the landscape, the Hofgarten has moved back into the heart of the city. Kö-Bogen's sloping green facades face one another in a composition inspired by Land Art. The new building complex oscillates in a deliberate indeterminacy between city and park.

The two structures form a dynamic entrance to Gustaf-Gründgens-Platz, which opens up the view to icons of post-war modernism – the clear austerity of the Dreischeibenhaus (1960) and the buoyant lightness of the Schauspielhaus (1970), whose renovation was also undertaken by ingenhoven architects. Kö-Bogen II is a contemporary response to these two historic landmarks, without competing with them.

With studies, urban planning concepts, and concrete projects, Christoph Ingenhoven has been pursuing the idea of redesigning the centre of Düsseldorf since 1992.

The hornbeam was intentionally selected as a native hardwood species that keeps its leaves in winter and changes colour during the seasons. A comprehensive phytotechnological concept was developed together with Prof. Dr. Strauch, Beuth University of

Applied Sciences, Berlin, to incorporate the hedges into the building design.

The greenery improves the city's microclimate – it protects against the sun's rays in summer and reduces urban heat, binds carbon dioxide, stores moisture, attenuates noise, and supports biodiversity.

The ecological benefit of the hornbeam hedges is equivalent to that of approximately 80 fully grown deciduous trees. This integration of nature into architecture offers a contemporary urban response to climate change.



Year:	2017 - 2020
Status:	To open in summer 2020
Client:	CENTRUM Holding Deutschland GmbH & Co. KG
Design:	ingenhoven architects
Images:	1 - 3: ingenhoven architects
Sources:	<a href="https://www.koebogen-2.de/">https://www.koebogen-2.de/</a> <a href="https://www.ingenhovenarchitects.com">https://www.ingenhovenarchitects.com</a>

## LANDSCAPES DESIGNED BY ARTS AND FOR ARTS

Neglected, remote or deserted landscapes can give creative and touristic impulses through the interventions of art and design and become landmarks. By promoting a sustainable use of the resources, these projects respect the environmental demands of their natural setting.

As the concepts are meant to be an ongoing process different art projects can be realised year by year.

The artworks and designs are spatially dispersed and stimulate a slow approach by walking, hiking and even rowing; nature serves as the most important framework. Annual events with new projects ensure that these concepts remain attractive.

## Landscapes designed by arts and for arts

### Land use changes in urban wetlands - Hortillonnages Amiens, France

For centuries, the Hortillonnages of Amiens were a centre of agricultural production in the north of France.

During the 20th century, vegetable growing on the system of islands connected by canals became less and less profitable. As one of the effects this traditional agricultural production decreased.

With many of the plots no longer cultivated annual flooding led to a deterioration of the islands.

On the other hand, the abandoned areas were taken over by nature.

In 2010 The International Garden Festival - Hortillonnages Amiens was created by the Maison de la Culture d'Amiens.

Planned as a single event to bring the special natural, historical, and local significance of the area into public awareness it started by inviting young landscape designers, architects, visual artists and designers to implement their ideas on different islands in the Somme river.

The success of the project was unforeseen, and it became an annual event ever since.

This project has several objectives:

- to support young creatives
- to develop and preserve natural and man-made heritage
- to develop a cultural project for existing populations that also attracts new populations
- to promote professional integration for young people and people in difficulty
- to participate in economic solidarity
- to develop the touristic attractiveness of the site.

Because of their proximity to the city, the Hortillonnages have also become an extremely popular tourist destination. Every year, around 100,000 visitors travel through the maze of canals in the characteristic local boats.



The objective today is therefore to turn this innovative project and its surprising success into a sustainable destination for tourism, leisure, and relaxation, as well as a major marker of Amiens' identity.



Year:	2010 - ongoing
Status:	Annual festival
Client:	Maison de la Culture d'Amiens
Design:	International landscape designers, architects, visual artists and designers
Images:	1 – 3: Hortillonnages Amiens
Source:	<a href="http://www.hortillonnages-amiens.fr/">http://www.hortillonnages-amiens.fr/</a>

## Landscapes designed by arts and for arts

### **Arte Sella Borgo Valsugana, Italy**

Arte Sella, set up in 1986, is an international outdoor exhibition of contemporary art in the fields and woods of the Sella Valley (Val di Sella, municipality of Borgo Valsugana, province of Trento). For more than thirty years now, it is the place where mountains and contemporary art merge in a continuous dialogue.

Artists from all over the world are invited to encounter the valley to carry out artworks that are nourished by the unique history and nature of the place.



Dance, music, and art in all its forms have assiduously attended the paths of Arte Sella, giving way to unique projects and events.

Arte Sella was born in an experimental form in 1986, when a group of friends who lived in Borgo Valsugana met in the Sella Valley in the garden of Villa Strobele and envisioned to combine contemporary art and nature. It starts a period of contacts with local cultural institutions, with the people and the artists. Strong bonds were formed between these groups. Right from the start certain cardinal principals were formed that still inspire the activities of Arte Sella:

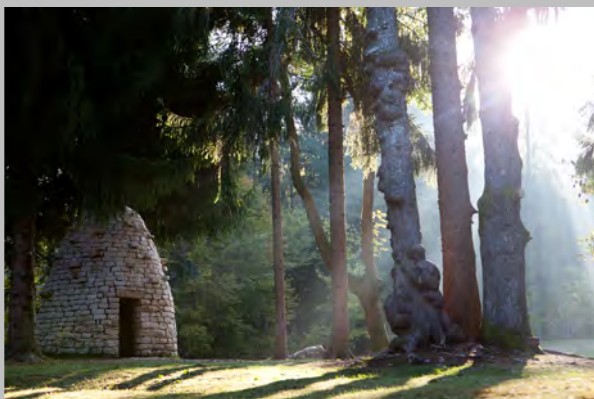
- The artist is not the absolute protagonist of the artworks but accepts that nature completes his work.
- Nature must be protected as a vault of nature.
- Nature is not only protected, but interpreted even in its absence, thus changes the ecological relationship.
- The artworks are placed here and there and are made of natural materials. They come from the landscape and then return to nature.

From 1996 Arte Sella developed a forest path with art works on the Southern side of Mount Armentera. In 1998 another path was added, "Malga Costa" which in the past was a farmland. Today the barn serves as a concert hall and the farmhouse is a meeting place and a place for the artists to share their views. 2001 was an important year for Arte Sella as the Tree Cathedral of Giuliano Mauri was created, which is a symbol of Arte Sella ever since. This

imposing architecture is almost complete thanks to the patient intervention of nature.

Since then Arte Sella has become established, promoting collaborations between nature and famous artists such as Nils Udo, Arne Quinze, John Grade and Michelangelo Pistoletto, just to mention a few. In 2016 Arte Sella opened again the Villa Strobele's garden, where there are new artworks realised by important architects as Atsushi Kitagawara, Kengo Kuma and Michele De Lucchi.

Today, Arte Sella is both a qualified exhibition of artistic works and, most important, an ongoing creative process in which art works can be followed as they grow and evolve. The works are usually three-dimensional and created using stones, leaves, branches, and tree trunks. Man-made objects, materials and colours are rarely used. All works are placed outdoor and can be admired while enjoying the different types of woods, stones, and monumental trees in the surroundings. When the exhibition closes, the artworks are left to decay, thus becoming again part of nature's life cycle.



Year:	1986/1996 - ongoing
Status:	Permanent art trails with annual exhibitions events
Client:	Associazione Arte Sella
Design:	Associazione Arte Sella and numerous international artists
Images:	1 - 3: Arte Sella; Photographer: Giacomo Bianchi
Source:	<a href="http://www.artesella.it">http://www.artesella.it</a>

## Landscapes designed by arts and for arts

### **Jupiter Artland Bonnington, United Kingdom**

Jupiter Artland is foundation with a contemporary sculpture garden located in the grounds of Bonnington House, outside Edinburgh. The foundation also provides educational activities for different target groups.

Works by many leading artists have been commissioned and then constructed in situ.

The relationship of each artwork with its specific topographical location is a crucial feature of the Artland, that is, art within the landscape.



The 80-acre garden is a garden of discovery - an earthwork here, a copse of cradled rocks there, the entrance to a fathomless as a surprise somewhere else. Visitors are provided with a map but there are no set routes and paths.

Jupiter Artland has charitable status and is committed to providing an educational resource for schools in the region. Students and children may touch, feel and explore these works of art using their senses, imagination and intellect.

There is an excellent archive of film, photograph and journals which enable the students to have an insight into the long creative process from commission to installation of each piece of sculpture.

The Foundation is also committed to nurturing the work of outstanding contemporary artists and offers annual residency. In conception, Jupiter Artland is a continuing work-in-progress.

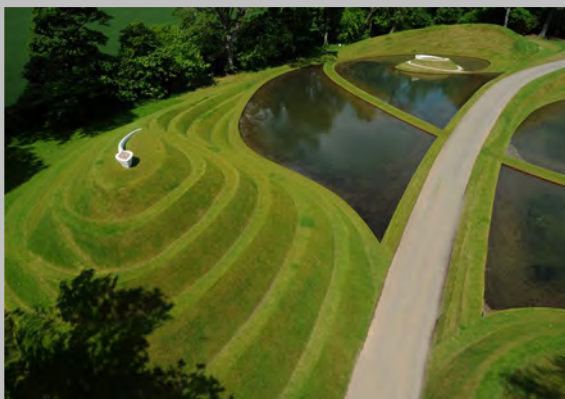
Robert and Nicky Wilson bought Bonnington House, a Jacobean manor house within an 80-acre estate, in 1999. Within a few years, the formal gardens, fields and woodlands surrounding this historic house became the perfect milieu for a sculpture park, influenced by Ian Hamilton Finlay's Little Sparta, some thirty miles from Bonnington.

In this ancient place with reputed Knights Templar connections, art and nature, home and family, livestock and the footfall of those interested in contemporary sculpture could all co-exist.

Now, the dream is definitely taking shape, configuring the vistas and hidden landscapes of Jupiter Artland in a variety of provocative and surprising ways. New works, e.g. by Turner prize nominated artists Nathan Coley, Jim Lambie and Cornelia Parker, are added. Thus, also return visitors will come across new installations in the park and hopefully come to appreciate more fully the concept of this unfolding story or continual work-in-progress.

The Artland is a unique resource in Scotland. It showcases contemporary sculpture in an ever-changing environment. The artists whose work is part of the collection are some of the most important of their time.

The artworks are exhibited in natural gallery spaces within the grounds of Bonnington House, with a classroom set among beautiful parkland and woodland where sculpture is placed in relation to its designed and natural landscape. The education centre is housed in the former stable block, which has been rebuilt to provide a state-of-the-art classroom, a resource library, the artist in residence's studio and bothy.



Year:	1999 - ongoing
Status:	Completed, new artworks added regularly
Client:	Robert and Nicky Wilson; Jupiter Artland Foundation
Design:	Various artists and designers (incl. Nicky Wilson, N. Coley, Jim Lambie, H. Finlay, C. Jencks, C. Parker)
Images:	1 - 3: Jupiter Artland
Source:	<a href="https://www.jupiterartland.org/">https://www.jupiterartland.org/</a>

## DISCOVERING FORGOTTEN HISTORY THANKS TO LANDSCAPE INTERVENTIONS

Our landscape is the result of different influences. Not everywhere can historically places with a singular character be found, but mostly all over Europe agricultural traditions or industrial uses shaped the environment. Over time requirements have changing and structural infrastructure has disappeared, at some point it becomes difficult to understand the specifics of a place and what shaped its appearance in the first place.

Different projects are looking into such forgotten traces. Contemporary interventions mean they can be experienced once more by the public. The places increase their cultural impact and become sites of leisure and recreation.

## Discovering forgotten history thanks to landscape interventions

### **Heritage Flume Sandwich, MA, USA**

Inspired by the historic gristmills of New England, the Heritage Flume fountain is perfectly attuned to its wooded site on the grounds of a Cape Cod museum and gardens. Traversing through a forest dell and ending in a 26-foot-high waterfall into a daylily garden, the design celebrates the melding of built forms, cultural history, and nature.

It is at once sculptural and fully at home in its setting and provides a delightful sensory experience.



Heritage Flume gives an abstracted reference to the historic wooden water flumes used as power sources for early grist mills on Cape Cod during colonial times.

The Heritage Museums and Gardens has a nationally significant collection of rhododendrons by Charles Dexter which the museum wanted to preserve and showcase.

From the entry terrace, the water feature appears as an infinite mirror floating from the arrival terrace, out into the mature canopy of the dell as a straight, level line through the established landscape, contrasting the woodlands with a clear human intervention. From the Daylily Garden, the water feature cantilevers over the water garden. The waterfall cascades into a pond that was designed for a new aquatic plant collection, a valued addition to the institution's horticultural canon.

The selected site for the fountain was an unmanaged Oak Pine forest dell between the elevated entry and the lower Daylily collection garden. The dell forest consists of a mature stand of white and black oak, hemlock, pitch pine, beech, rhododendron understory, and fern ground-plane that was beautifully wild. A third of the Daylily Garden was replaced with a contemplative water garden. Waterlilies were selected to protect the ecology of the pond while providing aesthetic interest to visitors. The surrounding emergence planting palette consist of native plants to improve the quality of the woodland edge. The calm water surface

reflects the canopy and sky above and provides a valuable source of water for birds and other wildlife.

By closely collaborating with the museum, contractor, and steel fabricator, the landscape architect was able to make a bold, but sensitive insertion into the existing landscape that connects visitors to natural areas of the property and expanded collection gardens. The flume was carefully crafted and implemented through a thoughtful design and construction process that intertwines built form, cultural history, and nature as one. The Heritage Flume represents the local history, ecology, and horticulture, and has become iconic to Heritage Museum and Gardens and Cape Cod.



Year:	2008 - 2010
Status:	Completed
Client:	Heritage Museums and Gardens
Design:	STIMSON; Stephen Stimson, Joe Wahler; Dan Euser, Waterarchitecture, Inc.
Images:	1: Ngoc Doan; 2: STIMSON; 3: Charles Mayer
Sources:	<a href="https://heritagemuseumsandgardens.org">https://heritagemuseumsandgardens.org</a>   <a href="https://www.asla.org">https://www.asla.org</a>

## Discovering forgotten history thanks to landscape interventions

### **Lorsch Abbey Lorsch, Germany**

The Benedictine abbey in Lorsch was dissolved as early as 1557. Although the original structures have largely been lost, it was declared a World Heritage Site in 1991, because of its gatehouse, one of the last Carolingian testimonies to the post-Roman period east of the Rhine. The aims of the new landscape architecture were to accentuate the still existing remains, to delineate traces and to add new structures to uncover and reveal the history of the site as well as its relationship to the cultural landscape.



The new design of the grounds is an example of contemporary landscape architecture which brings to life an early mediaeval abbey whose structures have been largely destroyed. The Carolingian gatehouse, a fragment of the church and part of the monastery wall have survived as historical remains from the 8th century. These are supplemented by the tithe barn, the elector's house and the forester's house from later periods. The new landscape design has made it possible to identify and walk through the lost structures again by imprinting them as clearly demarcated historical "footprints" in an extremely reduced landscape. The minimalist design makes use of lush lawns from which single solitary trees and the historical buildings rise up as individual monuments. The site is an archaeological monument, the archaeological finds being located just a few centimetres beneath the grass surface. Rather than being dug into the soil, the new design was thus created on top of it.

Within the abbey walls, slight changes to the topography – mostly in the form of cleanly slanting indentations – make it possible to identify the former buildings (monastery church, enclosed forecourt, cloister with covered walkway) and their positions relative to each other. It is as if the vanished buildings have left their footprints in the dark, lush lawn.

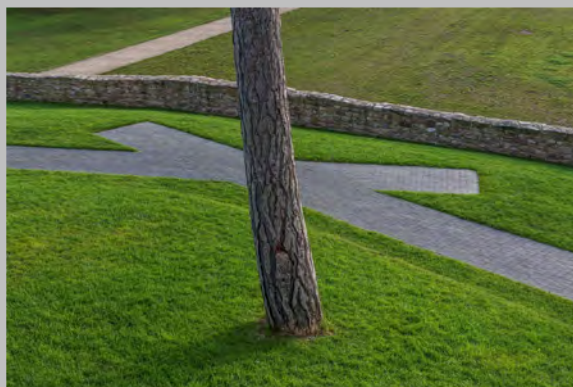
Sections of lawn and paving alternate on the approach to the gatehouse, resulting in a gentle slope which gives the impression

of a flight of steps with oversized treads. The alternation between lawn and paving interlinks the abbey grounds with the town.

The herb garden behind the tithe barn is a new element. While there is no historical evidence for the garden, its planting is based on the “Lorsch Pharmacopoeia”, which was written around 800 A.D. and was placed on the UNESCO Memory of the World Register in 2013. The plants mentioned in this book can be found in the garden, which hugs its way down a small slope in terraces formed by numerous dry walls. Its small-scale layout forms a strong contrast to the overall impact of the grounds and it thus comes as no surprise that the herb garden behind the tithe barn appears somewhat “tucked away”.

Here as throughout the grounds, visitors are guided by a network of paths laid out like bands along the structures, whereby the ends and curves of these bands do not run “seamlessly” into each other but overlap instead, akin to points on a railway track.

The abbey grounds in the town centre are linked by a network of paths to the earlier monastery of Altenmünster. A circular path also takes in the Carolingian open-air museum of Lauresham, where it is possible to explore the absorbing world of the Carolingians.



Year: 2014 – 2017  
 Status: Completed  
 Client: Land Hessen, Verwaltung der staatlichen Schlösser und Gärten  
 Design: topotek1  
 Images: 1 - 3: topotek1  
 Sources: <https://www.topotek1.de/> | <https://wp.eghn.org>

## **Lelijke Plekjes – Project Intercommunal Leiedal, Belgium**

For three years ten municipalities worked together with Leiedal on the project “Lelijke plekjes, mooie trekjes”, in ambition to improve the quality of public spaces.

The project did not focus on additional invasive infrastructural interventions, but on abandoned, neglected or unfinished sites. Inhabitants of the region could point out the ‘ugly spots’ on a website. Students and professional designers were called upon to come up with fresh ideas for a make-over.



