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Gardens of Interstitial Wildness

Cultivating Indeterminacy in the Metropolitan Landscape

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Abstract

This paper looks into 'gardens of wildness' that have been established in metropolitan interstitial spaces. These unused, unfunctional urban spaces could be considered as spatial-temporary interstices of the metropolitan landscape. These 'interstitial spaces' possess the potential to host diverse social-ecological minorities that tend to be excluded by regulated urban spaces. The ecological qualities of interstitial spaces are recognised by French garden designer Gilles Clément, who regards spontaneous ecologies, which emerge in neglected spaces of the city, as cherished reservoirs that diversify and sustain the urban ecology. Specifically, this paper discusses the value of making gardens of interstitial wildness. If the garden is a potential design approach magnifying the quality of the place, what would be the role of interstitial wild gardens? Furthermore, how do these gardens respond to the relationship between interstitial spaces and the metropolitan landscape? In this paper we will analyse Gilles Clément's garden design of Jardins du Tiers-Paysage (Gardens of The Third Landscape), located on the roof of the repurposed submarine base of Saint-Nazaire (FR). Reading Saint-Nazaire's urban context and examining the design from ecological and experiential points of view, this paper shows how the gardens re-introduce the submarine base as a place in the metropolitan landscape of Saint-Nazaire. Orchestrating the experience of the site's spatial characteristics and the emerging wildness, the gardens elicit an appreciation of the autonomy of non-human agencies and simultaneously reflect upon the heterogeneity of the metropolitan landscape.

Keywords

garden, interstitial, wildness, landscape architecture, metropolitan landscape

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Introduction: Niches in the Metropolitan Landscape

In the middle of the city we can often find a large number of in-between spaces: empty backyards, overgrown plots, and abandoned rail tracks hidden in tightly built-up urban areas, covered with overgrown vegetation, visited incidentally by citizens and frequently by wild animals. Ignasi de Solà-Morales conceptualised these spaces as Terrain Vagues, the ambiguous spaces that exist inside the city but outside the city's functional network, and do not play a role in the city's production and efficiency (De Solà-Morales, 1995). An increasing number of contemporary scholars argue that such interstitial conditions actually offer potential for the city, allowing the emergence of alternative experiences, meaning, and human practices (Cupers & Miessen, 2002; Foster, 2014; Rahmann & Jonas, 2014). These leftover abandoned spaces could be captured as spatial-temporary interstices of the city: spatially in-between different urban functional spaces, and temporarily unoccupied, open for diverse social-ecological appropriations. The ecological potential of these interstices is brought forward by the French garden designer Gilles Clément, who conceptualises the amount of spaces abandoned from human exploitation, in the urban centre or perimeter, as "the third landscape". According to Clément, the third landscape refers to neglected reservoirs of biodiversity among the controlled and managed urban nature: "These margins bring together a biological diversity which has not yet been listed as wealth"1 (Clément, 2004) (Fig.01).



FIGURE 1 An old industrial site in Duisburg Untermeiderich. After the halt of coal industry, numerous birch trees started to grow here. This process gradually recovers the site from industrial exploitation and manifests pieces of the third landscape. (Photograph by Sitong Luo, 2015).

In this article, we explore the relationship between interstitial spaces, gardens, and the metropolitan landscape. The metropolitan landscape is highly dynamic, fluid, and fragmented, defined by such issues as networks, programmatic proximity, and functional efficiency. According to Clemens Steenbergen, the metropolitan landscape is a patchwork of different functional spaces, connected by invisible networks and facilitated by overarching urban infrastructures (Steenbergen, Reh, & Pouderoijen, 2011). These spatial characteristics reveal an intention behind the organisation of space that no longer considers spatial qualities as the first requirement, but rather the functionality of each space. Tim Edensor exposes this pursuit of functionality as "a mechanic episteme that produces a series of single-purpose spaces where preferred

activities occur" (2005: 54). The metropolitan landscape, from a spatial perspective, is a sort of fragmented territory connected by diverse social and economic networks. Additionally, from a programme perspective, the majority of spaces in the metropolitan landscape function purposefully, leaving little room for unplanned and unexpected occurrences.