Their ideas and suggestions for 25 different places were collected in the atlas ‘Lelijke plekjes, mooie trekjes – creatieve ingrepen in de publieke ruimte’ (Plain places, attractive traces – creative interventions in public space). In the meantime, Kortrijk, Harelbeke and Wevelgem had already started reconverting one of the ‘ugly spots’.

The Oud Stationsplein is part of the former regional train line 85, now called ‘Trimaarzate’. Train traffic in Sint Denijs was abandoned by 1960. Recently a bicycle path was laid out along the former track, connecting the old station square with a dense network of different recreational paths. These new paths make use of the given spatial situation in the landscape and of the openings and layouts in the built-up areas. The linear remnants of the train tracks that are reused in the new transport and leisure network are quite obviously linked to the historic background. In other, urbanistically more complex areas – such as the area of the station square – the former context is not as obvious anymore.

Consequently, there are ‘strange places’ that seem to have no story to them. The Lelijke Plekjes/Ugly Spots initiative gives the opportunity to clarify and communicate a context, adding a narrative vein to the great achievement of newly reconnecting the landscapes of Leiedal and Westlanders.

The central, almost sculptural gesture to give the redesign of Old Station Square a catalysing moment for its possible reactivation, is

a pair of “platforms” of different width and length. These volumes are fully clad in bricks, like the adjacent houses, and in this way create an abstract reminder of the train station and platforms in one gesture.

The sidewalk at Helkijnstraat is extended to create a paved surface in the middle of the square. The same is done next to the Café de Paris. This creates two distinct surfaces that offer themselves to pedestrians. The Oud Stationsplein has a (central) square again and a terrace in front of the café. The café will have a chance to use the exterior space for outdoor seating.



Year: 2011 - 2017  
 Status: Completed  
 Client: Intercommunal Leiedal  
 Design: 100landschaftsarchitektur with studio basta  
 Images: 1 – 3: Thilo Folkerts (100landschaftsarchitektur)  
 Sources: <http://landezine.com> | <https://www.100land.de>

## Leubinger Fürstenhügel Leubingen, Germany

In Leubingen, a town not far from Sömmerda, history has left important traces: the Leubingen Prince's Hill (Leubinger Fürstenhügel). The burial place from the early Bronze Age is situated in a wide cultural landscape characterised by agriculture.

The hill represents a landmark visible from afar. The original dimensions can no longer be recognized today, because due to earlier excavations on the hill, it is much smaller today, both in height and in area.



In connection with the construction of the federal motorway A 71 near Sömmerda and the associated construction of a new filling station and rest area, the Leubinger Fürstenhügel was open for an innovative development for tourism. It is now both a rest for Bronze Age princes and a short stop for motorway users.

The design deliberately concentrates on the connection of the rest area with the Fürstenhügel. The lightning-shaped landscape staging should guide visitors from the southern filling station and the restaurant to the Fürstenhügel, in the north of the development area. The visitor will be accompanied step by step with information about the history and significance of the place on the way to the hill as a time warp or time travel between the millennia of history with its changes in culture, society, customs, vegetation and landscape.

The landscape lane cuts slightly into the landscape and is framed by smaller slope models. Rooms opening and closing through the planting and the path offer the visitor different perspectives and points of view of the Leubingen Prince's Hill and the adjacent landscape.

Elegant as well as robust supports along the path take up information boards distributed along the way, visualizing the time travel through space and landscape - partly with "classical" information in pictures and writing, but also with interactive elements, which, through self-action and a change of perspective,

allow a view of the original contour and cubature of the Leubinger Fürstenhügel.

It is a concept and design resulting from an early and intense partnership between the landscape architect, the architect and communication designers. The operator of the filling station supports the entire concept too, by an exhibition space inside the building.

Embankments, in the form of generous terrain models, absorb the difference in height between the landscape aisle and the car park to the west. The path blends with the architecture of the service area to form a formal unity and offers a comprehensive experience of the Genius Loci from Bronze Age until today.



Year:	2014 - 2020
Status:	Completed
Client:	DEGES Deutsche Einheit Fernstraßenplanungs- und -bau GmbH; Shell Deutschland Oil GmbH
Design:	Plandrei Landschaftsarchitektur and OSTERWOLD°SCHMIDT EXP!ANDER ARCHITEKTEN
Images:	1 -2: Plandrei Landschaftsarchitektur
Sources:	<a href="https://plan-drei.de">https://plan-drei.de</a> ; <a href="https://www.iba-thueringen.de">https://www.iba-thueringen.de</a>

## **(Museum and) Park Kalkriese**

### **Bramsche, Germany**

The architecture of the museum and its environment is an architectonic piece of art, which fully subordinates itself to the local landscape and its history. It translates the spirit of the scenery into a clear form. For centuries one has been looking for the “Teutonic Woods”, which – referring to Tacitus – was the scene of the Germanic victory over the Roman troops of Publius Quintus Varus in 9.A.D. By excavations it is now proven that the site is the place of the battlefield.



The compact cube of the museum building is covered with steel sheets, their top layer covered with rust. This effect of natural corrosion and the building's russet colour lets it fit into the surrounding landscape like an organism and thereby creates a connection to its history.

The museum park has a measure of 20 hectares and is located in the centre of the about 27 km widespread battleground. The hill of Kalkriese in the south, secured with a rampart built by the Teutons, and the moorland in the north formed a natural narrow landscape, in which the several km long spread line of Roman soldiers could be attacked by surprise. The design of the park focuses on the fact that the historic landscape is the actual exhibit of the museum.

By afforestation in the southern parts and cutting the wood on the former open parts of the site, the park is set back to the landscape situation at the point of the battle. The route of the Roman legions is marked with iron plates which are obviously exposed to deterioration through rust. Similar to the memory of the battle and the soldiers killed in action which faded away during the years until it fell into oblivion in the Middle Ages. Iron poles show the former height of the wall built by the Teutons. Visitors can walk onto the rampart from behind the parapet and one can change from the Germanic side to the Roman side through the gate.

A small sunken 'reconstruction' shows in detail the authentic site at 9.A.D. The different levels of time include the past and present time,

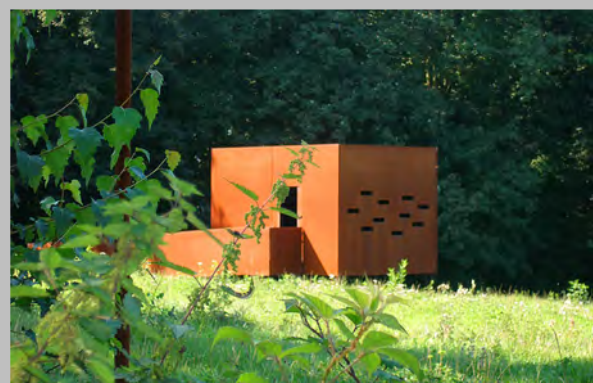
meaning that today's agricultural use of the land with its pathways is included as part of the park.

In the museum's park, three pavilions can be found: The pavilion of watching, the pavilion of listening and the pavilion of asking. The pavilion of watching does not show images of the battle, the pavilion of listening does not provide sounds from the past, the pavilion of asking does not offer any answers. These are places supposed to sharpen the visitors' perception and invite them to address what happened here on the sensual level. Not knowledge, but the power of imagination is called for here. What happened in this place? What kind of sounds reverberated in this landscape?

It is dark in the pavilion of watching. Light, shining through a large prism, gives an alienated picture of the surroundings like we see it today. It is quiet and peaceful. No sign of devastation and death like 2000 years ago. To get an idea of this we must change our vision of this place consciously ...

In the pavilion of listening reminds of the sound of marching soldiers, of commands, calls, screams and groans. Today an ear trumpet collects the sound of the 21st century and amplifies it in the ears of the listener. One can aim it towards the forest or in the direction of the moor.

The pavilion of asking considers why we should care about old Roman battles after more than 2000 years. In most European countries there was no more war for many decades. On the other hand, war is omnipresent. Every evening in the news. But something like this will not happen again. Or will it ...?



Year:	1998 - 2002
Status:	Realised, museum opened in 2002
Client:	Landkreis Osnabrück und Stiftung der Sparkassen des Osnabrücker Landes
Design:	Studio Vulkan; Annette Gigon/Mike Guyer Architekten
Images:	1: Studio Vulkan; 2+3: Museum und Park Kalkriese; Photographers: Hannes Henz; Stefan Leppert
Source:	<a href="https://www.kalkriese-varusschlacht.de">https://www.kalkriese-varusschlacht.de</a>

## DESIGNED LANDSCAPES PROVIDING HEALTH CARE FACILITIES

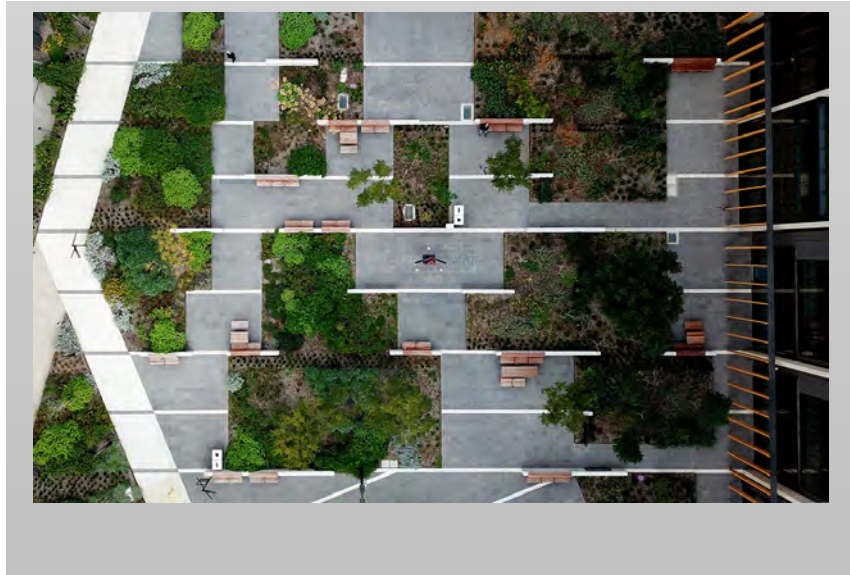
Many projects promote a general range of leisure and recreational activities. In other concepts, however, human health is at the centre of the design. The planners are concerned with the participation of all groups of people. Nature and being in nature are understood as an integrating and healing element and are accordingly considered.

Whether in urban areas as a green oasis, as a transition zone between town and country or as part of the landscape, these projects aim to raise awareness and slow us down. They focus on the requirements and needs of diverse population groups and emphasize health aspects.

## Designed landscapes providing health care facilities

### **Bendigo Hospital Bendigo, Australia**

The Bendigo Hospital project delivers world-class healthcare facilities as a green hospital across a 13-hectare precinct. References to the site's history and ecology have helped deliver social, environmental, and cultural benefits with a strong sense of place, for patients, staff, visitors and the community. The design was derived through extensive engagement with numerous stakeholders including the hospital staff, local community groups and local government.



The highly collaborative Bendigo Hospital Project was delivered as a public-private partnership (PPP) under the State Government's Partnerships Victoria policy from a world-class brief, combining architecture and design, health planning, landscape architecture, engineering, and construction.

Both the project brief and site posed significant challenges including: the precinct scale and establishment of two-sub precincts, accreted heritage buildings and demolished buildings, the need to support the future growth of Bendigo, considerable topographic transition across the site, significant safety in design considerations for people with limited mobility and where higher levels of safety and security required in the mental health unit, the complexity of designing a large number of multi-level landscapes on structures that were integrated into the building with levels of exposure and enclosure, complex user group, client and consultant engagement, access and maintenance and a 25 year design life.

The landscape architectural design drivers - connection and kindness - foregrounded a legible structure, developing a walkable precinct with a clear hierarchy of streets and walkways that engage with the broader city, heritage buildings and topography. Canopy cover and green links provide a high-quality vibrant public realm, with a north-south civic axis creating an important, inviting through-site link.

Providing choice helps to minimize stress in healthcare environments, so a diversity of community, collaborative and

private spaces was created across the precinct and throughout over 46 balconies, green roofs, roof decks, and courtyards (including 20 mental health courtyards).

Evidence-based and Biophilic Design approaches were used across the project, incorporating fractal leaf structures and utilising natural and local materials, moving water and textured planting. Green infrastructure initiatives include water sensitive urban design, structural soils and with significant increases in biodiversity, habitat, and the urban forest, restoring valuable ecological and hydrological systems across the precinct. The project has been assessed in consideration of best practice and will inform project planning of future health care environments in Victoria.

Recognising the region's significant cultural heritage, the design team collaborated with the Dja Dja Wurrung Clans Aboriginal Corporation through the 'Closing the Gap' initiative. The results include the Aboriginal Services Courtyard, with a fire pit and planting, to enable cultural practice and education. Within the broader precinct, an aboriginal garden incorporates more local indigenous planting and celebrates a valuable cultural artefact, a relocated scarred tree. The planting design was completed in collaboration with the community and the garden construction created community employment opportunities. Local Chinese history too is celebrated in a dedicated community garden, and site-specific public artworks are integrated across the precinct.



Year: 2013 - 2018  
 Status: Completed  
 Client: State Government of Victoria  
 Design: OCULUS  
 Images: 1: Mark Laririt OCULUS; 2 - 4: OCULUS  
 Source: <https://www.oculus.info>

## Designed landscapes providing health care facilities

### **Oasi Zegna Trivero (Biella), Italy**

In the 1930s, in love with the beauties of nature and deeply rooted in his own land, the Italian born textile industrialist Ermenegildo Zegna launched a formidable and avantgarde program of environmental reclamation around the village of Trivero (Biella), where the Zegna wool mill is still operating.

From this early initiative, Oasi Zegna, was created in 1993 as a natural development of Zegna's "green thought".



Oasi Zegna is a freely accessible nature park covering around 100 km<sup>2</sup> between Trivero and Valle Cervo in the Biella Alps, in Piemont.

Out of a visionary dream, the first example of environmental patronage in Italy emerged. From a natural site to a protected park capable of giving visitors an educational and unexpectedly moving experience. It is a development from an isolated mountain area to a nature oasis.

Oasi Zegna is now an outdoor laboratory for the new generations and an ideal place where families, kids and sports lovers can do activities in contact with nature all year round and with full respect for the local ecosystems.

The creation of a Tourism Consortium grouping key players in the territory – from alpine herdsmen to sports and cultural experts and hotel operators – has developed a tourism and recreational offering covering the whole year.

Offers include Forest Bathing, originated in Japan, where it plays an important role in preventive medicine. Walking in and exploring the woods, especially if they have certain biological characteristics, reduces stress and depression, lowers blood pressure and pulse rate and makes our immune system more effective.

A study of the vegetation has scientifically demonstrated that the beech woods in Oasi Zegna have a high capacity to release volatile substances (monoterpenes) from their foliage and this has a beneficial effect on our immune defence.

In the Rhododendron Bowl people with disabilities (e.g. motor, sensory or cognitive), as well as old people who need special aid and treatment, can enjoy the triumph of nature, thanks to a specially designed route. Taking a leisurely 45 minutes, the route reveals a veritable triumph of colours and fragrances in May and June, when spring coaxes the marvellous rhododendrons into bloom.

There are regulated parking spaces, picnic areas, hospitality facilities and refreshment points designed for sustainable and accessible tourism.



Year: 1993 - ongoing  
Status: Completed  
Client: EZ REAL ESTATE S.r.l.; Consorzio Turistico Alpi Biellesi; Oasi Zegna  
Design: Cultural landscape with interventions by a number of artists, landscape architects and other experts  
Images: 1 – 3: Oasi Zegna  
Source: <http://www.oasizegna.com/en/>

## Designed landscapes providing health care facilities

### Landscape Therapeutic Park Brilon, Germany

The landscape therapeutic park in Brilon visualises the contrast between an open meadow valley and steep forest slopes.

The redesigned spa park with the newly integrated “Haus des Gastes” (House of the Guests) is the attractive centre of the meadow valley with its beautiful trees, the fragrant flower meadows, and hilly grassland. Important views to the city, to the white limestone rocks in the distance and up to the former ski jump were elaborated.



In the south, the park is dominated by the woods surrounding the valley and the wide meadows that merged from the lawns. The forest represents the introverted counterpoint to the open meadowland.

Along the landscape therapeutic path with the spa park as a starting point there are 13 stations that stage various moods such as clarity, harmony, confusion, mindfulness, contemplation, and sublimity. Here, amazing things can be discovered, peace can be enjoyed, sounds and scents can be explored, and the alternation of light and shadow can be perceived. Recurring elements such as the comfortable benches, the red colour, and the explanatory lettering, integrate these stations into the context of the wider landscape.

A landscape window is located on a small bastion which forms the ‘prelude’ and opens towards the entire site of the landscape therapeutic way. A place of pausing before embarking on a tour to the other stations. At the first contact with the forest, narrow bridges lure the hiker into the mysterious penumbra. They lead into the romantic atmosphere of moss and fern-covered stone formations to the buried entrances of mysterious grottos. At the corner of the forest the visitor steps out of the shadow into the light. From the stances there is a particularly impressive view over the wide grassland and towards the distinctive spruce group on the horizon.

Freed from the proliferating green, the former fascinating ski jump presents itself over a long narrow meadow slope and gives a breath-taking view into the depths and into the distance. The balustrade of the jump-off platform juts out diagonally across the

path and gives the hiker a hint to the feeling of flying. On the eastern slope side, the path spider causes some surprise. Red oak beams follow the course of the path borders, marking this unusual crossing of three paths. High above the path, a fairy wreath shines red shimmering in the diffuse light of the tall forest. The ring of coloured acrylic glass captures and bundles the daylight. After the fairy sound trails off, again the aura of the forest fairy becomes perceptible. Directly on the path side, a small forest of wild cherries begins: A flowering forest with edible fruits and bright yellow autumn colours giving a good reason to take a rest on the bench.

At the end of the path through the forest several hammocks – partly shaded by red awnings – invite the hiker to relax. The view through the treetops into the sky and the clouds is complemented by the scent of the forest and meadow flowers.