Interstitial spaces can be recognised as a symptom of the metropolitan landscape, produced by the diffused territory and dynamic urban transformations. Compared to other ordered urban spaces, interstitial spaces have a unique quality of indeterminacy, as they are released from urban functional schemes and open to diverse appropriation. This particularity of interstitial spaces makes them a relevant design subject. However, designing interstitial spaces poses a paradox between the definition of design and the interstices' spontaneity. How can design engage with urban leftover spaces, to activate or manifest their qualities, while keeping their openness and indeterminacy? Moreover, designing them as gardens might expose the relationship between interstitial spaces and the metropolitan landscape. According to De Wit (2013), by means of an architectural design of gardens, interstitial spaces can be transformed into articulated places that reflect upon the surrounding metropolitan landscape. If gardens do indeed allow interstitial spaces to be experienced as meaningful places, then will it be possible for the gardens of interstitial wildness to bring together humanity and wild ecology? How can the design of these gardens allow for conditions of growth, while simultaneously manifesting the experiential and cultural significance of such processes? And how can these gardens reflect the metropolitan condition from which they are detached, while being interconnected with that very condition?

To answer these questions, we first delineate the theoretical background of wildness as a cherished component within the city, and the possible role of design. Following this discussion, we present the case study of Gardens of the Third Landscape (*Le Jardins du Tiers-Paysage*), focusing on two aspects: 1) how design prepares a better condition for the establishment of wild ecology and enriches the biodiversity of the site, and; 2) how these wild ecologies, through designing the garden, create a place in which people could appreciate the spontaneous agencies of nature. Therefore, the garden will be analysed from both an ecological perspective and a spatial-physical perspective, represented by a series of analytical drawings. The material under analysis is from the project office "Le Voyage à Nantes", including design documents, photos, and the report produced by students from "Lycée Jules Rieffel" and gardener Mathias Petitjean after the construction of the garden. In addition, we have used photographs and notes taken during a site visit in August 2018.

Appreciating Urban Wildness

The meaning attached to wildness has changed throughout urban development. The image of wildness was originally regarded as being opposite to human-cultivated and controlled territories. The concept of wildness as a condition of a place of hazard, confusion, and danger has been commonly adopted since the Medieval period (Jorgensen, 2007: 446). In the 18th Century, as more natural territories were transformed into cultivated areas, wildness became regarded less as the anthesis of civilization, but as something primitive, sacred, and powerful. For example, in Burke's contemplation of beauty and the sublime, he proposes "a sort of delightful horror" that could be summoned up by encountering wildness, through "the exposure to terror, provided one is not personally threatened" (Jorgensen, 2007: 448).

A subversion in the interpretation of wildness came about in the 20th Century, encouraged by a renewed interest in botanical research on wild flora within cities. Throughout the year 1940, French botanist Paul Jovet meticulously studied spontaneous flora in the city of Paris. Through his study, Jovet addressed the

heterogeneity of the urban ecology, a unique ecosystem that was highly dependent on artificial activities and accommodating a large number of exotic species (Gandy, 2013). In the 1960s, German ecologist Herbert Sukopp extensively investigated wild ecologies on abandoned industrial land in Berlin. According to Sukopp, the newly emerged ecosystem serves as reference for the design of urban nature, especially in terms of adaptive species and the renovation of disrupted sites (Sukopp, 1979). Inspired by those explorations of urban wildness, wild urban nature was added as a noteworthy category in urban ecological design discourse (Gandy, 2013).

Cultural geographer Tim Edensor's exploration of ruinous space establishes a unique link between urban wildness and urban interstitial spaces. According to Edensor, the wildness in neglected industrial ruins are spaces of 'resistance' where the practice of adaptive ecological initiatives reveals the strict management of most urban nature (Edensor, 2005). Jorgensen (2007) put forward that wildness in urban interstices brings new concepts both for theorising nature-human relationships and for urban landscape planning and design. Additionally, Gandy (2013) remarks that interstitial wildness serves as a useful counterpoint to the often-narrow utilitarian approaches of urban nature.

The growing interest in urban wildness gave rise to diverse design responses. Indeed, design has the capacity to introduce different levels of intervention in existing on-going ecological processes, forming a sort of "gradient". One extreme approach is ecological mimicry, where the planting scheme is deliberately arranged to create a natural-looking landscape. For instance, in the case of the High Line Park in New York City, the regeneration of an abandoned railway track took away most of the original species on the site and replaced them with an orchestrated combination of trees, woody shrubs, and a mixture of prairie grasses and blooming perennials. The maintenance of the new vegetation costs 4.3 million per year. The other extreme approach, at the opposite end to the mimicry of nature, proposes preventing the wildness from being touched by artificial intervention and leaving nature to take its own course. An example of this approach is the Landschaftspark Duisburg-Nord. The park's peripheral land is preserved for spontaneous ecological succession, revealing how nature transforms this exploited site. After few years, the area was already covered by pioneer young forest and meadows (Hemmings, 2010). In between these two approaches we could find a more interesting design concept, where artificial interference mediates an undefined natural process. The design intervenes in the site with clear architectonic form but leaves the outcome loosely defined. In Gilles Clément's approach, nature is invited to take over the process of transformation following the completion of the design. The role of the design is merely to actively transform the site in the initial stage, facilitating the more dynamic succession of nature.