Opposite the lakeside terrace, there is a view over the ponds towards the silhouette of the old town with two churches. The potential of the existing lake terrace was unleashed by removing fences, by new plantings and by steps giving access to the water. A lovely cherry grove replaces the formerly oversized plaza in the North, and a delicate pergola forms the 'prelude' to the lake promenade.



Year:	2012 - 2015
Status:	Completed
Client:	City of Brilon
Design:	PLANERGRUPPE OBERHAUSEN and B.A.S. Kopperschmidt & Moczalla
Images:	1 – 3: Claudia Dreysse
Source:	<a href="https://www.planergruppe-oberhausen.de">https://www.planergruppe-oberhausen.de</a>

## URBAN GARDENING, URBAN FARMING, URBAN AGRICULTURE

Different projects focusing on the centres of the cities have a health related and holistic approach. These concepts prove that unconventional campaigns can create green niches even in densely populated metropolitan areas. Participation and the promotion of alternative food production are at the core of these concepts. Ecological, social, and climate considerations are included in the planning.

Cities and municipalities are increasingly recognizing the social, economic, and ecological potential of urban gardening, promoting projects, or initiating such approaches themselves. From a subversive intervention urban gardening is gradually developing into a tool for urban planning.

## Urban gardening, urban farming, urban agriculture

### **L'Agronaute Nantes, France**

Located in the former MIN of Nantes (wholesale market for food), this ephemeral urban farm is a place with a strong sense of solidarity and recreation intended for all agronomists, who are interested in the unique field of the agricultural future: curious, passionate, children, start-ups, farmers, marginalized people, cooks, associations, families. It was the winner of a call for projects launched by SAMOA (Société d'Aménagement de la Métropole Ouest).



The project symbolises the transition to a new agricultural system but also the transition from a mineral city to an edible city and from an ecocidal society to an ecological society.

The Agronaute farm is an educational, recreational and solidarity project. It is „recreational" all year round with its activities, concerts, cultural space, and restaurant. It is "educational" because it aims to reconnect the links between town and country, and because city dwellers will be able to learn how to grow fruit and vegetables. And because there will be conferences on agriculture and responsible and ecological consumption. It is "solidary" because it is linked to an association that works for the integration of homeless people. The farm is already contributing to their integration, by training them.

L'Agronaute has been built (on premises that once belonged to a horticulturist) since April 2019 and was opened in September 2019. The farm and the cultivation will be developed here on 3,500 m<sup>2</sup> for five years. Then the construction will be transferred to the roof and around a social housing building managed by SAMOA (with 1.000 sqm on the roof and 3.000 sqm on the ground).

During its intervention, the project and its stakeholders strives to joyfully bring (urban) agriculture to the table, to disseminate projects and solutions to make cities resilient. During its 5-year intervention in this space, it should lead to the emergence and dissemination of practical solutions for urban agriculture.

L'Agronaute is open to passionate or curious people who wish to discover, learn or train for new agricultural professions. Its vocation is to involve the general public in its productive activities and to be a resource place on the scale of the metropolis for the diffusion of agricultural know-how. The farm has the originality to give professionals and the general public the opportunity to produce together the food of tomorrow!

Therefore, the farm welcomes a diversity of associative structures and businesses working towards reconciliation, such as the renewal of agricultural trades with our cities, in a concern for ecological transition. A multitude of workshops and formulas are offered to suit audiences of all ages and backgrounds.

Constrained by the physical and psychological distance from places of consumption and agricultural production, the Agronaute wishes to be a link between these spaces and communities. It wishes to produce information and knowledge to bring together its ecosystems, which are nevertheless interdependent. It aims at putting the subject of agriculture back on the table, at bringing farmers into the spotlight and at bringing their produce and products on our plates. It sells produce to about fifteen restaurants. Every day, a dozen people - salaried and volunteers, civic service interns - are active on the farm. Each Thursday the people of Nantes are invited to help (and learn). The production process is based on using straw, spent grain, residues from a brewery, a little soil, and water.

Agronaute can be considered as innovative use forms for urban sites that contributes to reducing the pressure on landscapes.



Year: 2019  
 Status: Completed, but designed as a temporary project lasting for five years  
 Client: SAMOA Société d'Aménagement de la Métropole Ouest  
 Design: La SAUGE La Société d'Agriculture Urbaine Génèreuse et Engagée  
 Images: 1 - 4: L'Agronaute  
 Sources: <https://www.lasauge.fr/la-sauge> | <https://www.lagronaute.fr/>

## Urban gardening, urban farming, urban agriculture

### **Essbare Stadt Andernach Andernach, Germany**

Andernach is an "Edible City" (Essbare Stadt) with beans and berries on public spaces. Where there was only ivy, people will now find vegetables in the middle of the city of Andernach.

"Pick your own" says the project leader for this concept based on the idea of permaculture. "Your own" does not imply that you are only allowed to pick those vegetables that you have planted.



Standing on this beautiful field of flowers people may feel like being on the countryside. But Andernach is an idyllic town on the Rhine with approximately 30,000 inhabitants. And in addition to the flowering meadows, there is also cabbage, lettuce and many other vegetables.

Landscape architect Heike Boomgaarden developed the project "Edible City" in 2010 in close cooperation with the city administration. Only four years later the citizens are invited to "eat their city" as there are no signs of "no trespassing" but many like "picking allowed".

The citizens of Andernach accept the new offer and love to pick flowers or sometimes just to harvest lettuce, tomatoes and apples. They also support the project by, for example, building up the stakes for the beans. And as everything should not be functional only, but also looks nice, additional morning glories are planted on the rods, adding blue colours when the beans are not quite as pretty.

Andernach organises the largest urban gardening project in Germany and attracts more and more visitors. They enjoy this modern form of a green city too. The new green in the city has improved the ecological balance. And the care is more cost effective. The conversion from seasonal beddings – with tulips and pansies – to native perennial plants has paid off: instead of the previous 60 euros per square meter, there are now only about 12 euros.

By planting vegetables less attractive city areas were upgraded in Andernach. The city has become a garden where you can relax and reap the fruits of his labour. A special mix of flowers meadows also creates many habitats for insects and birds. For in Andernach everyone should feel at home.

The heart of the entire project is so-called permaculture, combining ecologically and economically viable activities. There is 13 acres teaching garden outside the city centre. Without that the edible Andernach would not work. Many of the local staff are long-term unemployed and learn a conscious approach to nature. Humans, animals and plants live together so that there are benefits for all parties involved. And so, it is that pigs in the project "Edible City" provide valuable work by roaming and digging freely.

There is an incredibly positive review for the project "Edible City". You can learn a lot in Andernach on the Rhine - also for your own garden. And the city has become more beautiful.



Year:	2010 -2014
Status:	Ongoing
Client:	City of Andernach
Design:	Heike Boomgaarden, landscape architecture
Images:	1 - 3: City of Andernach
Source:	<a href="https://www.anderenach.de">https://www.anderenach.de</a>

## Urban gardening, urban farming, urban agriculture

### **Ferme Abattoir Brussels, Belgium**

BIGH, the organisation behind this project, was founded in 2015, inspired by Steven Beckers, Cradle-to-Cradle architect, and co-founder of the consultancy Lateral Thinking Factory.

After conducting several studies in 2015 for the Brussels Capital Region on the potentials of urban farming and on the sites and resources needed, LTFc received many demands for finding operators.



Not finding any, it leads to elaborate a commercial business model for a “farming on top” based on aquaponics integrated to buildings where buildings support agriculture and vice versa.

In 2016, the BIGH model was developed to build the first farm of the BIGH farms network: the Ferme Abattoir. The first farm combines a 2.000 sqm high-tech greenhouse and a 2.000 sqm productive outdoor garden on the roof of Foodmet market hall, in the heart of Brussels, at the famous Abattoir site.

End of April 2018, the farm opened officially, products are commercialized since May 2018 in the Brussels Capital region and the farm is now accessible for public on demand visits.

Integrating the farm on the roof of an existing building (a market hall) benefits arise from using waste energy and thus reducing environmental impact. With the circular economy in mind, the building materials are cradle-to-cradle where possible, sustainable and can be up-cycled. The farm is designed to make the best use of water and energy, and to reduce the heat island effect. It is also a space to encourage greater biodiversity in cities.

Production is mainly based on a state of the art aquaponic system where fish, fruits, vegetables, and herbs are grown in a closed and zero waste loop. BIGH uses the latest sustainable technology, captures building energy losses, recycles rainwater from the site and uses solar energy.

BIGH aims at developing a network of urban farms throughout Europe on urban sites of at least 2.500 sqm production gross area.

Such a network of local food production is likely to affect consumers in the cities. Will it have a substantial influence on the traditional agricultural landscape?



Year: 2015 -2018  
Status: Completed  
Client: Brussels Capital Region and others  
Design: Lateral Thinking Factory; BIGH holding SCA (Building Integrated GreenHouses Holding SCA)  
Images: 1 - 3: BIGH team, melvinkobe.com, Caroline Moine!  
Source: <https://bigh.farm/>

## Urban gardening, urban farming, urban agriculture

### **Nomadisch Grün / Prinzessinnengärten Berlin, Germany**

The Prinzessinnengärten (Princess gardens) were launched by Nomadisch Grün (Nomadic Green) as a pilot project in the summer of 2009 at Moritzplatz in Berlin Kreuzberg, a site which had been a wasteland for over half a century.

A group of friends, fans, activists and neighbours, cleared away rubbish, built transportable plots for vegetable and reaped the fruits of their labour.



Today the entire concept is characterized by these key elements:

#### Nomadisch Grün (Nomadic Green)

Starting in the summer of 2009, the non-profit company „Nomadisch Grün“ leased a site of more than 60.000 sqm in Berlin/Kreuzberg in order to create a mobile urban farm, called Prinzessinnengärten.

#### Locally grown organic vegetable

A great variety of fresh, organic, locally produced herbs and vegetables are grown in raised compost beds without using any pesticides or artificial fertilisers.

#### Mobile Gardening

Nomadisch Grün stands for mobile (nomadic) gardening. Therefore, the project and all workers (up to 1.000 volunteers are active in the project) are ready to move from temporarily transformed unused spaces such as building sites, car parks and roofs to other places to create new urban farmland and green meeting places.

#### Sustainable Living

Prinzessinnengärten is a place of discovery where children, neighbours, experts and those curious about sustainable living can come together to about and explore alternative visions for our cities.

Today the garden is a place of pleasure and rejuvenation: for those who do the active work as well for the increasing number of

visitors who relax and enjoy watching the vegetables being harvested and freshly prepared in the small garden restaurant.

Nomadisch Grün invites inhabitants to join in and to help growing a new city, where as much as possible available spaces are used to let new green spaces bloom. Green spaces that local residents create themselves and use to produce fresh and healthy food. The result would be increased biological diversity, less CO<sub>2</sub> and a better microclimate.

The spaces would promote a sense of community and the exchange of a wide variety of competencies and forms of knowledge, and would help people lead more sustainable lives.

They would be a kind of miniature utopia, a place where a new style of urban living can emerge, where people can work together, relax, communicate and enjoy locally produced vegetables.



Year: 2009  
 Status: Ongoing  
 Client: Nomadisch Grün  
 Design: Prinzessinnengärten  
 Images: 1 – 5: Prinzessinnengärten  
 Sources: <https://prinzessinnengarten.net/>

## CONNECTED TOWNSCAPES AND LANDSCAPES

Since the Industrial Revolution, the boundaries between urban developments and the surrounding landscape have become less distinct. The urban sprawl followed industrial, residential, and municipal demands and the connection of the different monofunctional areas was primarily regarded as a question of traffic engineering.

The following projects create a connection between the centers, the periphery, and the landscape. Green corridors and alternative access routes are intended to break down the barriers between the city and the surrounding area. In addition to the practical accessibility, new perceptions play a role. Landscape is no longer understood as a disposable quantity for cities, but a place with significant intrinsic value.

## Connected townscapes and landscapes

### **Xanten City Wall - Park of Encounter Xanten, Germany**

The historic city centre of Xanten is surrounded by a 14-hectare city park: the rampart.

As the historical origin was the defence of the boundaries around the city, today the rampart area serves as a recreational and leisure park in the heart of the city.

From 2017 to 2019, the rampart area has been converted into a spa garden with the intention of strengthening the local tourism in Xanten.



Planergruppe Oberhausen have designed and built on the existing green potential of the area and have developed a contemporary, clean image with emphasis on the historical structures. Considering today's and future users, innovative offers expand the average profile of a classic spa garden and result in a "Park of Encounter" appealing to all generations. Right from the start, special focus was laid on a barrier-free design for the whole area.

The park is characterized by generous grass and meadow areas planted with groups of trees, single trees, and shrubs. The structures and dimensions of the rampart were partially opened to better integrate it within the park. Alongside the Bundesstraße 57 (major road) and lengthways the Eastern Wall, the existing trees were supplemented with a free-growing hedge of lower shrubs.

The green areas are traversed by a hierarchical path system, which was partially re-arranged and adapted during the re-design. The planting of perennials accentuates the access to the park, from which the main path can always be reached. The barrier-free circular route, which is paved with mastic asphalt and is illuminated, connects all areas, and crosses all access paths via traffic-calming narrowing. Numerous benches ranged alongside the circular route offer to seat during a stopover. The Northern Wall area is equipped with three pergolas emphasizing distinct resting places offering a great view towards the gabled houses, the Kriemhild mill and the new dragon sculpture.

The rampart is divided into four sub-areas: Eastern Wall, Northern Wall, Western Wall and Southern Wall. Each area has its distinct

character and was developed based on the existing structures according to its specific theme and focus:

- Eastern Wall – movement, games and fitness, environmental protection and ecology
- Northern Wall – stopover, adventure and outdoor catering
- Western Wall – spa gardens (with a rose garden and a bible garden), Kneipp facilities and graduation house, games
- Southern Wall – entrance to the historical city centre respectively start of the spa gardens

The ground monument Wallanlage – i.e. the walls of the rampart – remains untouched from structural interventions. Only arty and creative structures were added, such as the dragon sculpture, the stone circle, the perennials, playgrounds and theme gardens.

The planting of new perennials also serves as identifying marks of the rampart at the path crossings and to emphasize the city entrances. They are site-specific in their composition and colours, and all have a rather meadowlike character.



Year:	2016 - 2019
Status:	Completed
Client:	City of Xanten
Design:	PLANERGRUPPE OBERHAUSEN; With: LUZ Landschaftsarchitektur; Architekturbüro Heinrich Böll; Nowakteufelknyrim
Images:	1 – 3: Claudia Dreyße
Source:	<a href="https://www.planergruppe-oberhausen.de">https://www.planergruppe-oberhausen.de</a>

## Connected townscapes and landscapes

### Lammasaari Boardwalk Helsinki, Finland

Vanhankaupunginlahti bay nature reserve is the largest conservation area in Helsinki. The wetland area is protected under the Ramsar convention and it is part of the Natura 2000 network.

The bay and its islands have a long history of recreational use, considerably related to bird watching. Nowadays the site is very central in Helsinki. A boardwalk leading from the urban bustle to the middle of wilderness.



The bay is surrounded by the growing city, and an increasing number of citizens are enjoying its recreational values. Nevertheless, the environment is very vulnerable, and it is prohibited to step beyond the marked paths.

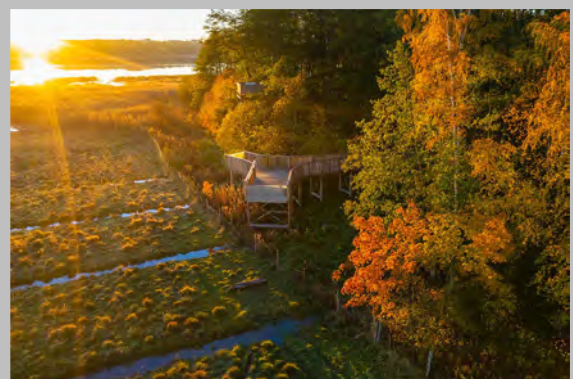
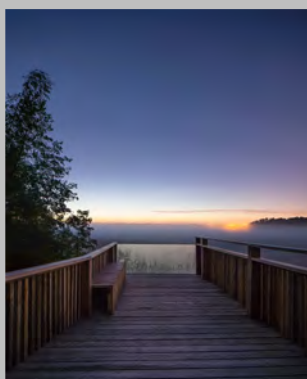
In 2016, the city of Helsinki together with Tallinn, started an EU funded project called Nattours. The aim of the project was to improve the accessibility of urban nature by increasing awareness of significant destinations and by removing both physical and mental barriers from hindering visits to the areas. Another goal was to promote nature destinations as the city's attraction. A website was developed to introduce selected recreation areas. The Lammasaari boardwalk was chosen to be the main objective in Helsinki for improving physical nature trail structures. The existing Lammasaari duckboards were popular but dilapidated. As a part of this project the duckboards were chosen to be replaced with a new, fully accessible boardwalk with accessible bird watching platforms.

Changing sea level, ice, poor soil conditions for foundations and restrictions in working on the protected site were challenges for both design and construction. In this framework, the new, accessible and floating boardwalk was designed in dialogue with the city's own construction unit. The design consists of two different types of boardwalk elements, a straight one and a curved one. The elements were prefabricated on dry land and brought to the site for installation with light vehicles. Wooden poles framing the path keep the elements in place in varying water level conditions. Occasionally flooding can lift the floating elements more than one

metre. The boardwalk and the platforms are made of untreated Siberian larch. The pathway is one and a half metres wide. The width enables assisted walking and passing of wheelchairs or prams. The complete length is 860 metres. To minimise waste and the use of new material, the pre-existing base structures were maintained. As a design task the project was intriguing. In addition to all the technical and practical requirements, it was essential to create both an aesthetically and spatially interesting route.

As the boardwalk leads from the urban bustle to the middle of wilderness, it offers a phenomenal, constantly changing nature experience. The basic level of the boardwalk is very close to sea level meanwhile the surrounding high reeds line the edges of the pathway creating a narrow, corridor-like space. Along the boardwalk there are two slightly elevated platforms for birdwatching, allowing a view over the reeds. The finale of the pathway is an accessible vantage point elevated to three metres. Viewpoints are provided with glass walls to enable unimpeded views from a wheelchair and for children.