Gilles Clément is a French garden designer, ecologist, and botanist. Clément regards nature as an evolutionary process leading to diversity and equivalence, and, in this context, he appeals to preserve parcels of land for natural processes alone, which serves "the genetic reservoir of the planet, the space of the future ..." (Clément, 2004)". Clément named nature that emerges in the abandoned urban spaces the "third landscape", where non-human agencies and non-utilitarian processes recover the sites from previous human exploitation processes.

To engage with the third landscape, and to address the question of "how to exploit diversity without destroying it" (Clément, Morris, & Tiberghien, 2015: 80), Clément conceived the "garden in motion" as a design-based response. The garden in motion explores how designers can insert themselves "in the midst of this (nature's) powerful flow" (Clément, 1991), where the design observes, guides, and enriches nature's own processes. A well-known example is le Jardin en Mouvement in *Parc André Citroën*, Paris. In this garden, the form of growth is prioritised to the ordered and aesthetic requirement of architectural design. Clément depicts his intervention as a constant dialogue with the site, caring for whatever emerges over the course of transformation. "Flowers which germinate on a path force the gardener to decide between maintaining the flowers or the path. The Garden in Motion recommends maintaining those species that is decided by

where they wish to grow..."2(Clément, 1991). In this garden, Gilles Clément brings forth the role of gardener as an observer rather than an intruder, where artificial intervention is established on the basis of fully acknowledging the existing conditions.

What follows the concept of a single garden, in Clément's proposal, is an idea to consider the whole planet as a garden and each human being as its gardener. This perspective addresses a human-nature relationship in which the human is considered an integral part of ecology and collective human action influences the future of our planet. "What we do here will inevitably have repercussions over there, on the other side of the planet, to the extent that each one of us, in our daily activities, in our way of understanding the world and transforming it" (Clément, Morris & Tiberghien, 2015: ix). The concept sheds light on the cultural meaning of interstitial wild gardens: to elicit a consciousness of nature and, subsequently, of each individual's responsibility to sustain our planet.

Gilles Clément was not the first to explore the role of the gardener in this way. His ideas resonate with the 'Wild Gardening' movement that began in the 1970s in Europe, which encourages the 'natural' growth of the garden. One of the main practitioners in this movement is the Dutch artist and gardener Louis Le Roy (Ruff, 2002). Le Roy calls himself an 'ecotect', as his representative work 'ecocathedrals' pursues an interplay between human being's creative force and the constantly changing nature (Vollaard, 2002). Le Roy advocated for a devotion to the site through spending time in it, day by day, piece by piece. This approach does not give a definition to the site's transformation at the very beginning of the project, but rather it would grow from a response to changes within the process. "Brief events or 'spectacles' can also release creative potential, but in the end, these activities must be able to take place in a process. In a time continuum. In order to affect a true evolution creation. Finally, involvement" (Vollaard, 2002: 22). Le Roy recognises nature as a system always in motion, within which the interaction between multiple individuals forms a dynamic equivalence and slowly drives the system towards diversity. Gardens as a design approach, within which the architectonic design mingles with spontaneous nature, can be a moderate intervention of interstitial wildness. This design thinking is tested in the project *Gardens of The Third Landscape*, a case which exposes the transformation of an abandoned submarine base's roof into a garden of urban wildness.

Gardens of the Third Landscape

Gardens of the Third Landscape is a project of three gardens located on the roof of an abandoned submarine base in Saint-Nazaire, France: the Garden of Aspen Woods, the Garden of Stonecrops and Grasses, and the Garden of Labels. These gardens survive on the dry concrete roof without (extensive) artificial maintenance. The design deliberately improves the early stage of ecological conditions, to allow a wider range of flora that might adapt to the site's condition. Beyond satisfying basic ecological functions, the design embellishes the garden with another layer of expression, amplifying the perception of the site. Each of the three gardens has a specific focus. While the Garden of Aspen Woods is more like an art installation and thus has a fixed ecological process, the Garden of Stonecrops and Grasses and the Garden of labels offer more interesting contents for the focus of this paper.

The Submarine Base in the Metropolitan Landscape

"Saint-Nazaire makes boats", are the first words I heard from my landlord in Saint-Nazaire during my visit there in the summer of 2018. Sitting next to the estuary of the Loire, where the river joins the Atlantic Ocean, the story of Saint-Nazaire is tightly knit with the city's harbour.

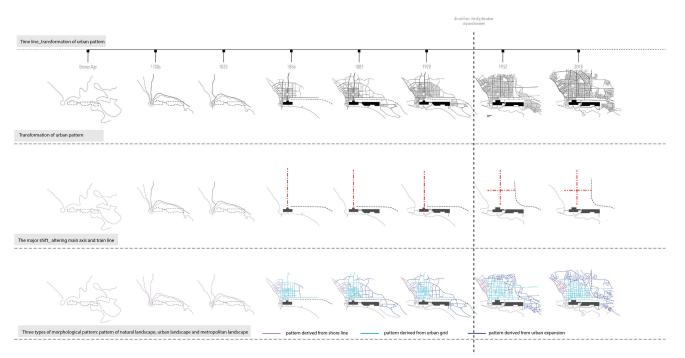


FIGURE 2 The recession of maritime industry changed the relationship between the harbour and the city. Since the railway became the dominant transport connection, the urban centre was gradually detached from the harbour. (Drawing by Sitong Luo, 2019).

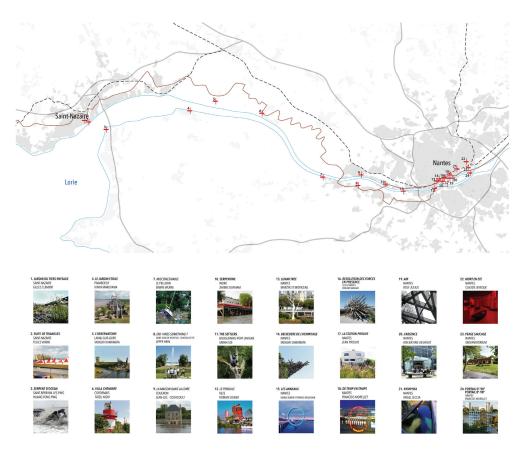


FIGURE 3 The artistic installations of the Estuary biennale,installed between 2007 and 2012. 24 pieces of in-situ art works were placed in and between Saint-Nazaire and Nantes, along the bank of river Loire, facilitating the establishment of a metropolitan region. (Drawing by Sitong Luo, 2019).

The advantages of the location of the estuary defined the city's growth. In the 18th Century, Saint-Nazaire was only a small fishing village while in the 19th Century, when the river corridor of the Loire was choked with mud, Saint-Nazaire became the first possible location to unload large cargos. As a result, two harbours (Saint-Nazaire and Penhoët) were dug at Saint-Nazaire, which further opened the city as a pivot point of maritime transportation. In 1862, the harbour area witnessed the construction of major shipbuilding facilities where the first French metal-hulled ship was constructed. Today, the ship building industry still constitutes a major part of the economy of the city. This unique geographical location also led to the city's fatal destruction. During the first and the second world wars, Saint-Nazaire was recognised as a critical military point on the Atlantic seafront. In 1940, German troops conquered the city and constructed the submarine base at the harbour of Saint-Nazaire. At the end of the second world war, the submarine base was recognised as a target, which prompted a raid on 28 March 1942 that destroyed 85% of the town. During the post-war period, the harbour gradually became the backside of the city. This transition is visible in the plan for the city's reconstruction in 1956, in which the previous urban axis from the harbour was rearranged into two perpendicular axes, responding to the location of the new train station. The rationale for the new urban layout, in this way, is driven by infrastructure and network (Fig. 02). The train station indicates the connection of Saint-Nazaire to the larger metropolitan region of Saint-Nazaire and Nantes.

In 2009, the second edition of the biennale exhibition "Estuary" was launched. This programme, promoted by Nantes' Local Public Institution Le Voyage à Nantes, intended to strengthen the connection between Saint-Nazaire and Nantes and prepare for the development of the metropolitan region. In the 2009 edition, 30 art installations were placed between Nantes and Saint-Nazaire. These artistic works were created in-situ, as the gateway to discover the particular characteristics of the Loire estuary landscape. As part of this exhibition programme, Gilles Clément was invited to design the three public gardens on top of the submarine base (Fig. 03).