The structures were completed in spring 2018. After the renewal of the boardwalk, the number of visitors has increased remarkably. During the summer season 2018 there was an average of over 1000 visitors per day. The project fulfilled its objectives both in improved accessibility and in increased attraction. In Finland, the project has been a pioneer in introducing the importance of design and high-quality construction in nature trail structures. It is evident how the design is promoting the outdoor life and healthy way of living.



Year: 206 - 2018  
 Status: Completed  
 Client: City of Helsinki  
 Design: Nomaji Landscape Architects; Studio Puisto Architects  
 Images: 1 - 4: Mika Huisman Decopic  
 Sources: [www.nomaji.fi](http://www.nomaji.fi) | <http://landezine.com>

## Connected townscales and landscapes

### **Parc de la Senne Brussels, Belgium**

This linear park, located in the heart of Brussel's Masui district, is today the only free space available to the municipalities of Brussels and Schaerbeek to develop a key public space in the district.

This precious space has been earmarked to become an attractive and sociable location.

A landscape element was covered to create a new urban landscape link. The project is located over the bed of the covered River Senne.



The park has a twofold purpose. With its existing network of vegetation, it will reinforce both the district's identity and the region's green network. This public space is currently characterised by numerous interruptions. The new design enables a variety of different atmospheres and represents a perfect response to the concerns of sustainable development. In the end of the implementation process, the end of phase 3 (of 4) is expected for 2023, four main sequences will be included:

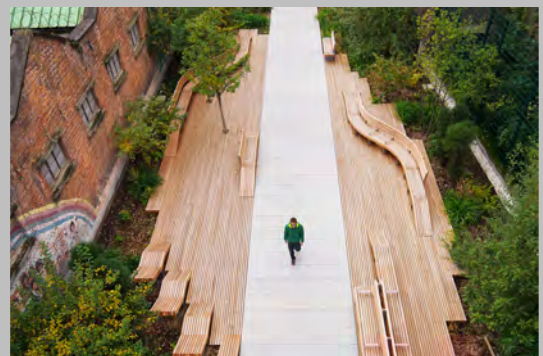
The 'Natural Senne' sequence: structured around a mainly residential sector, this sequence will be characterised by lush greenery, significantly enhancing the presence of vegetation in the district.

The 'Playful Senne' sequence: positioned at a point where most of the building façades are windowless, the playgrounds will be developed in two dimensions: the existing walls will be used as backdrops for graphic decoration or as climbing walls.

The 'Senne Garden Square' sequence: intersected by infrastructure and public facilities, this area already serves as meeting places and points of convergence; they are being developed as garden squares with the twofold function as a transitional space and a place for sitting and for social contacts.

The 'Cultivated Senne' sequence: community vegetable gardens are laid out here in sets of terraces and reinforce the connection towards Parc du 21 Juillet. Their south/west exposure makes this a

high-quality growing environment yielding constant returns as an extra resource for low-income households in the local area.



Year: 2012 - ongoing  
Status: Section 1: completed; Sections 2 and 3: under construction; Section 4: to follow  
Client: Brussels Institute for the Management of the Environment (IBGE-BIM)  
Design: La Compagnie du Paysage; Montois Partner; Infra Services; Agence ON; Cabinet Gerphau; HSP  
Images: 1 – 3: La Compagnie du Paysage  
Sources: <http://www.compagniedupaysage.com> | <http://landezine.com/>

## Connected townscales and landscapes

### **Parc Del Garraf Barcelona, Spain**

The Vall d'en Joan waste dump was opened in 1974 in a valley in the limestone massif of El Garraf, which is situated in the natural park of the same name.

The objective of the recent intervention was bringing back nature into this more or less devastated landfill zone and to create a distinctive transition zone between a nature park and a city that does ameliorate but not hide the effects and traces of the former use as a landfill.



The restoration project is defined by a pattern of topographic configurations consisting of terraces, side slopes, a drainage system of internal fluids (separated from the external drainage network), a biogas extraction network, pathways and revegetation being conducted in phases.

The goal of the entire restoration project is for Parc Del Garraf to absorb the dump by using the local forest's biomass while supporting the establishment of primary ecosystems. It is believed that the ongoing development of these ecosystems over time will allow them to adapt to the site's environment. The revegetation process makes use of hardy local species that require minimal irrigation, and which are already adapted to the local environment. The planned distribution of the vegetation incorporates various local varieties of shrubs (such as burdock, herbal plants or Mediterranean maquis) and trees.

Infilling began at the lowest point. Shrubs and trees were eliminated, the site was waterproofed with clayey soils, and a drainage system was installed for the leachate. Work also began on superposition by alternating layers of waste matter with shallow layers of earth. As the bottom of the valley was filled in, the waterproofing was extended. The landfill now occupies 70 hectares with a depth of waste matter of over 80 meters at some points.

At the start of the restoration project, a layer of earth was laid over the most recent deposit of refuse. A large concrete ditch separates virgin land from the operational waste dump, and channels drain the runoff from the mountainside. Semi-clean waters and runoff

water from the operations area accumulate in a reservoir, where they are treated. The restoration process began at the lowest levels while the waste tip was still in use higher up. A new and completely different system was introduced to replace the existing one, and the two will coexist until the dump is closed. Restoration will not be complete until three years after closure.

The Waste Deposit Restoration Project intends to reinstate the public use of this area. Because of its proximity to urban areas, access and parking facilities, this well-linked side has been converted into a new gateway to Parc Natural del Garraf, which also connects to the long-distance GR footpath.



Year:	2003 - ongoing
Status:	Base sections restored, upper sections to follow
Client:	AMB / DIPUTACIÓ BCN / METROPOLITAN ENTITY OF HYDRAULIC SERVICES AND WASTE TREATMENT
Design:	ENRIC BATLLE, JOAN ROIG
Images:	1 – 3: Battle   Roig
Source:	<a href="http://www.batlleiroig.com">http://www.batlleiroig.com</a>

## Connected townscapes and landscapes

### **BORDEAUX / 55 000 hectares for nature Bordeaux, France**

The territorial study «55000 ha for nature» is an interrogation of the role of nature within the sustainable strategy for the future development of the metropolitan area of Bordeaux.

This problem is primarily present and visible at several areas and sites where uncontrolled or even badly planned urban sprawl is producing new and indefinite interfaces between the city and the «non-city» (or links to landscape)



These spaces represent both an opportunity for urban growth and an intensification of nature within the urban fabric.

A concrete strategy was developed for Bordeaux Nord. Workshops held with stakeholders helped to identify their positions and to discuss and prioritize the issues. The current functions and zones in the area were analysed and its natural structure and environmental impact diagnosed.

Originally a marsh, the area had become a patchwork of urban spaces without structure or landmarks. The persistent wetlands are today the only natural vestiges of the original marsh. Disconnected from all hydraulic continuity, these wetlands have lost much of functionality. The risk of flooding remains in the area and therefore flood expansion fields are a necessary element of the planning and should lead to a real integration of wetlands to the city.

Located between the city centre of Bordeaux and nature reservoir of the “Parc des Jalles” Bordeaux Nord itself has three large structures on which the project is focusing: the banks of the Garonne, the banks of the Bordeaux Lake and the remaining wetlands of the old marshes.

The Bordeaux Nord strategy proposes to enhance the quality of both the bank of the Garonne and the banks of the Bordeaux Lake by making them more accessible to the public, improving the leisure facilities and their ecological diversity.

The remaining wetlands scattered between those areas would develop a major role by being connected with each other and

connecting the Bordeaux Lake with the Garonne river. Transformed into a “Way of the Marshes” and with new areas of mixed neighbourhoods (housing, shops, businesses and offices) they can form a backbone of public spaces.

In addition, the city of Bordeaux and “Parc des Jalles” will be linked by the Bordeaux Nord strategy plan. The main connections will be the banks of the Garonne developed as “Parc des Berges Sauvages” and the “Way of the Marshes”.



Year: 2012 - ongoing  
 Status: Study, Masterplan and actions in progress  
 Client: Bordeaux Métropole  
 Design: agence ter; Bas Smets; Coloc-ADH  
 Images: 1 - 4: agence ter  
 Sources: <https://agenceter.com> | <https://www.bordeaux-metropole.fr>

## GREEN ECONOMIC ENVIRONMENTS

Sustainability and environmental issues play an increasing role in the planning of industrial and commercial areas. By using innovative design approaches, renewable energies, sustainable waste disposal concepts and the establishment of green industries, these projects respond to the demands of the future and help attracting investors and customers.

In addition to economic and ecological requirements, social and municipal issues are considered as well. The embedding in the environment and the connection to existing neighborhoods play a major role. Cycle and footpaths link the new area with the surrounding area. The layout of the sites takes these different requirements into account. Accordingly, sports and leisure activities, but also childcare and alternative means of transport are integrated into the design.

## Green economic environments

### **Calvados-Honfleur Business Park Honfleur, France**

At the foot of the Pont de Normandie, near Honfleur, a new business park is being created.

Here rainwater retention is a key asset for a new business park or business landscape.

Ecological, sustainable and perfectly integrated into the landscape of the Seine estuary, Calvados-Honfleur Business Park is innovative in more ways than one.



In response to the economic advantages generated by the Pont de Normandie and the development of the ports, the various local public actors quickly joined forces to seize the opportunity and transform the existing Poudreux business park on the banks of the Seine, which will be overhauled to ensure its continuity with the future urban and landscape complex, into a large new-generation business park with the potential to become the showcase for the department's economic development.

Located near Honfleur city centre and the nature zone east of the Pont de Normandie, the business park must meet stringent environmental and architectural requirements.

The architecture of the site and future buildings will play its part in the environmental ecosystem through the widespread use of green roofs and of wood in all its forms in the site development and construction. Energy savings will be encouraged through the use of renewable energies, selective waste management on the construction sites and non-motorised transport.

The network of pedestrian paths and cycle tracks designed on a municipal scale and the business park's integration in the public transport network will ensure the use of alternative modes of travel to the car.

The integration of the Calvados-Honfleur Business Park into its environment is based above all on its compositional axes. From the roundabout at the entrance to the zone, the main axis points towards the second pillar of the Pont de Normandie, the site's architectural

emblem. The network of public spaces create a connection between the park and the middle of the estuary by means of views over the Seine and the slopes of the surrounding landscape, while a green corridor at the centre of the park links the two nature zones to the east and west. A distinctive presentational approach has been used for the entrance to the park.

Rainwater treatment and retention are two important factors in flood prevention during storms. The ditches and pools have been interpreted as assets for the urban landscape of the Calvados-Honfleur Business Park, with a belvedere platform overlooking the green corridor, ditches alongside the roads and pedestrian paths and so on. The rainwater retention system manages more than 200,000 m<sup>3</sup> of water. The ground plan and levelling have been designed to keep the infrastructure dry even in the event of a hundred-year flood.



Year: 2007 – ongoing  
 Status: 1. Phase completed and under operation, extensions to follow  
 Client: Syndicat Mixte du Parc d'Activités Calvados Honfleur (SHEMA)  
 Design: La Compagnie du Paysage; Stéphane Plisson; Aktis; Viamap; Antea; Inno  
 Images: 1 – 3: La Compagnie du Paysage  
 Sources: <http://landezine.com> | <http://www.compagniedupaysage.com>

## Green economic environments

### **Lune Delta – A vision for commerce and industry Bremerhaven, Germany**

In 2010, Bremerhaven took over an area of 15 km<sup>2</sup> / 3,707 acres from the neighbouring region of Lower Saxony to enlarge the city's area for a mixed-use development.

The majority was designated as ecological area to compensate for the construction of a container terminal.

The rest of the area is intended for commercial use, which should be in line with the neighbouring nature reserve.



The city wants to create a "home port" for both young and established companies in the Green Economy, i.e. an infrastructure for sustainable economic activity that is to be sustainably developed.

The new commercial and industrial area, LUNE DELTA, will be developed under strict sustainability aspects. The DGNB (German Sustainable Building Council) will accompany the ongoing development planning. The delta project will be based on the Cradle to Cradle philosophy and will still have design, ecological and social added value after it is no longer in everyday use.

The topography on-site with plots divided by canals, dike relics as well as water and green spaces, characterizes the design. Water bodies will become places for recreation and new parks and open spaces created for ecological use as well as for sports and leisure activities. A network of bike and foot paths will provide fast connections to the countryside or the city centre.

Based on 100% renewable energies, the supply concept is a pilot project as far as the energy system of the future is concerned. In the neighbourhood, wind power will generate "green" hydrogen – the first of its kind in Germany.

The goal is an energy network that will distribute heat and possibly also cooling to the entire neighbourhood. Deep geothermal energy is an option for the Founders' Centre, considered as the beacon and the first construction site. This energy will not only supply the

Founders' Centre but also become part of the neighbourhood supply later.

The name "Commons" is given to common areas with offers to be shared, e.g. in the areas of workplaces, mobility or childcare. The Founders' Centre with focus on the "Green Economy" is also intended to be a nucleus for new forms of joint and networked economic activity. An area management system is planned to direct material flows, to manage the maintenance of the area and to contribute to save resources and costs.

The first construction phase is expected to begin in 2022.



Year:	2010 - ongoing
Status:	First construction phase scheduled for 2022
Client:	BIS Bremerhavener Gesellschaft für Investitionsförderung und Stadtentwicklung
Design:	cityförster
Images:	1 – 3: cityförster
Sources:	<a href="https://www.cityfoerster.net">https://www.cityfoerster.net</a>   <a href="https://www.bremerhaven.de">https://www.bremerhaven.de</a>

## **SUSTAINABLE HOUSING AREAS INTERTWINING URBAN AND LANDSCAPE QUALITIES**

Sustainability, social integration, and local identification are becoming more important in the development of new residential areas. In addition to the requirements of the residents, contemporary planning strives for the connection to the landscape and promotes the structural and functional anchoring of the new residential areas within their specific surroundings. Community spaces, communal gardens, and the access into the surrounding area by walking and cycling paths support the development of a lived neighborhood.

Within the new developments a functional mix brings living, working, and shopping closer together. Thereby the areas and their residents gain autonomy. These measures are flanked by environmentally friendly construction methods, waste, and supply concepts.

## Sustainable housing areas intertwining urban and landscape qualities

### The Learning City

#### Augsburg-Haunstetten, Germany

Developed in an agricultural landscape at the outskirts of Augsburg, 30 min away from Munich, Augsburg-Haunstetten will offer outstanding opportunities for high quality affordable housing with innovative solutions to respect the landscape and the needs of sustainability.

Fully built, the new district will incorporate around 700.000m<sup>2</sup> of program, generous public spaces and a large park.



Architects participating in the competition have been asked to develop a "city of short distances". Urban development needs to deliver a fine-grained mixture of living, working, shopping, education, culture and recreation.

In addition to this differentiated development with adequate buildings, much care must be given to perfectly usable public spaces and green neighbourhoods. A structure and variety of calmer open spaces and lively public spaces for all users have to be created. It is important to install a graded system or a zoning of public, semi-public and private areas.

The guidelines for the competition include a clear statement and objective for the transition zones between the new urban development, the adjacent agricultural land and the future open spaces. Here a clear position and convincing (urban) design serving both the urban development and the need of landscape ecology must be presented. This includes the need to design the entrance area in a way that they serve as a prelude to the quarter, which means that they must create a high-quality and inviting space using the principles and tools provided by urban planning and landscapes planning.

In January 2020 the three winners of the competition have been announced.

One concept (2<sup>nd</sup> prize), named "The Learning City", will be able to generate its own energy and produce a large part of its food intake

and construction materials locally. Together with a plan for recycling, sharing and re-using materials, this vision aims to minimize waste and to promote a circular society. The Learning City puts forth a new economic model built around circularity and connected to the nearby innovation campus.

The Learning City is a vision that embraces and strengthens the qualities of the existing, as the starting point to create the city of tomorrow. A vision that links new and old, combines history and future and intertwines city and landscape.

The vision puts forth a highly adaptable and learning plan that can change as it develops. A simple and clear structure inspired by the underlying agricultural and natural landscape forms the basis of the plan and sets the framework for the future.

Within this robust framework the city can change and adapt to the unexpected, always learning and improving. Where traditional planning investigates rules and regulations, the learning city offers freedom and experimentation: a timeless framework for city life.



Year:	Start 2018 - ongoing
Status:	Competition decided in January 2020
Client:	City of Augsburg
Design:	1 Prize: Wimmer ZT, 2. Prize: Karres en brands; 3. Prize: Octagon
Images:	1 + 2: Karres en brands; 3: Albert Wimmer ZT GmbH
Sources:	<a href="https://www.augsburg.de">https://www.augsburg.de</a>   <a href="https://www.karresenbrands.nl/">https://www.karresenbrands.nl/</a>   <a href="http://www.awimmer.at">http://www.awimmer.at</a>

## Sustainable housing areas intertwining urban and landscape qualities

### The Connected City

#### Hamburg-Oberbillwerder, Germany

Within the proposal 'the Connected City', a master plan for a 360ha area close to Hamburg's city centre has been developed.

Close to both city and landscape, Oberbillwerder is the largest one-off development in Germany since Hamburg's Hafen City.

Fully built, the masterplan will include about 1.000.000 m<sup>2</sup> in a mix of housing (7.000 houses), business (5.000 workplaces), shopping, public buildings and recreational activities.



A location between meadows, cultivated farming landscape and suburban sprawl gives Oberbillwerder, just a 15 minutes ride from the centre of Hamburg, an enormous potential as an attractive urban development area with a highly liveable and vibrant city environment.

The masterplan for the area shows how Oberbillwerder can grow as a city of the future, through a visionary approach to architecture, infrastructure and resources. This project has comprehensive and well-throughout strategies, which are replicable as a masterplan prototype. It has seamless integration with blue and green and social infrastructure. It is sensitive with development, phasing, and scale a sensitivity that is relevant to the context.