The Roof of the Concrete Submarine Base

The submarine base is impressive, first and foremost, because of its enormous volume: 126 m long, 300 m wide, and 17 m high. On the roof, the Germans protected the submarine base from air-attacks with a thick layer of concrete reinforcement. The structure of this reinforcement consists of three layers: The base comprises 2 metres of concrete filled with a grid of V-shaped concrete beams. On top of that, concrete walls measuring 2m high and 1.5m thick were added to support the last layer - an array of concrete beams that create a hollow space that serves as a buffer to bomb explosions.

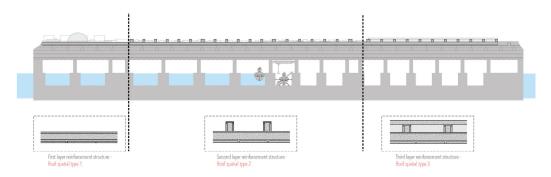


FIGURE 4 The section of the submarine base. The reinforcement layer yields a thick volume on top of the existing enormous submarine base. Three stages of construction divide the roof into three zones, each with its own spatial characteristics. (Drawing by Sitong Luo, 2019).

The German troops retreated from the city before they had completed the reinforcement of the roof, leaving three zones with different layers of the reinforcement structure (Fig. 04). The micro-climate on the roof is

extremely dry: two-thirds of the surface is fully exposed to sunlight, and the hard surface exacerbates the sun radiation. The sun radiation and lack of wind protection further accelerate the evaporation of rainwater. The floor is fully covered by concrete, which makes it very hard for seeds to germinate. The three gardens sit separately in three morphological zones, and Clément's design exploits the unique spatial characteristics of each. The Garden of Labels is established in the zone of the first reinforcement layer, where a sunken pit (12 m wide and 51m long) is situated on the concrete foundation. The Garden of Stonecrops and Grasses is placed in the zone of the second reinforcement layer and consists of ten planting beds. Each single planting bed is positioned between the existing parallel concrete walls. The Garden of Aspen Woods is placed where the three layers of reinforcement have been completely constructed. 109 aspen trees within a rectangular concrete planting box are spread in the hollow chambers of the reinforcement structure.

Recondition the Habitat for Wildness

To establish new habitation on the dry concrete roof, the starting point of the design is not selecting species but responding to the micro-climate on the roof.

In the Garden of Stonecrops and Grasses, the design makes the most of the shade provided by the concrete walls by filling in the gaps with planting beds (Fig. 05). The planting beds are raised 20cm, offering a thin layer of soil for the plants. The substance consists of rubble stones and sand, which subtly diversifies the habitat condition. Species that are able to adapt to the dry, hostile environment were planted in between the coarse concrete wall; these species are mainly from the family of Sedum and Gramineae, such as, for example, *Sedum spectabile, Euphorbia characias, Stipa tenuifolia, and Melica ciliata.* Additionally, rock plants such as *Armeria maritima* and *Dianthus deltoides* were also part of the planting scheme.

The gateway running through the concrete wall is filled with a narrow canal of water, which, to some extent, provides extra moisture to the planting beds (Fig. 06). A foot bridge made of galvanised steel and aluminium perches on top of the concrete walls, providing shade for the planting beds. This benefit of shade is discussed in the report of gardener Mathias Petitjean after the first year of the garden's construction: "The plantations which are located in the shadow of the footbridge running parallel to the walls are all in better condition than their neighbors"3 (Petitjean, 2010).



FIGURE 5 The Garden of Stonecrops. Ten planting beds were added in-between the concrete walls, which host a group of selected species that are able to adapt the dry, hostile climate on the roof (Photograph by Martin Argyroglo).



FIGURE 6 The narrow canal, running through the gaps of the concrete walls, poses another sight line that perpendicular to the sight line of the planting beds. (Photograph by Sebastiaan Kaal).

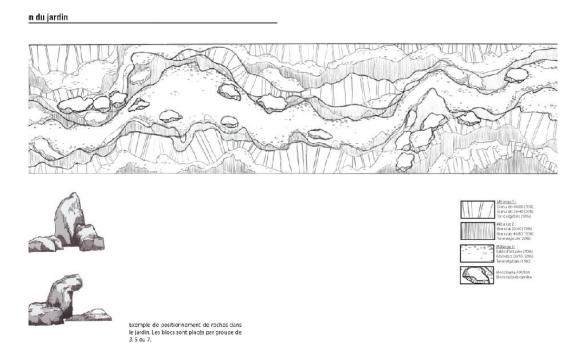


FIGURE 7 The Garden of Labels. The design experiments with a minimal intervention: a layer of substance, shaped into several slops, was added to the site. The substratum is diversified with five ingredients of soil (Drawing by Gilles Clément).