The infrastructure in the Connected City ensures rapid connections to Hamburg's city centre but prioritizes pedestrians, cyclists and public transport, while looking into the future of mobility. The unifying green artery that encircles the plan provides access to all neighbourhoods, public buildings and recreational activities. The overall development strategy embraces social, financial and environmental sustainability as well as climate adaption through a nuanced distribution of functions, typologies and resources.

"With the design of "the Connected City" the jury has selected a forward-looking concept for Oberbillwerder. We want to create a district that shows us what Hamburg should look like in the future.

Oberbillwerder should stand for the pleasure of designing, with the possibility to design a lively and urban, future-oriented district as part of our strategy "Mehr Stadt an neuen Orten" in a beautiful natural and cultural landscape."

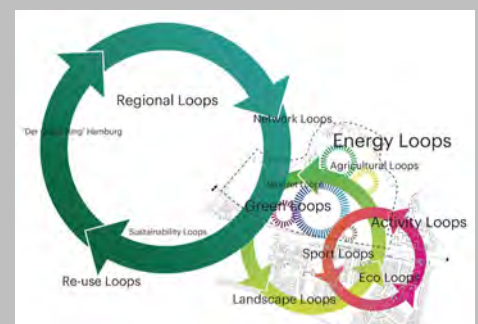
*Dr. Dorothee Stapelfeldt, Senator for Urban Development and Housing.*

"The selected design offers an excellent planning basis. The concept deals very precisely with the sensitive cultural landscape and develops a very specific contribution to this location. He has a good sense for the right scale, creates a diverse range of different living and working opportunities and makes great with the first proposals for possible architectural ideas."

*Franz-Josef Höing, Oberbaudirektor Hamburg.*

A mosaic of neighbourhoods is formed within the masterplan, linked by pedestrian and cyclist friendly streets and blue/green arteries. The different characters are defined by climate adaption: wide canals, large green rain beds and narrow blue streams, or concave street profiles and thin linear trenches. The future inhabitants can then choose a way of living; canal living, landscape living or urban living. Each of these, the starting point of developing unique housing typologies and collective facilities.

Oberbillwerder will also be the model for the Active City. This means that there will be offers for sports and motion for all groups, but even more that most inhabitants should be able to get to work and to all infrastructures by foot and/or bike.



Year: 2017 - ongoing  
 Status: Masterplan, based on the winning concept of a competition, agreed in 2019  
 Client: Stadt Hamburg, IBA Hamburg  
 Design: Karres en brands, ADEPT, Transsolar, Büro Happold, Kraft  
 Images: 1-4: ADEPT, Karres en brands  
 Sources: <https://www.karresenbrands.nl/> | <https://www.oberbillwerder-hamburg.de/>

## Sustainable housing areas intertwining urban and landscape qualities

### **The Sustainable Arctic WinterCity Oulu, Finland**

In the context of sustainable smart city and urban planning, the INURDECO initiative created and tested an innovative, integrative urban development process.

The concept was piloted in Hiukkavaara, a former barrack area. It is one of the most important urban development and investment areas in the city of Oulu in northern Finland, where the thermal winter last 160 days. A sustainable neighbourhood for about 20,000 inhabitants is being built there.



INURDECO piloted new methods to engage all stakeholders in the urban development planning process. A plan of interaction for city planning stage was drawn up to identify stakeholders, necessary interaction and timing in terms of planning process as well as suitable methods.

Methods used included: polls and competitions (online and letter surveys, social media); test user forum PATIO, a web-based tool for user community testing of innovations and large public interactive Ubi (turns any surfaces into a touch screen) displays; a virtual city model demonstrated to test groups in a three-dimensional virtual space CAVE through 3D glasses; workshops, idea days, social and cultural events; social media, blogs; a reference group. An open 3D model proved to be one of the most popular forms of interaction. Virtual models allow users to understand the implications of the plan and respond accordingly.

The INURDECO process has been able to create a Living Lab of urban planning and construction that has the potential to improve the quality of cities and living environments. The INURDECO concept observed the different aspects of energy production, adopted the integrative urban development process to become more open, faster and fluent, supported and helped the business ecosystems needed to access and participate in the process.

At best, an integrative urban development process generates cost savings because space is used more efficiently, land space is saved, and the number of complaints on the town plan is reduced. All this contributes to a more streamlined process. As a final outcome integrative urban planning development processes will

produce high-quality living environments. A particular focus has been to involve and to engage all stakeholders in the town planning process from the outset.

The interaction plan developed, and methods used for it may be re-used as a manual in the planning, interaction and construction of new neighbourhoods. Sustainability, energy-efficiency and winter city planning took high priority. Altogether 29 different sustainable values were identified.

The result is an energising town plan that refers to the sustainable development values that will have ecological, social cultural and economic effects. Many of these values are transferrable to other cities in Northern regions.



Year:	2011 - ongoing
Status:	Masterplan agreed, detailed plan under preparation
Client:	City of Oulu
Design:	City of Oulu, Hartela-Forum Oy, Skanska Oy, Sonell and the University of Oulu
Images:	1 – 3: City of Oulu
Sources:	<a href="http://www.eurocities.eu">http://www.eurocities.eu</a>   <a href="https://www.ouka.fi">https://www.ouka.fi</a>

## **Garden City Helsingør, Denmark**

Today, many young families have a desire to move to the countryside to be closer to nature, fresh air, affordable living and to provide a better environment for their children.

However, due to intensive farming and a prioritization of car transportation, the landscape is to a large extent inaccessible to the rural population and the existing building mass is outdated and cannot fulfil the dreams for young families anymore.



Many urban residents hesitate to move to the countryside due to a lack of good public transportation, the distance from job opportunities and the lack of alternative housing forms. As the concept of work changes, the supply of jobs and the transportation options will be less important, and the urban-rural movement can seriously take off.

Helsingør Garden City – Village of Tomorrow is a proposal for a new way of living in the Danish countryside, in close connection to the surrounding landscapes, with a strong identity and sense of community. The settlement is structured in clusters, with a large amount of common spaces and a high degree of sharing that enables a more sustainable way of living. The master plan has been developed with three main parameters in mind: Environmental, social and economic sustainability, which together will provide new possibilities to live a healthier self-sufficient life, in close connection to the landscape and in commuting distance from Copenhagen.

The master plan for the new village community is an organic plan, where landscape and settlement blend together. In order to strengthen community life and create a stronger relation to the surrounding landscapes, the settlement is developed as dense living clusters, with a limited amount of private outdoor spaces. The landscape and the in-between spaces are common areas, used for recreational purposes and with production of food integrated in the landscape, such as fruit orchards, permaculture, and husbandry.

To create a neighbourhood with social diversity, both regarding income and lifestyles, the clusters differ in form, materiality, sizes and types of ownerships. However, all houses have a private outdoor area and a direct connection to the common landscapes. The clusters will be developed as 25 small villages, with each their own characteristics, inspired from the qualities of their location. As in the old Danish villages, they are all structured around a common, a pond or a square, where the community and public life can unfold and thrive.

In contrast to the classical homogenous farming landscape, the clusters are surrounded by a diverse and accessible landscape with wet areas, meadows, forest gardens, fruit orchards and husbandry. This productive recreational network anchors the development in the existing town. The car roads and pathways are developed as a delta that runs out from a main distribution road and branches out through the landscape to connect the housing clusters in the landscape and the rest of the town.

A food hub, centrally situated in the new area, will be the main driver and meeting point for both locals and visitors. The identity of the new neighbourhood is crucial to attract new types of residents and together with the transformation of the landscape, the food hub will provide social and food related activities such as markets and gathering days, which will be the key to create an identity and an awareness of the new area.



Year: 2016 - ongoing  
 Status: Competition decided  
 Client: Municipality of Gribskov  
 Design: EFFEKT, Atkins, CBFO, Trafikplan, Karres en brands  
 Images: 1-3: EFFEKT  
 Sources: <https://www.effekt.dk> | <https://www.karresenbrands.com>

## **SOCIALLY AND ENVIRONMENTALLY SUSTAINABLE NEIGHBOURHOOD PARKS**

The grey and blue infrastructures of cities and municipalities must adapt to structural change and new technologies. These examples avoid a unilateral approach of considering only the technical aspects of the sites. The needs of the surrounding neighborhoods, especially of the direct residents, have been integrated. As a result, places are developed in which the needs of the grey and blue infrastructure are combined with leisure and recreational opportunities.

The approaches are remarkable, because the designers have created the amenities for relaxation and leisure based on the technical functions of the sites and have integrated the technical infrastructure into the concept. The residents are also involved in these projects through didactic and social concepts. Places with a high potential for identification and participating have emerged.

## **Socially and environmentally sustainable neighbourhood parks**

### **Hillside Eco-Park Changsha, China**

The driving idea of this neighbourhood park in the centre of a high-density housing area was to create a participatory eco-system.

The multi-functional and compatible system will balance people's daily outdoor activities with the protection of the environment and storm-water management.

It is a prototype for the hybrid parks of the future, which is needed in many Chinese cities (and elsewhere).



The site with a polluted and degraded fishpond is transformed to a socially and environmentally sustainable neighbourhood park, which provides a meaningful space for recreation, environmental education and social connections to the growing community.

This 1.4-hectare neighbourhood park is located in the suburb of Changsha, the capital city of Hunan province. The site is in the centre of a new 18.8-hectare high-density community to accommodate approximately 10,000 new residents.

The landscape architect was given an opportunity to develop a comprehensive, yet detailed strategy for a communal park to address two challenges: environmental sustainability and a multifunctional recreational open space. As the response, participatory and ecological functions were embraced and thread together. While the park satisfies the complicated program and technical requirements, it achieves the goal to create a place where urban life can reconcile with the nature.

The protected wood on the hill is accessible by a forest path that avoids deterioration of the soil and vegetation.

An innovative stormwater treatment system deals with the complicated challenges Hillside Park is facing. It integrates various open spaces where people can observe and interact with the water treatment process.

Children in the Hillside Park will have the opportunity to feel, to touch, to learn and to enjoy nature as they are growing up. Nature elements, such as sunlight, plants, flowers, rainfall, creek, wetland, ponds, waterfalls, birds, fishes, frogs, fireflies, butterflies, insects etc are part of their daily life and will have a lifetime positive impact to them.

The inclusive design of the playground offers activities for wide range of age groups. It balances people's recreation needs and environmental quality. The playground with slides, climb walls, sand pit and big insect toys is designed at the edge of the protected hill. With a mindful, yet playful design of "wood carpet", the edge of forest becomes a landscape for gathering, sharing, and family time for the community.

The design also brings various environmental education opportunities in the park. A signage system not only provides basic information, but also illustrates the plants, remediation processes and other ecological knowledge.



Year: 2014  
 Status: completed  
 Client: Caticity Inc.  
 Design: Z + T STUDIO; Z + T ART WORKSHOP  
 Images: 1 – 3: Photographer: Hai Zhang  
 Sources: <http://landezine.com> | <http://www.ztsla.com>

## **Vallée Verte Development Lannilis (Finistère), France**

The French municipality of Lannilis has acquired the main nature area enclosing the village to the south.

It is a small affluent valley to the Aber Benoît River, combining a number of wetlands, some of which were damaged when the old village was urbanised.

There was the need to create a blue and green infrastructure for the needs of nature and people.



The project consists in creating four vast rainwater holding basins in keeping with the catchment basin relating to current and planned urbanisation. The aim is to avoid splitting up the management of rainwater through making a small rainwater basin for every urbanisation operation.

Those technical areas are part of an approach to enhance wetland landscapes and to make them easier to get to, both for recreational strolls and day-to-day use. The explorer pathways also act as urban links towards schools and other public facilities from the various (existing and future) housing estates bordering the site.

Old hydraulic structures (a small heritage of washing-places and fountains) present on the site are being restored and enhanced as part of the operation, while more recent facilities like the water treatment plant are being redesigned so as to fit better into the landscape.

The project revives and highlights the wetlands for both environmental and educational purposes, by restoring settings that have been filled in. Planted basins are managed as wetland parks featuring different topologies that are specific to wetlands, like prairies, reed beds and lagoons.

The project combines technical functions, with ecological aspects while the design also took care to create an attractive and accessible site for many different parts of the local population.

But not only the locals use the place. It has now become a destination for visitors and especially families with children come here for a weekend excursion.



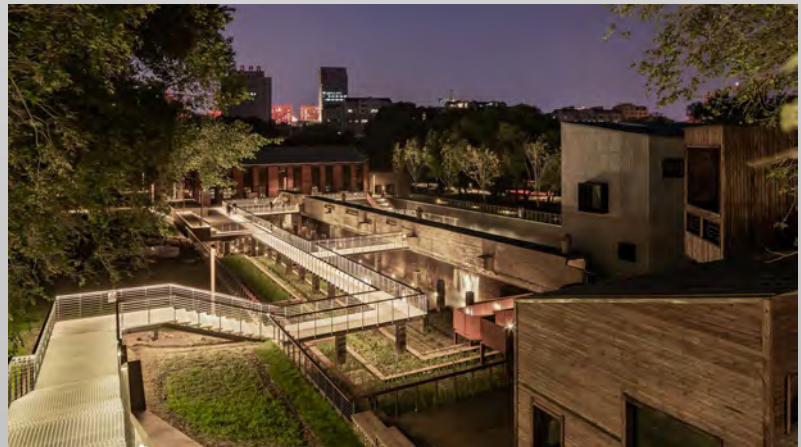
Year: 2015 - ongoing  
Status: Work in progress  
Client: Municipality of Lannilis  
Design: Agence Laure Planchais  
Images: 1: Le Télégramme; 2 + 3: Agence Laure Planchais  
Sources: <https://www.laureplanchais.fr> | <https://www.letelegramme.fr>

## Culture of Water Ecology Park Changchun, China

In Changchun in northeast China, a closed 80-year-old water treatment plant has been transformed into a public park that brings back to life a derelict industrial site.

The designers threaded 300.000 m<sup>2</sup> of varying green spaces through the linear site, including a forest landscape corridor and habitats for native flora and fauna.

Many of the original historic structures were respectfully retained and repurposed.



New areas for play, relaxation, and art activate the park. The design preserves the cultural memory and demonstrates sustainability practices, including a sophisticated rainwater system appropriate for a former water purification facility.

Changchun Nanling Waterwork was built in 1932 on a low, lushly vegetated hill. Seven sets of water purification systems were built successively here over 84 years. After sedimentation, filtration, flocculation and disinfection, clean water flows steadily to thousands of households and grows together with the city.

In 2016, the old waterworks was replaced. As a second-grade cultural protected destination, the new park provides a living space for the citizens, which coexists in harmony with the historic buildings, original flora and fauna on this 32-hectare site. Aware of the great historical value and cultural significance of remains and the original habitat to the entire park and even the city, much of the original environment was retained and their use was maximized.

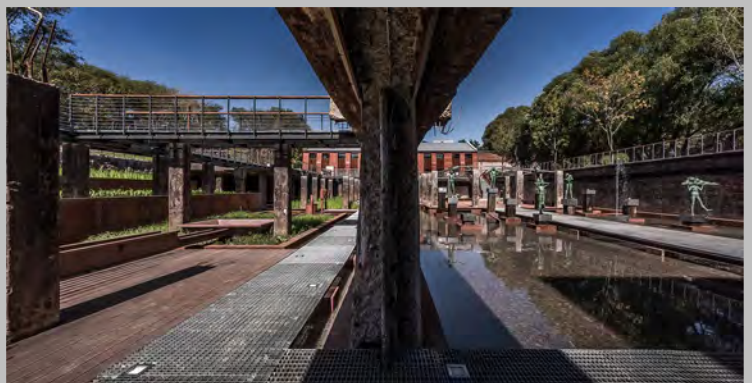
Ecological connections include the original gullies, buildings, forests, open-air pools and urban interfaces, and diversified social venues have been built to enrich the park. The composition, quantity, distribution pattern, habitats and seasonal dynamics of the flora and fauna were analysed. Invasive tree species were removed, and a large number of native plants added. The hanging trestle in the jungle fills visitors with a sensory experience and provides habitat and a migration corridor for native flora and fauna.

In the park, many of the old structures were used to construct a rainwater system. Materials were recycled, and the cleaned dead trees are returned to the forest as nutrients. Abandoned wood and stones are used as paving materials to minimize carbon emissions.

The design includes a multi-functional lawn activity space. Together with the buildings and art installations, it forms the core theatre of the park, where a diversity of urban activities such as exhibitions and concerts are carried out; the old hard ground in the jungle has been turned into a playground for children. People can experience the original water purification process and feel the seamless connection of the past and the present.

The park highlights the characteristics and historical memory of the project by protecting and utilizing the site's industrial texture and historical context. The whole design turns the site into a water purification technology museum, so that the public could learn the water purification process and fully experience the space scene 80 years ago, having a better memory of the site history.

The open sedimentation tank restores the old water storage function and integrates hydrophilic trestle, aquatic plants and hydrophilic platforms to create an ecological wetland, while the closed sedimentation tank now incorporates participatory urban functions and art installations. Cultural and creative offices, businesses, art centres, museums, exhibition spaces etc. are incorporated into the park's buildings to establish an open, functional and ecological creative cluster.



Year: 2017 -2018  
 Status: Completed  
 Client: Changchun Urban and Rural Construction Committee and Changchun Construction Investment Co., Ltd.  
 Design: SHUISHI  
 Images: 1: Pan Shuang; 2 + 3: Wang Xiu  
 Sources: <https://www.asla.org> | <https://www.archdaily.com> | <http://www.shuishi.com/>

## Climate Adaption Kokkedal Kokkedal, Denmark

The specific feature of this urban climate adaptation project are its 35 individual projects with dual functions in one park.

The challenge of the project in the North of Sealand was to develop a climate adaption which also could promote an improved urban life: connect the fragmented urban areas, create new attractive meeting points and overall bring nature closer to the residents – all this on 60ha only.



Climate Adaption Kokkedal covers an area, which contains two large subsidised housing associations, borders Usseø river and suffered from a severe flooding around 2011.

The Kokkedal project contains an extensive catalogue of solutions for climate adaption and water management methods. Whereas rainwater formerly was hidden underground in pipelines, the rainwater management is now made visible in a way, offering new recreational urban possibilities. The residents already ascertain that the project has improved the sense of security as planned. The new recreational areas are popular and have driven out the shifty activities which used to dominate the area.