The Garden of Labels has a simple set-up, only a thin layer of substance was added to the sunken area. Unlike the Garden of Stonecrops and Grasses, the Garden of Labels leaves the space open to host natural agencies. What is essential in its design is a deliberate arrangement of terrain that augments the ecological diversity. The newly added soil is shaped into several mounds, creating slopes that project shade onto the surface while serving as a cushion that stores rainwater. Apart from shaping the terrain, the design further differentiates the substrate into four types of gradients: clay soil, sandy soil, gravels, and large-grained pebble stones (Fig. 07). No plant species are introduced to the site. The idea is to allow seeds, brought by the wind, animals, or humans, to spontaneously occupy and grow out of the ground prepared by the design. From 2010 to 2015, twice a year, students of the Jules Rieffel Agricultural High School come to identify new species, marking them with labels. Over a 5-year period, 163 plant species were identified on the site. At the early stage, most species were annual or perennial herbaceous plants, while in the later stage, several woody species appeared. The plant coverage of the site increased, with a significant growth of *Senecio inaequidens:* a species from Southern Africa, very often found in artificially disturbed site such as riverbanks and rocky slopes, but in recent years an invasive species in central Europe (Lachmuth,2011).

A Theatre of Evolving Wildness

The primary consideration of the design focuses on the ecological requirements. Nevertheless, the design is not merely a functional response, the artistic expression of the garden plays another essential role. By dramatising the visitor's perception of the wild flora in the garden, the design creates a stage for wild nature, capturing its uniqueness and dynamic succession. In the Garden of Stonecrops and Grasses, an extended sight line is shaped by the narrow canal that runs through the gateway of concrete walls. Perpendicular to this, another sightline through the gap in the concrete wall is enhanced by filling the gap with the planting bed. As the planting bed fully occupies the intermediate space, it concentrates the contrast between two materials from the existing and the new: the roughness of the eroded concrete, and the lively floristic species. The Gramineae and Sedum species embellish each other's texture, where the Gramineae offers a weaving, fragile texture, the Sedum is short and sculptural, demonstrated by its unique fleshy leaves. The parallel concrete wall frames the observation of this miniature world. The experience of the garden is orchestrated by the constant interplay of perspectives and tactile impressions, between harsh, solid concrete, and the lively, colourful planting (Fig. 08).



FIGURE 8 The material contrast in the Garden of Stonecrops and Grasses. The thriving plants enhance the experience of the original concrete structure of the roof. (Photograph by Sitong Luo, 2018).



FIGURE 9 Twice a year, the newly emerged species is identified the with labels. The white labels, scatted crossing the whole site, elicit a sense of curiosity from the visitors (Photograph from Le Voyage à Nantes).

In the Garden of Labels, the design emphasises a winding path in the central line of the sunken pit, to resemble a transitory landscape that is changing and evolving. Compared to the Garden of Stonecrops and Grasses, where the planting palette is carefully selected and composed, the Garden of Labels is hardly perceived of as an artificial intervention. Instead, it comes across as an overgrown site with a cluster of wild herbaceous plants. However, the tactic of labelling the new species each year discloses the narrative of the garden. The layout of countless tiny white labels, amongst the rest of the unfamiliar wildness, arouses an intriguing elegance and stimulates the visitors who may just be passing by this almost invisible sunken pit (Fig. 09).

The Garden, the Submarine Base and Saint-Nazaire's Metropolitan Landscape.

Surrounding the submarine base stands a recent urban regeneration programme in which most spaces are scripted with a commercial programme including retail, a supermarket, restaurants, and a cinema. However, on top of the roof, one discovers the wild gardens full of surprising encounters and witnesses a choreography that plays with constantly shifting directions and sightlines, and the contrast between wild flora and the deteriorated concrete (Fig. 10).

The gardens, hosting spontaneous wildness on the roof of the submarine base, have a hidden character. You can only find them once you step on top of the roof. As a space that is detached from the rest of the city, how do those gardens connect to the metropolitan landscape of Saint-Nazaire?

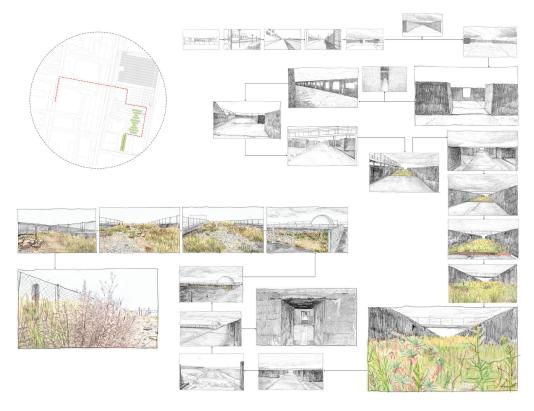


FIGURE 10 Landing the garden from outside: a sequential experience with constant shifts of visual directions, movement, and material contracts. (Drawing by Sitong Luo, 2019).