Rainwater is retained in basins and volumes which have a capacity of retaining a 5-year occurrence. Rainfalls larger than this can still be managed without any serious damage occurring.

The rainwater is managed in a system on the surface, making it possible to follow its course from the smaller basins on to the soakaways and trenches, until it finally reaches the large basins and Usseø River. All the water is led through cleansing elements such as rainwater beds and basins.

Climate Adaption Kokkedal consists of 35 individual projects, each contributing recreational activities to the residents of the area. This dual function has been central to the project. A garden space has for example been created which functions as green retainment basins and the local sports field has been walled in by a grass clad earth mound ensuring that large amounts of stormwater can be held

back. The project consists of gardens, activity areas, exercise paths, nature playgrounds and areas which can be used for educational purposes. The artist Eva Koch has furthermore created a space shaped as a large bowl which at night-time is filled with projected images of flowering poppies.

In November 2017, the project received DANVA and Realdania's Climate Award for creating a project which serves as an inspiration for all future climate adaption projects.



Year:	2012 - 2017
Status:	Completed
Client:	City of Fredensborg; Realdania; Lokale- & Anlægsfonden AB Hørsholm Kokkedal; Boligforeningen 3B
Design:	Schönherr A/S
Images:	1 – 3: Schönherr A/S
Sources:	<a href="https://schonherr.dk">https://schonherr.dk</a>   <a href="https://realdania.dk">https://realdania.dk</a>   <a href="https://moresports.network">https://moresports.network</a>

## Parc de la ZAK des Docks Saint-Ouen, France

The Development Zone of the Docks is a large 100 ha area on the banks of the Seine, on the edge of Saint-Ouen's historical centre at the gates of Paris.

It is the transformation of an odd, almost mono-functional, industrial territory into a new mixed development integrated in the existing town.

The 2-hectare Park of the Docks is a highlight providing an extensive open (green and social) space on the banks of the Seine.



This functional mix is inscribing itself into a metropolitan and regional perspective with the strong ambition to develop an ecological neighbourhood. Saint-Ouen is a complex urban context to work in, as it is rapidly changing from its (mostly) industrial past. Social diversity is a great opportunity in the area and is something that is indirectly being addressed in the project. The ambition has been to create an inclusive and democratic space, welcoming the public, residents and visitors alike. Located on the banks of the Seine River, the park is linked to the theme of water. One of the main aspects of the park is how it collects and treats the rainwater, on just a few meters from the region's largest watercourse.

The park alternates hollows and solids, which materialize two types of place: spaces for nature and gardens for the public. This interplay between accessible and visible nature structures the park and its uses. The park offers different kinds of conviviality and experiences due to its spaces and its multiple atmospheres: light/shade, quiet intimate spaces/busy active places, and wide-open views/framed vistas. A sequence of compositions and views of the distant landscape, of the city or the park itself.

Valleys, ponds and large sunken surfaces gather rainwater and floodwater from the Seine. The park is a hydraulic system, a huge reservoir that filters water and uses it to irrigate the plantations. The ponds and filtering gardens welcome a wide range of fauna.

Diverse services and structures are in the park. Firstly, the park has an educational greenhouse (1 400 m<sup>2</sup>), which is linked to the

allotment gardens (5 000 m<sup>2</sup>) and which holds meeting spaces, a kitchen, a large experimentation and event space and gardening material. This greenhouse is reflected as a central point for the many associations in and around the park. Throughout the allotment gardens, several gardener's cabins are located as well as pick nick tables. These associations have re-found their cultivation grounds that were already present on site before the design of the project, an element that was fundamental for the design team.

Secondly, a large skate park is situated at one edge and is linked to an urban, multifunctional amphitheatre. Lastly, three playground areas serve multiple age groups. One of them is strongly linked to a large grass field (10 000 m<sup>2</sup>) that is used as an extension of this playground and which includes playful water elements.

The park is linked to the historic tissue with a generous plateau that includes a historic building. This parvis not only allows for an overview of the park, it interweaves the different scales of old and new tissue and it allows for an elegant entrance area of the park. The Park of the Docks is showing how natural systems (like water cleaning and storage) and environments can be combined with an active and urban park that has the ambition to become a central point within the emerging neighbourhood and a destination in the minds of its inhabitants.



Year: 2010 - 2013  
 Status: Completed  
 Client: City of Saint-Ouen  
 Design: Agence Ter  
 Images: 1 – 3: Agence Ter  
 Sources: <https://agenceter.com> | <https://www.iflaeurope.eu> | <https://landezine-award.com>

## FLOOD PREVENTION, WATER MANGEMENT AND WETLANDS

Environmental aspects, local recreation and biodiversity requirements are increasingly being considered in grey and blue infrastructure concepts in the outskirts of cities or in rural regions. These large-scale projects might even form independent landscape zones and therefore not only local but also regional interests become relevant. The inclusion of different stakeholders makes it possible to take diverse aspects into account.

Our examples show that sustainable and future-proof solutions are created when the concept and design take different needs seriously, recognizing the creative potential which lays in their fusion. As a result, we see resilient landscapes in which technical, ecological, and social demands are joint in an aesthetic design.

## Flood prevention, water management and wetlands

### Vaughan's Stream Reserve Auckland, New Zealand

Vaughan's Stream Reserve is a 20-ha infrastructural park that provides the central landscape experiences and a hybrid system of water retention.

As a second function, this hybrid park provides a huge variety of recreation options for a recently developed urban development area in Auckland that embodies a new secondary town centre, 2,500 houses, and 28 ha of parks.

The hybrid project scope includes:

- 1| the design of 3 wetland areas forming part of an integrated low impact design network and stormwater treatment system for the broader development,
- 2| a road bridge on the sites central north-south spine connecting the two sides of the stream,
- 3| and a series of secondary pedestrian bridges providing pedestrian connectivity between the stream corridor, neighbourhood and adjacent Long Bay Regional Park.

The design strategy stitches together the ecological restoration of the corridor with new stormwater and social infrastructure programs into a contemporary coastal parkland network with a distribution of design elements – boardwalks, bridges, and pavilions – which facilitate circulation, navigation, and occupation. The articulated bridge and structures are a recessive, yet sculptural family of steel elements set within the rejuvenated ecological network of the park. These features reveal and support wayfinding and connectivity of the park network and articulate an episodic experience for the park system.

A dam separates the main wetland forebay and the main body of the wetland that incorporates a pedestrian access bridge leading to the Long Bay Regional Park walkway. Corten weirs provide water aeration, introduce the sound of water as an experience, and manage water flows in a variety of rain events. Rows of gabions define alternating pond depths that support surface flow and sub-surface flows. A pedestrian path runs along the western side of the pond, and it links the park spaces to the adjacent Long Bay Village.

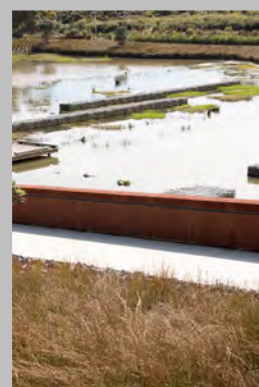


It incorporates opportunities to access the water's edge via timber decks orientated to sweeping landscape views.

The central bridge re-conceives conventional notions of a bridge, as it expresses an infrastructural and landscape-led approach. They are characterised by its horizontality, which meshes with the surrounding landscape and preserves views to the broader coastal landscape. This strategy also harnesses the convergence of the park's movement networks to create a landmark and focal point. The bridge form extends a folded sequence of Corten walls across the stream corridor and integrated into the surrounding landscape. These forms support legibility and wayfinding and extend the bridge beyond its span into the surrounding landscape.

The design of the smaller bridges reinforces wayfinding using solid panels that unfold and extend into the landscape. It contrasts with lighter detailing over water. These bridges continue the materiality palette of the wider project, utilizing concrete, timber, and Corten steel. They also incorporate detailing of balustrades via a sculptural composition of solid panels and vertical bars.

A vital feature of this project is the considered inter-weaving of the typically mutually exclusive spaces of recreation and stormwater treatment into a hybrid infrastructural parkland. Its sensitivity to the significant surrounding landscape of Long Bay, the Waitematā and beyond has ensured an appropriate fit and transition between the neighbouring project and these significant natural landscapes.



Year: 2015 - ongoing  
 Status: First phase 2017 - ongoing  
 Client: Todd Properties Ltd; City of Auckland  
 Design: LandLab  
 Images: 1 – 4: LandLab  
 Sources: <https://www.wanawards.com> | <http://landlab.co.nz> | <http://landezine-award.com>

## Flood prevention, water management and wetlands

### **Sydney Park - Water Re-Use Project Sydney, Australia**

Much has been achieved over the past two decades to transform the Sydney Park site from its post-industrial history and waste disposal, into 44 hectares of a fully accessible and multi-faceted landscape or waterscape.

Today the park celebrates exciting connections between people and place and is a vital asset with a plenitude of opportunities for the growing communities living in Sydney's suburbs.



This project forms the City of Sydney's largest environmental project to date and is built in partnership with the Australian Government through the National Urban Water and Desalination Plan. It is an integral component of Sustainable Sydney 2030; targeting 10% of water demand to be met through local water capture and re-use in the park. The City also seized the once in a lifetime opportunity to use what was essentially an infrastructure project to breathe new life into the park – as a vibrant recreation and environmental asset for Sydney.

The City engaged a design team who orchestrated an intense and multi-disciplinary collaboration intersecting design, art, science and ecology – in a 'roundtable' of creatives shared between water experts. The result is an interwoven series of community infrastructures and 'made' systems – water re-use, recreation, biodiversity and habitat all integrated within the physical fabric of Sydney Park. Sydney Park now offers an enhanced recreational experience to the Sydney community, going beyond the picturesque; creating instead a revitalised, multi-faceted waterscape that celebrates the connection between people and place.

After an intensive process of 'easing in', the water re-use project is now fully operational and intrinsically linked with its park setting. The bioretention wetlands not only capture and clean the equivalent measure of 340 Olympic-sized swimming pools worth per annum, but successfully improve local water quality, habitat and reduces potable water consumption in the area. The park's fauna and flora are thriving, with new habitats created and existing

ones protected and enhanced throughout the park. The function and processes of water harvesting and cleansing is enhanced through its visible ebbs and flows through the landscape. New pathways intersect the wetlands, allowing park users to explore and discover 'moments' in the landscape that can be at times playful, dramatic and peaceful, but at all times connected to the water narrative of capture, movement, and cleansing.

Highlighting these processes was an important part of the project, as they emphasise the intrinsic relationship between water, people, topography, flora and fauna. Public art is interwoven; Turpin + Crawford Studio's 'Water Falls' celebrates clean water release while also working with TDEP's cascades to aerate water in the last link in the bioremediation treatment train. Turpin + Crawford Studio also devised the water 'exhaust fans' that celebrate the transfer of water from bioremediation 'paddies' to the lagoons, playing on the spirit of water and its interactions with the landscape.



Year:	2013 - ongoing
Status:	Official opening of this section in 2015
Client:	City of Sydney
Design:	Turf Design Studio & Environmental Partnership; Alluvium; Turpin + Crawford Studio; Dragonfly Environmental
Images:	1 + 2. Ethan Rohloff Photography; 3: Adam Hunter
Sources:	<a href="http://turfdesign.com">http://turfdesign.com</a>   <a href="https://www.archdaily.com/">https://www.archdaily.com/</a>

## Flood prevention, water management and wetland

### **Kopupaka Park Auckland, New Zealand**

Kopupaka Park is a good example for a design-led approach that integrates a wide range of community amenities and heritage assets with engineering and ecology.

What once might have been considered 'space left over after planning' has been transformed into a unique hybrid park that challenges expectations of professionals and visitors around the design and use of stormwater reserves.



The park also illustrates how urban growth can be balanced with ecological restoration, the creation of new public space and the development of a strong sense of place.

This hybrid park integrates infrastructure with natural features; it is part stormwater reserve, urban park, playground and skate park – all made possible by dovetailing the master planning of new streets with the green infrastructure of the 22-hectare stormwater reserve.

The park is structured around six stormwater wetlands and works also included the revegetation of the Totara Creek and Sakaria Stream corridors. The riparian planting extends to the reserve boundaries, where a playground, a botanical garden and a skate park have been cut into clearings. The new stormwater infrastructure not only accommodates massive urban expansion but also restores elements of the degraded riparian system, protecting water quality and ensuring habitat preservation.

However, it is the crib walls, used at a range of scales, that define the spatial experience of the park. The structures provide vantage points over the wetlands, with pond embankments designed deliberately with a formal and natural (stream) side, and the angular form of the pond embankments mimicking the site's former irrigation dam. The formal terraces around the dam embankments ensure that safety benches and grades are met but also provide significant flat, usable space for recreation. Extensive benches and islands for aquatic planting and habitat balance recreation with ecology.

The notion of weaving histories and overlapping functions together is the dominant design narrative of the park, with a concept of 'thread, weave and gather' articulated in physical form through the merging tributary and constructed wetlands of the park.

While Kopupaka Park provides the infrastructure for the attenuation and detention of stormwater run-off from the streets and buildings of a new town centre, this new type of civic infrastructure, where traditional boundaries, constraints and functions overlap, has a tight overlay of cultural, ecological, community and (mostly unseen) engineering objectives.

What is visible are the cultural aspects of the project, especially the curving timber 'baskets' that have been integrated into the edges of three main wetland ponds. These functional sculptures abstractly reference harakeke (flax) woven into kete (baskets) and hīnaki (eel pots). While the forms appear complex and bespoke, they are in fact constructed from a standard timber-crib retaining system: an off-the-shelf system adapted to allow the expression of a traditional weaving pattern in curvaceous form.



Year:	2013 - 2016
Status:	Completed
Client:	Auckland Council
Design:	Isthmus Group
Images:	1 - 3: Isthmus Group
Sources:	<a href="http://isthmus.co.nz">http://isthmus.co.nz</a>   <a href="http://landezine.com">http://landezine.com</a>   <a href="https://nzila.co.nz">https://nzila.co.nz</a>

## Flood prevention, water management and wetlands

### Kustzone Katwijk Katwijk, The Netherlands

For the past ten years, the two main responsible bodies in the Netherlands, namely the Rijkswaterstaat and the Ministry of Infrastructure and the Environment, have been working to strengthen the weak links in the coastal flood defence of the Dutch shoreline.

Katwijk is a best practice example that shows how the huge investments needed for coastal defence can also benefit a dune landscape and urban development.



One pioneering measure was implemented in the centre of Katwijk. Here the investments allowed building a protective, serving and inviting dunescape. It ensures that Katwijk remains a tourist destination and is a good practice example for supporting the local economy of seaside towns by landscape measures.

In an interactive planning process, the most important values of Katwijk were defined: namely the relationship between the village and the beach.

The chosen dyke-in-dune coastal defences, a stone-lined embankment covered and reinforced by dunes, allows a minimal disruption between town and beach. In addition to the strong sea dyke, a large parking for beach visitors and local inhabitants. Both dyke and garage are completely hidden from view by natural-looking dunes. Only the entrance elevators to the parking lot pop out from the dune grass.

All these functions are integrated to protect the town from flooding, offers ecological value for coastal flora and fauna and create a beautiful solution to the parking issues in summer. An extensive network of paths has been built to connect village and beach, offering views of the sea. The highlight of the design is a broad dune transition that serves as a welcome space and event plaza, in total forming a vibrant heart for the coast of Katwijk coast.

The concept of developing a multifunctional sea defence, linking it to tourism, public space and nature is a great example of Dutch integrated engineering. The large investment that a coastal

defence usually demands, is now benefitting so many more goals than just the primary safety from flooding. This way of thinking is crucial for sustainable coastal development that can reduce floods in coastal zones over the world as landscape architects will need to assist communities in abating the effects of climate change.



Year: 2013 - 2015  
Status: Completed  
Client: Gemeente Katwijk; Hoogheemraadschap van Rijnland  
Design: Okra; Arcadis; Royal Haskoning  
Images: 1 - 3: Okra  
Sources: <https://www.okra.nl> | <http://landezine.com> | <https://www.flooddefences.org>

## Flood prevention, water management and wetlands

### **River Aire Canton of Geneva, Switzerland**

This measure allowed the renaissance of a river and the preservation of its history. At the same time, the function of the river in the context of flood prevention was maintained.

Canalisation of the River Aire began in the late 19th century and was long considered an engineering success: a 5 km stretch of the River Aire was channelled to eliminate the threat of flooding, and to turn former wetland into fertile farmland.



At that time, the radical changes caused to the landscape and the flora and fauna living along the once meandering river were deemed of lesser importance.

In recent years, however, our understanding of the natural world has evolved: the realisation that there are limits to how much we can control nature has led to calls for rivers to be given more space again in order to strengthen natural processes and the interactions integral to biodiversity.

As early as 1998 the Canton of Geneva launched a renaturation programme with a number of objectives. Increasing the amount of space available to rivers would protect local residents from flooding, restore the rivers into valuable habitats and also provide recreational spaces for the public. In 2000, the Canton launched a design competition for revitalising the River Aire.

The project submitted by Superpositions, an interdisciplinary team of designers, biologists and hydrologists as well as civil and environmental engineers, stood out from the rest: rather than restore the river landscape to its natural state, they planned to do the exact opposite by preserving the traces that man had left on the landscape over the preceding decades. The project was implemented in three stages, starting in 2002. A fourth stage, scheduled for completion by 2022, will enhance the Aire from the village of Certoux to the French border.

Today, the banks of the revitalised river are a popular recreational area and a precious habitat for water-loving plants and animals. No

longer bisected by a concrete channel, the landscape is much more diverse, with the river flowing in a newly designed bed, slowly or rapidly depending on the water level, and providing an important habitat for a variety of species.

The former channel has been preserved as a reminder of how things have changed: some sections are covered with pergolas and there are picnic areas and steps leading down to the water, creating an attractive space in which people can walk, run and relax as well as a practical thoroughfare for non-motorised traffic. By reading the landscape as an overlay, or 'superposition', of different layers of time, the project designers have created a hybrid of the natural and the artificial that brings the diverse history of the place to life.