First and foremost, the link is made through the interstice. The neglection of the submarine base, making it abandoned and becoming the backside of the city, was tightly connected with the development of metropolitan region between Saint-Nazaire and Nantes. It is the prioritisation of the train station – a network connection with the larger region, including Nantes – that shifted the urban centre away from the harbour and the submarine base. Therefore, the conditions on the roof, allowing the emergence of wildness, can be regarded as a consequence of this metropolitan development. At the same time, it is also the network between Saint-Nazaire and Nantes that provided the opportunity for the establishment of this garden. The garden is one of the artistic installations of the 'Estuary' biennale. The event is launched by the touristic office of Nantes, to promote the development of metropolitan region. In fact, the majority of visitors to the garden are from Nantes rather than Saint-Nazaire. In this view, the garden is more related to the metropolitan landscape than to the town itself.

De Wit suggested that interstitial gardens may give an expression to the characteristics of the place in the placeless metropolitan landscape. This perspective also applies to the Gardens of the Third Landscape. The gardens re-introduce the submarine base as a meaningful place through an architectonic design intervention, highlighting the existing structure of the roof. The design represents the hidden narratives of the site through knitting the experience of the labyrinthine-like defence structure on the submarine's roof together with the backdrop of the city and the harbour, and with the encounter of newly established wildness. In this way, the intertwined stories of the submarine base, the harbour, Saint-Nazaire and its estuary landscape unfold to visitors. The artistic expression of the garden reveals to its visitors the beauty and performance of wildness, of nature's spontaneity and dynamic. A new relationship between human and nature can be established here, one that is based on understanding nature as more than a resource for human use, and as something all-encompassing, to which humankind is intricately connected. Here, the gardens' form is both the result of natural growth as well as the symbolic meaning plotted by the designer.

Leaving the site's future profile to be defined by the occupation of wildness, the gardens in this way present themselves as counterpoints to the functional operation of metropolitan landscape. the gardens introduce a process that doesn't follow the strict regulations imposed by humans elsewhere in the metropolitan landscape. They are places of indeterminacy, where visitors encounter the nature's tempo and circulation: the seasonal changes of flourish and decay, and the process that pioneer species will be gradually replaced, ensuring the garden's profile never stays the same.

Conclusion: Nurturing Places of Wildness inside Metropolitan Landscape

The metropolitan landscape's dual character- spatial fragmentation and functionally-driven processes – give rise to the existence of the interstitial spaces within it. These spaces are niches in which alternative ecological processes take place, allowing certain species, typically excluded from the human-controlled urban environment, to settle and manifest. Interstitial wildness is a potential counterpoint of the metropolitan landscape, hosting the practices of wild ecologies.

To fully appreciate the interstitial wildness, gardens can be introduced as landscape architectonic interventions. Gardens with an open-ended design approach, responding and adjusting to natural processes, might intervene in leftover spaces without losing their essential quality of indeterminacy. Through nurturing wildness, the garden elicits the appreciation of nature, of its wholeness and diversity. The proximity and contradiction between the garden and the surrounding metropolitan landscape makes the garden a place of reflection, a place in which to re-examine the heterogeneity of the metropolitan landscape and to embrace the uncertainties it holds within.

References

- Bianchetti, C. (2006). The third landscape. Retrieved from https://www.domusweb.it/en/reviews/2006/02/06/the-third-landscape.html.
- Boukema, E., McIntyre, P., Vollaard, P., Broek, C., Tekstredacteur., Ball, G., & Le Roy, L. (2002). Louis G. Le Roy : nature, culture, fusion. Rotterdam: NAi Uitgevers.
- De Certeau, M. (1988). The practice of everyday life. Berkeley: University of California Press.
- Clément, G. (1991). Le Jardin en Mouvement [The Garden in Motion]. Retrieved from http://www.gillesclement.com/cat-mouvement-tit-Le-Jardin-en-Mouvement.
- Clément, G. (1997). Le Jardin Planétaire [The Planetary Garden]. Retrieved from http://www.gillesclement.com/cat-jardinplanetaire-tit-Le-Jardin-Planetaire.
- Clément, G. (2004). Manifeste du Tiers Paysage [Manifesto of the Third Landscape]. Retrieved from http://www.gillesclement.com/fichiers/_tierspaypublications_92045_manifeste_du_tiers_paysage.pdf
- Clément, G., Morris, S. & Tiberghien, G. A. (2015). 'The Planetary Garden' and Other Writings. Philadelphia: University of Pennsylvania Press.
- Cupers, K. & Miessen, M. (2002). Spaces of uncertainty. Wuppertal: Müller + Busmann.
- Edensor, T. (2005). Industrial ruins: spaces, aesthetics, and materiality. Oxford, UK: Berg.
- Foster, J. (2014). Hiding in plain view: Vacancy and prospect in Paris' Petite Ceinture. Cities, (40), 124-132.
- Gandy, M. (2013). Marginalia: Aesthetics, Ecology, and Urban Wastelands. Annals of the Association of American Geographers. 103(6), 1301–1316. London/ New York: Routledge.
- Hemmings, S., Kagel, M., Hemmings, S., & Kagel, M. (2010). Memory Gardens: Aesthetic Education and Political Emancipation in the Landschaftspark Duisburg-Nord. German Studies Review, 33(2), 243–261.
- Jacques, L. (2007). The planetary garden, garden unknown: on the work of landscaper Gilles Clément. In Conan, M. (Ed.) Contemporary garden aesthetics, creations and interpretations. Washington DC: Dumbarton Oaks.
- Jorgensen, A. & Tylecote, M. (2007). Ambivalent landscapes–wilderness in the urban interstices. Landscape Research, 32(4), pp. 443–462. London/ New York: Routledge.
- Lachmuth, S., Durka, W., & Schurr, F.M. (2011). Differentiation of reproductive and competitive ability in the invaded range of Senecio inaequidens: the role of genetic Allee effects, adaptive and nonadaptive evolution. *New Phytologist.* 192 (2): 529–541.
- Petitjean, M. (2010). Le Jardin des Orpins et des Graminées: Compte-rendu d'intervention [The Garden of Orphans and Grasses: Intervention Report]. Unpublished manuscript.
- Rahmann, H. & Jonas, M. (2014). Void Potential: Spatial Dynamics and Cultural Manifestations of Residual Spaces. In Mariani, M. & Barron, P. (Eds). (2013). Terrain Vague: Interstices at the Edge of the Pale. London/ New York: Routledge.
- Ruff, A. (2002). Holland and the Ecological Landscape. Garden History, 30(2), 239-251. Retrieved from https://doi.org/10.2307/1587255
- De Solà-Morales, I. (1995). Terrain Vague. In Mariani, M. & Barron, P. (Eds), Terrain Vague Interstices at the Edge of the Pale. p.40–46. London/ New York: Routledge.
- Steenbergen, C. M., Reh, W., & Pouderoijen, M. (2011). Metropolitan landscape architecture: urban parks and landscapes. Bussum: Thoth Publishers.
- Sukopp, H., Blume, H.P., & Kunick, W. (1979). The soil, flora, and vegetation of Berlin's waste lands. In Laurie, I. C. (Ed.), Nature in Cities, pp. 115–132. Chichester, New York / Brisbane / Toronto: John Wiley & Sons
- Vollaard, P. (2002). Time-based Architecture in Mildam. Louis Le Roy's Ecocathedral (Ca. 1970-3000). In Louis G. Le Roy: nature, culture, fusion. Rotterdam: NAi Uitgevers.
- de Wit, S. (2014). Metropolitan Gardens gardens in the interstices of the metropolitan tissue. SPOOL, 1(1), 601-622. doi:10.7480/ spool.2014.1.630

Notes

- 1. Translated from Gilles Clément's Manifeste du Tiers Paysage [Manifesto of the Third Landscope]. The original text: "Ces marges assemblent une diversité biologique qui n'est pas à ce jour repertoriée comme richesse".
- 2. Translated from Mathias Petitjean's report in French. See the original text: "Les plantations qui sont situées à l'ombre de la passerelle qui court parallèlement au murs sont toutes en meilleur état que leurs voisines".
- 3. Extracted and translated from Gilles Clément's writing on the garden in motion (le Jardin en Mouvement) on his personal website. See the original text: "Des fleurs venant à germer dans un passage mettent le jardiner devant le choix de savoir s'il veut conserver le passage ou conserver les fleurs. Le Jardin en Mouvement préconise de conserver les espèces ayant décidé du choix de leur emplacement".