The project is valuable not only for its outcome but also for its approach, having evolved in close consultation with residents, farmers, environmental organisations and local government representatives. The involvement of a range of stakeholders has led to widespread popularity and support for the project.



Year:	2000 - ongoing
Status:	Completed, next phase to be completed in 2022
Client:	Canton of Geneva
Design:	Superpositions; Georges Descombes; Atelier Descombes & Rampini SA
Images:	1 + 3: Fabio Chironi; 2: Superpositions
Sources:	<a href="https://www.bafu.admin.ch">https://www.bafu.admin.ch</a>   <a href="http://superpositions.ch">http://superpositions.ch</a>   <a href="http://superpositions.ch">http://superpositions.ch</a> (PDF download)

## Flood prevention, water management and wetlands

### **Etar de Alcântara Lisbon, Portugal**

The Alcântara Wastewater Treatment Plant serves more than 750.000 inhabitants of the cities of Lisbon, Amadora and Oeiras and received an investment of € 70 million.

10% of the investment, thus € 7 million, were used for a green cover that is clearly contemporary but reflects the history of the landscape.

Today, Etar de Alcântara includes a garden designed on the roof of a wastewater treatment plant.



This inclined “green roof” of approximately 30.000 sqm form a landscape of green mosaic composed of plants and shrubs of different types that compete with the native colours of the valley. It is a cornerstone of the design strategy devised to reference the site’s agricultural history but also functioning as an important element of environmental mitigation.

The Alcântara Wastewater Treatment Plant (ETAR), which is the largest of the four ETAR that serve the city of Lisbon, is designed for a flow of 3,3 m<sup>3</sup>/s in the dry season. Considering the unitary feature of the drainage network, a dedicated line was also built for the wet season, prepared to treat an additional flow of 3,3 m<sup>3</sup>/s and is able to deal with initial rainfalls, which have a significant pollution load.

Reshaping the topography, the design nearly conceals the Etar de Alcântara plant from the exterior. The station’s planimetric and volumetric design, mostly underground, is camouflaged above by a landscape recalling former uses and creating a semblance of pre-existing countryside.

The intervention was developed as a moment of territorial reconfiguration of the Alcântara Valley where the hillside meets the station’s roof garden. Further downstream, this breach was exacerbated by urban development and transformation of the western slope. The restructuring between the two previously disconnected slopes towards a coherent identity relied on integration of the water treatment station.

The site refers to landscape regeneration and to reclaim lost continuities, both visually and ecologically. The farming history of the Alcântara Valley is reinterpreted by the reconstruction of patterned plots below the ring road on the hillside. The bioengineering of the slope's soil provides a suitable load-bearing groundcover rich in floristic and visual diversity.

This action is fundamental for the stabilisation of the hillside and, consequently, for its biological reactivation and full integration with the urban infrastructure.



Year:	2005 - 2011
Status:	Completed
Client:	Águas de Portugal
Design:	Proap Group
Images:	1 – 3: Proap
Sources:	<a href="http://www.proap.pt">http://www.proap.pt</a>   <a href="https://www.archdaily.com">https://www.archdaily.com</a>

## Other good practices identified by the UL2L Partnership

The UL2L Project (UrbanLinks 2 Landscape) identified and analysed a number of good practice examples located in or close to the partner regions. You will find all these good practice on the project's website, which is published as a subsection of the Interreg Europe Programme website: <https://www.interregeurope.eu/ul2l/> (see screenshot below).

The next chapter summarizes some of those good practices and invites you to check the website for more details on these and to get to know some other inspiring measures.

The screenshot displays the UL2L Project website. At the top, there is a navigation bar with the UL2L logo, the European Union flag, and links for 'My Interreg Europe', 'Search', and 'Approved projects'. Below the navigation bar is a large banner image of a park area with the text 'UrbanLinks 2 Landscape' overlaid.

The main content area is titled 'Project summary'. It contains the following text:

**Open spaces**, ranging from natural heritage to derelict sites and from the urban core to the fringe and into the landscapes, are **of increasing value** for European municipalities. Not only because they are **constantly reduced** by land use (for business, infrastructures, housing etc.), but also because remaining open spaces **must serve new requests** and functions. These include ecosystem services, such as mitigation of local effects of climate change, and new public demands for urban farming and outdoor healthcare services.

Consequently, **local and regional policies** to **deal with these issues** were agreed and measures can be financed from several sources, including ERDF and ESIF according to priorities set up in Regional Operational Programmes.

Implementation however faces **open questions** and **major challenges**:

- How to **identify** the best **locations** for new services and use forms ?
- How to **include** regional **Stakeholders** ?
- How to **ensure** that new offers are **attractive and welcoming** ?
- How to **ensure** that new offers deliver the optimum **economic** benefits ?
- How to **ensure** that new offers deliver the optimum **environmental** benefits?
- How to **ensure** that new offers deliver the optimum **social** benefits?

One example: today urban gardening often develops spontaneously and at deficient locations. If planned in cooperation between authorities and users/operators and if better placed and designed, it could increase its benefits for public realm, climate adaptation, social inclusion and local markets.

Below the main text, there are several sidebars and a footer section:

- Sign up for the UL2L newsletter**: A button labeled 'Subscribe now'.
- UL2L Workshop 5 Kuldiga**: A button labeled 'Registration'.
- Newsletter February 2020**: A section titled 'Newsletter February 2020 UrbanLinks 2 Landscape' with a button labeled 'Current newsletter'.
- Visit us on Instagram**: A section titled 'Visit us on Instagram' with a button labeled 'Link to Instagram'.
- Video conference on Action Plan**: A section titled 'Video conference on Action Plan' with a button labeled 'See full news'.
- Footer**: A section with two green hexagonal icons. The first icon shows a Euro symbol and the text '€1,193,175.00'. The second icon shows a clock and the text 'from 1 Jun 2018 to 31 May 2022'. To the right of these icons is the text 'TOPIC: Environment and resource efficiency'.



### **Nordpark Pulheim - An urban invitation into the landscape**

*Nordpark Pulheim is a prototype for a park that opens a city into the landscape. It offers new use forms for the citizens while enhancing biodiversity.*

The inner-city green areas in Pulheim are very limited. To react to the public request of access to green areas, for recreation, sports activities, playgrounds etc. the city acquired land between the city limits and the adjacent farmlands. Here a prototype of a new urban landscape characterized by field paths, tree-lined avenues and parcelled fields was implemented. Nordpark is structured by a staggered arrangement of tree rows, wooded bosques, farms and industrial objects along the horizon. The park will grow to surround the north-western edge of Pulheim by 2030.

The park includes a variety of opens spaces for (semi)private activities as well as public open spaces. The design is open to serve constant adjustments and change but establishes a stable and recognizable form. Characteristic features of the landscape are incorporated in the design (e.g. fruit orchards, meadows and surfaces) as well as classical garden design such as promenades and vistas. The public is making wide use of the park, it is a playground for children and a meeting point for groups, e.g. those using the infrastructure for outdoor gyms etc. The city ensures that the best mix between private use and public needs will be guaranteed and cares for maintenance and repairs. Recently ground for the extension of Nordpark was acquired by city of Pulheim and implementation is likely to start in autumn 2020.

The park was realised in the framework of the REGIONALE 2010 with budget from ERDF, ministries and the city of Pulheim. External experts delivered the framework plan, the design and implementation plan. About 3.5 Mio. Euro were spent for sections 1 and 2.

The conversion transformed agricultural areas into meadows and orchards, making the structure appreciably, species-rich and ecologically valuable, including cool air production. The park established an ongoing planning process of transformation and sustainable and climate-friendly development, based on the engagement of citizens. The park is used by the people and for professional health care offers. The park won the NRW Award for Landscape Architecture by BDLA. 3rd section agreed in June 2018.

The initial idea of providing plots for urban gardening was not well accepted. It is assumed that this since many people in Pulheim either have a small garden to grow fruit and vegetable or do not find the time to do so. These plots were now used for orchards with public use.

Nordpark is the result of a development approach jointly worked out and agreed by several municipalities and thus one element in a wider green network. The location between a city and the open landscape is still quite unique for an urban park. The design successfully combines urban and rural elements and offers a wide variety of structures and use forms. Thus, both the planning process as well as the implementation and the current use offer several experiences and approaches to share.



## **Garzweiler - Recultivation of open cast mining**

*The recultivation of the huge mining area Garzweiler is based on a joint vision for regional development and new approaches for planning processes.*

Garzweiler is Europe's largest open cast lignite mining area. Germany's agreement to entirely phase out coal mining by 2038 includes the end of Garzweiler and affects all municipalities in this area. To be prepared for the dramatic changes in the landscape, economy, urban and social development, these municipalities with 430 km<sup>2</sup> and more than 330.000 inhabitants decided to jointly create a vision for the future development and to install an intercommunal organisation to assist this development approach.

In a first phase (in 2016) the municipalities collected relevant material, informed the public and invited external planning experts to contribute to a one-week workshop to identify challenges and opportunities of this changes and to develop a vision or screenplay (<https://www.landfolge.de/projekte>). Using several approaches, this open and creative workshop agreed on four main strategies for a preferred economic, social and urban development and for the creation of new landscapes. They always include measures to start within a short term as well as mid-term and long-term measures (until 2086). The landscape plans include a "green ribbon" and three different kinds of landscapes: innovation valley, real lab and lake. On the organisational side, all partners support and finance the installation of a permanent managing body: Zweckverband Tagebaufolge(n)landschaft Garzweiler.

Starting the process required first human resources and the readiness to work together across administrative and sectoral borders. Some funding was required for external experts and a publication. Staff and overhead costs are mainly covered by the municipalities.

In Europe, most landscapes are shaped by human use. Post-mining landscapes represent the most dramatic type with new topography created by machines. But natural processes can start leading to new ecosystems and biodiversity. The reconnection with the surrounding landscapes is a big challenge: differences may disappear, or uniqueness emphasized. The plan agreed for Garzweiler mixes options, questions romantic views of landscapes and turns challenges into benefits for nature, culture and society.

Opencast mining has been a controversial topic causing opposition and resentments for decades. It is important to show the enormous resources and opportunities early and in an open process, including all parties and the local citizens. This new approach is a first attempt to deliver to these needs.

The scale of Garzweiler2 is unique. However, this large-scale project includes issues that must be addressed (e.g. the revitalisation of former industrial and mining sites) ideas for innovative approaches to using unique qualities and opportunities at smaller sites too. The early and open discussion of a mix of strategies to cover social, urban, economic and landscape needs is a transferable approach for other regions too as is the installation and joint funding of an organisation to assist the municipalities in dealing with the challenges and resources.



*Internationally renowned artists and landscapes architects transformed the previously inaccessible sewage treatment plant into a unique park.*

BernePark in Bottrop is located on the so-called Emscher Island between Gasometer Oberhausen and Nordsternpark Gelsenkirchen, directly linked to the Emscher Radweg (Emscher cycle path). BernePark is one of the extraordinary, transformed industrial monuments in the region: Wastewater has been treated here since the 1950s. In 1997 the sewage treatment plant with the two round basins and the turbine house was shut down and almost fell into oblivion. Its revitalisation as a place of industrial culture took place within the context of EMSCHERKUNST.2010 - a summer art festival with installations and interventions at several places along the river Emscher.

Internationally renowned artists and landscapes architects (e.g. Piet Oudolf) transformed the previously inaccessible sewage treatment plant into a unique park. One clarifier remained as a lake accessible via a pontoon bridge, the second was transformed into a "theatre of plants" with thousands of perennials and grasses reminiscent of a green amphitheatre. The main building now serves as a restaurant and parts of the former machinery have been lovingly preserved as decorative highlights. The unusual "Parkhotel" is unique in Germany: Five canal pipes converted into bedrooms offer overnight experiences with views into the starry sky above the Ruhr Area.

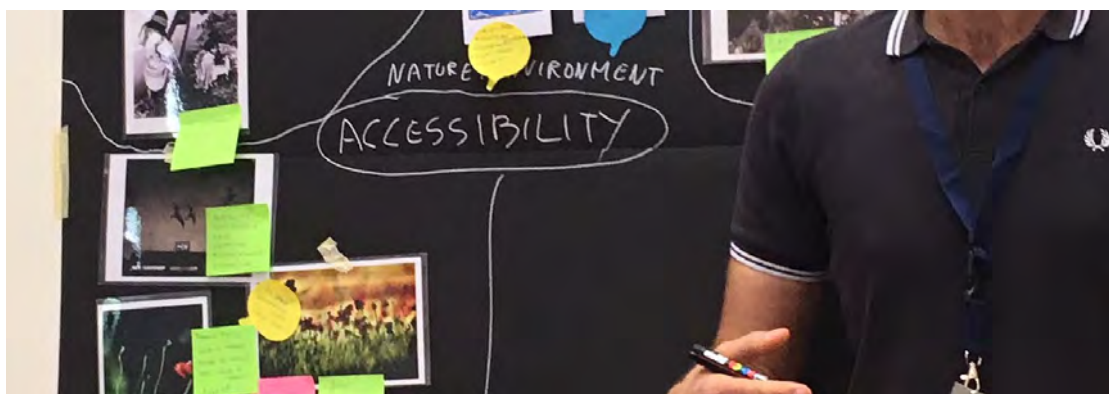
BernePark was one element of EMSCHERKUNST.2010 which had a reported total budget of about 6 Mio. Euros, but included 19 works of art and landscape interventions.

The new park, including a playground for children, is well used by the local population. It also attracts visitors from abroad with the use of the restaurant and the "hotel" as an additional evidence. Professionals and professional magazines consider it as a unique transformation which can be a good practice at similar places across Europe.

Currently the access by car is difficult as a weak street bridge must be closed, but people are encouraged to come by bike as the sites is located alongside one of the main regional cycling tracks.

Similar sewage water treatment plants will become redundant at several sites due to technical progress and environmental reasons. To work with artists and landscape designers in developing a creative, green and inviting use for the remaining building structures can be a good alternative to tearing down everything and starting from sketch.

It is also an important factor that people who live close to those sites, for the first time can enter these sites which have been forbidden and "unfriendly" for many years. Thus, it is infrastructure turned into green and artistic environment with a strong social component.



## Participatory photography workshop

*Based on photography as an educational tool, young people were involved in a participatory planning process on new uses and functions of public spaces*

The participatory photography workshop took place at the Ciuffelli Agricultural Institute in Todi for a total of 12 meetings. The weekly meetings involved a total of 14 students aged between 14 and 18 years. The goal of the lab, widely achieved, was to involve the students of the Institute in a participatory planning process on new uses and functions of public spaces in order to enhance their point of view and their project proposals of redevelopment. The training course was mainly based on the use of photography as an educational tool. The methodology adopted in the laboratories followed the principle of "learning by doing, learning by shooting", which allowed the maximum level of student participation.

The reference methodologies applied throughout the laboratory phase were:

- 1) Photolanguage, a method of communication and mediation in groups born in France in 1965.
- 2) Photovoice, is a method of research-action that allows people to become aware of what is worth preserving and what needs to be changed in their community and pass it on to others. Participants are given the opportunity to document and communicate the important aspects of their life and the possibility of becoming promoters of change.
- 3) The M.I.P. - Multidimensional Image Path - method designed and structured by Antonello Turchetti. MIP is an individual path of knowledge through a progressive dialogue that allows a multidimensional visual narration that allows the emergence of one's imaginative components.

Resources needed included a fee for the creative director of the workshops and some budget for prints and other material, catering etc.

The participatory photography workshop allowed participants to be more aware of their environment / landscape, activated critical reflection processes on landscape issues in relation to the environment, the population and socio-cultural elements and allowed to create a participatory planning of redevelopment of the areas of intervention identified.

The use of photography in an educational context, gives participants the role of "protagonists", a role in which photography becomes a detector of a reality that goes beyond the purely aesthetic and technological data and learning goes beyond the boundaries of the school. On an educational level, photography acts on 3 relational dimensions:

- 1) Photographs as objects of relations between reality and its representation.
- 2) Photographs as possible mediation tools in the relationship between people. This is one of the peculiarities of photography as a non-verbal communication tool and as an activator of interactions. It is in this area of similarity / difference that exchanges, and comparisons can take place. An occasion for the meeting of thoughts, of relationships between points of view that, by interacting, build relationships.
- 3) Photographs as tools to relate to yourself. The images reflect our inner values that define our way of representing the world and relating to each other.



### **The vegetable gardens of St. Peter: the rebirth of a forgotten place**

*A participatory, community project that established an urban gardening project offering several health care services on an abandoned university area.*

The project provides a location and activities to engage the local population and various NGOs working with sensitive social groups to cooperate with University's students, faculty, and staff. In doing so, the project has enabled the recovery and retrofitting of an abandoned area of an ancient Benedictine complex, St. Peter in Perugia. The project started with a participatory design process in 2014. It now occupies 1.700 m<sup>2</sup>, and it is organized in operational areas:

- Greenhouses: propagation of herbaceous and shrub plants from cuttings and seeds;
- Carpentry workshop: to build raised beds and furniture;
- Aromatic plants' slope;
- Vegetable gardens: one larger area and 10 in-ground planters at the entrance of the area;
- Flowering plants plots;
- Common area: with barbecue, tables, and benches under two ancient persimmons trees;
- Orchard and Vineyard: 21 trees (apple, prunes, cherries, persimmons) and 20 vine plants.

The main stakeholders, users and supporters are:

- University faculty and staff and students
- Primary school children and Kindergarten kids
- People from the neighbourhood
- American college students and elderly students
- Non-profit's patients with food issues (anorexia, BED, etc.)
- Psychiatric patients involved in daytime activities.

Now the project is a "urban hub" providing support for other local urban agriculture projects.

The project has no dedicated fund, but some support for buying equipment and materials. The number of people needed varies with the seasons and work to be done, but the heterogeneity of the groups covered all needs and workloads since 2015. The project received attention from many local and national media. From this project started a series of academic collaboration with universities that produced research projects, participation to various international conferences and scientific papers.

Difficulties were linked to the attitude of some of the university members that were not used to working with people from outside the academic environment and at the same time. Also patients with food issues prefer working autonomously in a more quiet setting.

Urban Gardening projects are started at many places, but often fail because they miss a clear focus, an identification of main target groups and a guiding hand. At the same time the benefits of therapy gardens for certain diseases are widely acknowledged. This project is a good example for combining the ideas of urban farming and the benefits of therapy gardens, both based on community involvement as well as on support by experts. It has also opened a wider local and regional relevance as a hub for other projects in the agricultural and health protection fields, much in line with UL2L and many urban-rural development policies.



### Area Project "NATURAL PLOTS"

This landscape design project creates new paths between separated sections of a city and promotes local plants, traditional agriculture and sustainable tourism

The project covers about 200 hectares including valley and pedicollinare areas characterized by transformation trends, unfinished, residual and missing connections. The man-made landscape has incorporated the natural landscape. The project regenerates the "marginal" critical areas, restoring the harmonious connection with the surrounding rural landscape. Here a new form of an urban agricultural park will be built. It will renovate a building at the entrance of the city, linking it with the new project rest areas. It will be enhanced the cycle and pedestrian paths and autochthonous plant species will be planted to mend the peripheral urban fringes. Moreover, it will restore the tower of the olive grove in the park of Villa Fabri, to be used as a centre of landscape documentation.

The interventions aim at protecting and preserving the environment, biodiversity and the landscape, through restoration of spaces and areas that over time have undergone anthropic transformations, losing their original rural connotation to the advantage of:

- resident population and tourists
- hotels, restaurants and tour operators that offer packages for slow and natural tourism
- public institutions.

The joint element of success is the multi-functionality: the positive effects of a given action will multiply by focusing on the added values. Therefore, they'll coexist blue and green interventions of rural areas, ecological and fruitful interventions and an increase in the naturalness of unused marginal spaces. It will be possible to overcome the degradation of rural landscapes through the construction of new experimental spaces, usable and with a greater environmental landscape value.

The critical elements of the project are lead times, complexity of activities, and difficulties of maintenance by the beneficiaries. The positive element of the project is the opportunity to implement a policy of sharing between local authorities, actors and citizens.

The project can be replicated by applying the bottom-up approach, to transform the environmental and cultural characteristics of the area into strengths, without distorting its vocation. The strategy of enhancement and successes are based on these factors:

- enhanced rural landscapes proofed by obtaining national and international awards
- redeveloped urban and peri-urban areas that denote elements of criticality and discontinuity with the rural landscape
- countered the risk of hydrogeological instability by safeguarding and restoring green areas in harmony with native plant species and the restoration of dry-stone walls
- safeguarded traditional agricultural practices that maintain the landscape of olive trees
- restored and enhanced places representative of biodiversity
- enhance scientific excellence on biodiversity and landscape issues
- results in enhancing the society's sensitivity and in promoting slow tourism.



### **Cascinet: the regeneration of land and people**

*The Association Cascinet transformed a monastery and its land to a space of conviviality and solidarity for people, nature, agriculture and cultural heritage.*

The project started in 2013 thanks to a call of Milano Municipality. The “Cascina” and the rural area surrounding were entrusted to an association to re-invest this place regenerating the land and the 11th century monastery. Located on the eastern belt of Milan, Cascinet is surrounded by the ring road, railway ring, a detention centre for immigrants, a heating plant.

The Association Cascinet started to develop projects to recreate an ecosystem based on feed, rest, work, cultivate, socialize, invent, meditate and think, in synergistic way. These are the four pillars: 1- Environment and Agriculture; 2- Recovery, conservation and valorisation; 3- Culture and conviviality; 4- Education, solidarity and work.

Main stakeholders are: people involved in activities; the municipality of Milan, their main partners for the coordination and co-construction of projects and activities; other institutional actors, financiers, neighbourhood actors, philanthropic bodies, commercial customers, artists, public; partners, influencer, other people with similar projects. The beneficiaries are the city-dwellers that can participate to the wide variety of the activities. Also, the municipality of Milan benefits of those actions that are transforming the place to a real space of connection and reconnection with people, nature, agriculture and cultural and historical heritage.

The project received some funding to restore the Cascina and the monastery. Other funding sources are memberships, participation at call for projects, donations, and commercial activities. They also launched a crowdfunding to create the agroforestry. The project has received attention by many local and national media. From this project started a series of collaboration with the University to recover the monastery and the buildings. They also received an award of the Acea Onlus Federico Ceratti for the creation of food forest.

Difficulties encountered include managing very different spaces with great diversity., remunerating people for their work. Concerning the agronomic sector, the access to water and machinery are additional challenges.

Essential success factor are the governance model of this association and the charter established to guarantee the values and principals of this project and the linkage with the different stakeholders involved. A second essential element is the join of a municipal policy, oriented to the recovery and management of public abandoned heritage (farmhouses and lands) with a no profit initiative and the system of calls for entrusting the areas to no profit sector. This policy has already shown very positive effects on the whole municipal area.

A third element is given by the complexity of the agricultural and social-cultural activities promoted by CasciNet, which look at the economic sustainability of the association, but which simultaneously produces many services to the community and a social and environmental requalification of the entire area (supervision, care of the territory, legality).



### **The Water Kingdom, Biosphere reserve**

*The Water Kingdom is an enhanced nature reserve adjacent to the city centre. The visitor centre offers educational tools and is a driver for local tourism.*

The city of Kristianstad is built upon, and surrounded by, wetlands. The city was founded in the 17th century and when it grows, in the 19th century many wetlands were drained. The work with the water kingdom started 30 years ago with a few people that started to understand the value of the wetlands. The objective was to change the view of the municipality and city from “water sick” to “water-rich”. The restoration of the wetlands began including accessibility for the public and efforts to include educational elements in the process.

The successful work led to the Water Kingdom being recognised by UNESCO in 2005 as a biosphere reserve. Biosphere reserves are model areas for sustainable development with highly valued cultural and biological landscapes. Five years later, a large visitor centre was built in the middle of the wetlands, only 500 meters from the central train station. It gives both local citizens and tourists the opportunity to visit, learn more about, and enjoy the area for free. The focus of the work is Man and Biosphere, a concept where the interaction between land, water, city and citizens are of great importance.

Today, the Water Kingdom is of great value to anyone living in or visiting the city. It has made Kristianstad city proud to be the face of a water-rich area and is now an important part of the municipal profile. It is a source of tourism, education, recreation and biodiversity.

An investment of 10 million euros was needed to build the visitor centre. Currently around ten people work within this field at the municipality. A total of at least 150 hectares of wetlands have been reconstructed. Both new and old species have found their way back to the area and/or the number has stabilized, including cranes, wild otters, catfish.

The visitor centre has had more than 950 000 visitors since opening and is top ranked on TripAdvisor for nature activities in Scania. The investments made by the municipality for the visitor centre has already been repaid through the increased tourism in the city.

One of the main difficulties was to ensure the funding for the building of the visitor centre. It was a large investment for the municipality and getting it agreed by all politicians, parties, boards and the council was a challenge. The Water Kingdom shows the importance of changing the attitude to the surrounding environment when working to maintain and amplify ecosystems and ecosystem services. With fun and educational elements, it has created a great opportunity for tourism and contributed to the water-rich profile of the region.

The water Kingdom is also good example of the importance of enthusiasts in the work. They are the ones with vision and drive, and without them, none of the current work with the water kingdom would have occurred. The concept of man and biosphere is of great interest across Sweden and for UL2L partners. Even without the same resources, the concept of the interaction between land, water and city, as well as people, can be used successfully in other contexts.



## The Alnarp Landscape Laboratory

*The Lab shows over 100 examples for forest and meadow habitats on former cultivated land to create various recreational values at the urban fringe.*

The landscape laboratory in Alnarp includes 20 hectares of woodland stands, edges, shelterbelts, roadside plantations, meadows, wetlands and water bodies, constructed and planted close to campus from 1982 and onwards. Here, landscape enrichment and dynamic vegetation are studied and demonstrated in full-scale areas as an inspiration for urban forests, agricultural land, parks, gardens and road environments. The main aim is to create an arena that explores and shows examples of multiple-use and enrichment in recreation, ecological values as well as forestry and agricultural production.

One of the areas in the park is the showroom Tor Nitzelius park. It was originally created in 1994 to protect Alnarpsparken's large range of plants against the harsh western winds. The park consists of plots in a variety of shape, form and content. They vary in what stratum is represented in the vegetation as well as the number of species. They also offer the opportunity to get an understanding of how the plots react according to the succession. This way, whole systems with plants from different continents can be studied and it offers an opportunity to compare and acquire inspiration by Northern European, North American and East Asian mixtures of plants.

The laboratory offers both national and international visitors, as well as students, teachers and researchers an outdoor laboratory for long term follow up studies, shorter experiments, workshops, inspiration and outdoor learning.

The latest report showed that the Alnarp Landscape laboratory arranged 101 activities with 3323 visitors between the years 2008-2010. The visitors are both international and national students as well as institutions, administrations, and companies. Professionals agree that the site is a kind of living tool kit informing and inspiring landscape design across Europe.

Before and during the project it has been difficult to find funding for the project and to further develop the project. In Scania the land-use is a complex issue due to the many actors of different interest groups and their different priorities in terms of land-use, e.g. Recreation vs agriculture.

By focusing the design, construction and management of new and young landscape elements and characters, the landscape lab is rather unique in a Swedish context. It offers an outdoor laboratory for long term follow up studies, shorter experiments, workshops, inspiration and outdoor learning.



### **The Health Garden in Kristianstad's city park**

*A new health garden has been installed into a traditional inner-city park and is managed by the city administration*

The Health garden in Kristianstad is located in the old city park just 100 meters from the train station. It was constructed between 2012 and 2014 as an initiative by the municipality in close cooperation with local organisations and NGOs to include special needs groups in a health preventive activity and increase their well-being. It consists of a garden area with, among other things, perennials, greenhouses, animals and an orangery. Everything grown is organic and sustainable. Around 50 people are involved in organized activities in the garden and greenhouses.

The Health Garden is also considered as an investment to improve the old city park, which was a bit out-dated and started to decline. It was a response to changed user demand on public space and substantially improved this green urban environment, the number and satisfaction of visitors. It ensures that this green environment will be kept for the people and the nature and as an important element in the city's green network.

The unique combination of stakeholders involved, the municipal finance, the free accessibility for the public and the cooperation with organisations and NGOs has proved to be a success. To build the health garden and the orangery the municipality invested 1,2 million Euro 2012-2014. Since 2016 there is a full-time gardener taking care of the activities and maintenance with help from the managing staff in the park.

Around 50 persons with special needs take part in the activities in the health garden and there has been created a supporting NGO to help the garden. The NGO has around 150 supporters. The health garden is rated 4.4/5 on google review with 76 reviews. The Health Garden enhanced the overall use and quality of the old city park and contributes much to safeguard and appreciation of this important inner-city environment.

The municipality invested in the garden and orangery without having financed the management and staff and it took some time to allocate resources to arrange the gardener's employment.

The garden is an important good practice example as there are very few examples of health gardens in a public park in Europe. It is important to understand the challenges resulting from combining groups with special needs and public access and to see options for avoiding or at least solving these challenges working well in Kristianstad.



## Revitalization of the zinc heap in Ruda Śląska

*Revitalization of a zinc spoil heap near the city centre. The transformation solved environmental and spatial-functional problems.*

Lands formerly degraded by the mining industry in central parts of cities were not only an undesirable element that disfigured the landscape but were also areas of ecological threat due to strong degradation of the earth's surface, dusting of waste and a highly transformed area. Main problem and target of actions designed for area of zinc spoil heap in Ruda Śląska was the soil contamination and the process of the situation improving with remediation, to reach safe recreational open space there. Additional targets were to mitigate dangerous sharp and high crags on the northern heap edge; build possibly low cost in maintaining leisure infrastructure with possibly broad offer, vandalism resistible, and with deep connections with local identity and history.

Actions included the formation and stabilization of the northern slopes, remediation and phytostabilization of the upper layer, construction of a path system, alleys, lighting installation and monitoring system, and recreational infrastructure with viewpoints, barbecue areas, a gym, playground, educational path. As a result of the project, the 19.419 m<sup>2</sup> zinc heap area was secured against further emission of harmful substances and obtained natural and aesthetic values. Visitors now include residents of Ruda Śląska, but also from Silesia and Poland (tourists, families). An educational trail and pedestrian-bicycle connections and functions are planned. The costs of about 1 800 000 PLN were mostly covered by EU funding within the ROP Silesia 2007-2014. The realization was a part of the LUMAT Interreg project.

The dump developed for recreational purposes is unique on a national scale as phytostabilization (i.e. planting of plants, whose task is to protect against the escape of heavy metals outside and stabilize the slopes) was applied for the first time on such a scale. It has shown as a good practice for the revitalization of post-industrial areas with preservation of biodiversity and protection of natural habitats of protected species. The inner-city location allowed the creation of green and safe connections between housing, shopping, recreation and working areas. Difficulties result from a lack of permanent monitoring, menace of violent hooligan behaviour, garbage in the area, nearby industry with noise and air pollution.

The revitalization process for the zinc spoil heap in Ruda Śląska is an attempt to solve as many environmental and social problems as possible. According to sustainable development rules, technologies of remediation and phytostabilization were taken into consideration and were applied to wide areas. Much of the local flora was preserved as a source for natural succession and to support biodiversity nearly all added plants are native.

Small architectural elements, among them area information elements, are resistible for vandalism and/or easy to maintain, repair or exchange. All solutions were designed to follow spatial, social, economic and environmental demands of sustainable development and follow the ideas of green urbanism, the local action for biodiversity, the European Landscape Convention and others.



### **“Climate for Silesia” by Silesian Botanical Garden**

*“Climate for Silesia” is a cooperation across the voivodeship. The Botanical Garden increases the knowledge about nature and environmental protection.*

The Silesian Botanical Garden as a union of associations realises a set of projects in strict cooperation with voivodeships' government and regional organisations. As an association it participates in many projects of educational character as well as develops and creates ecological movement in Silesian agglomeration society.

The Botanical Garden is looking for alternative ways of transferring educational content and involving participants in activities for the environment, as well as promoting spending free time in an environmentally friendly place, respecting other people, needs of animals and plants.

Green revitalization of post-industrial areas requires the implementation of proper methods and use of plant species. Thus, the association cooperates with local governments providing assistance in the effective biological revitalization of degraded post-industrial areas. Activities include educational, laboratory, creative and gardening workshops, educational happenings, seminars and scientific lectures, educational field games, competitions, educational and information campaigns (e.g. collection of electro waste), demonstrations, guided tours, film screenings, exhibitions.

Main beneficiaries of the practice are inhabitants of the Silesia region, local governments, education groups, especially schoolchildren.

The number of participating organisations and people participating in the courses and events are constantly increasing. Climate for Silesia plays an important role in raising the environmental interest in the region and supports the design and implementation of projects with environmental effects. As an association, the Silesian Botanical Garden offers several jobs and trains teachers too. Local events, such as fairs and markets support the regional economy.

In summary, the Botanical Garden performs an unusual range of works based on a broad regional cooperation, knowledge transfer and consultation. This includes maintaining plant collections in revitalized post-industrial areas, for example, in the GEOSfera Ecological and Geological Education Centre and in the Gródek commune park. It will assist in creating the Botanical Garden Arboretum in Jaworzno. It is a place of active leisure combined with education and contact with nature, and within it a total of 20 family-ecological holidays are held annually.



### **Development of the Park Gródek area in Jaworzno**

*Restoration of utility values for the natural purposes of a part of the excavation after the old dolomite mining operation of the Szczaków mining plant.*

Natural remediation of post-industrial area, elimination of threats related to contamination of the earth's surface (the area is in the zone of the highest water protection) and creation of the possibility of forming natural habitats affecting the biodiversity of the area, i.e. restoring the natural values of the degraded are the main objectives of this project.

To deliver to those objectives, the following measures have been implemented or started: the improvement of the quality of surfaces and thus underground waters, the improvement of air quality, the provision of opportunities to enjoy and to communicate with nature for the inhabitants of Jaworzno, the careful support of proper successions in nature, the reduction of natural hazards, the enhancement of aesthetics and of land use with minimal interference in the natural environment, the restoration of public spaces with high natural value, the growth of the social and economic potential of the district, the improvement of the city's image in the eyes of residents, including those who are potential.

The area has been made more attractive, the existing sports and recreation infrastructures have been expanded and qualified, and new opportunities for active recreation have been created based on the construction of new facilities and equipment within the functioning diving base.

Today the beneficiaries include the residents of Jaworzno, but also visitors from all over Poland visiting the diving centre and the arboretum.

The ROP 2007-2013 contributed about 1,2 Mio PLN to the total costs of about 1,7 Mio PLN that are invested so far.

Despite the accumulation of crisis phenomena in these areas, they have a strong development potential and due to the interventions of the public and private sectors have a chance to become thriving spaces in Jaworzno, and the pillar of their development in the sectors of tourism and recreation. Entrepreneurs also notice the potential of the place, e.g. a hotel was opened recently. Cliffs, greenery and the crystal-clear water attract an increasing number of visitors. The practice has created conditions for ecosystem-safe tourism, educational and recreational movements as well as observation opportunities for visitors. The arboretum will be located in the space of the Gródek Park, well known to the inhabitants of Jaworzno, and will serve as a living atlas of nature for visitors.

## SOURCES | CREDITS | IMPRINT

This study had to be realised within the context of the UL2L project and according to the opportunities and limits given by the Interreg Europe Programme. The permission by the Programme's Joint Secretariat to carry out a study that is investigating good practice examples outside the partnership regions was exceptional. At the same time, the work to be done by the partner was limited to a pure desk research. Site visits, interviews and a more profound analysis of literature was not possible within the given framework. Therefore, the main source of information was the internet and texts and photos of the projects and good practices presented in this study are taken from the internet too.

The main websites that provided information are listed as well as the sources or copyrights of the images that have been used. Any owner of a text or image who should not agree with the use of the information or requires a compensation is kindly asked to contact Schloss Dyck Foundation.

Any further use of the information provided in this publication should be made by referencing to the original sources too.

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