

DEBRIS TERRARIA. BERLIN AND ITS VOID ISLANDS

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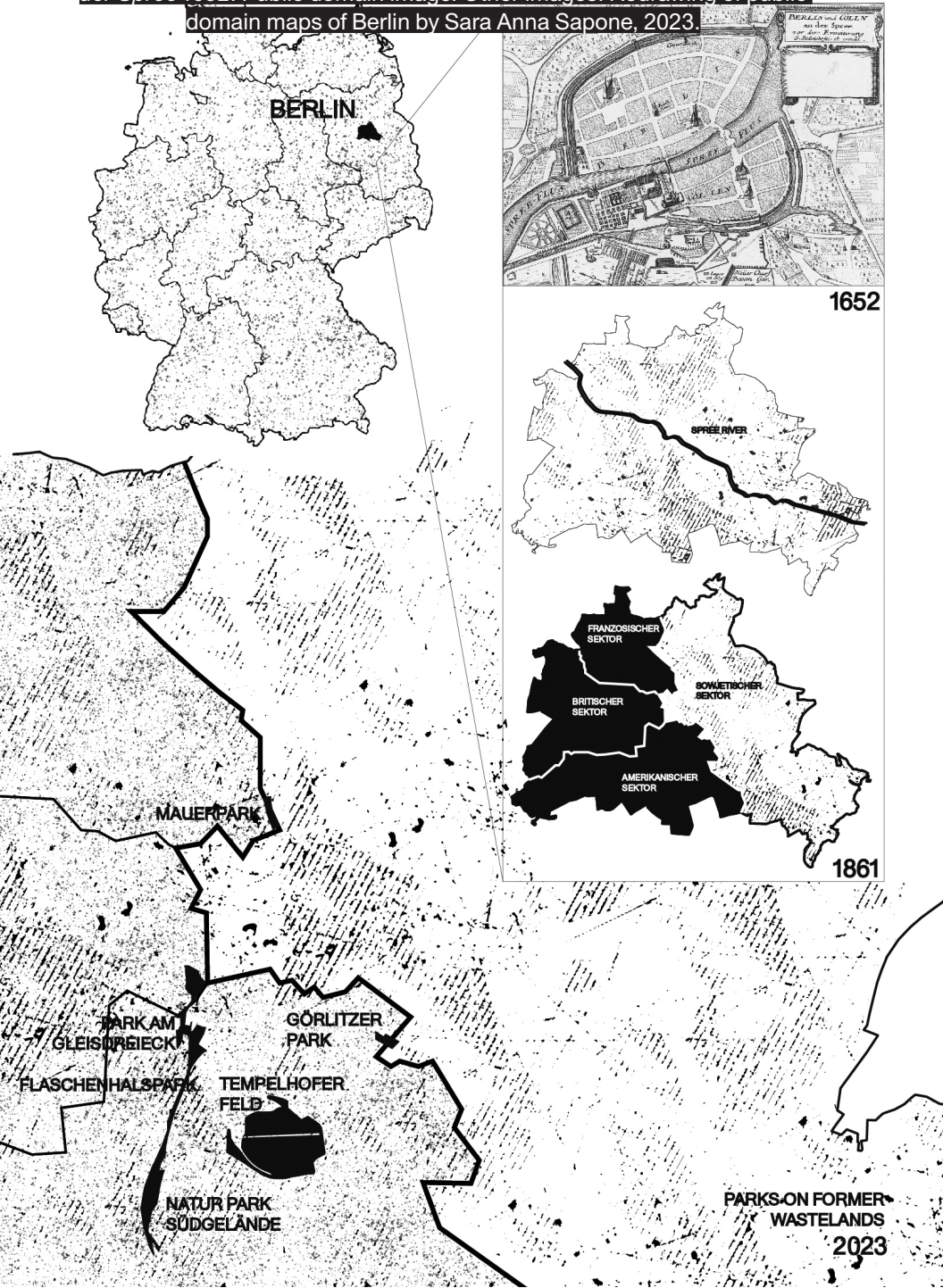
Berlin can be seen as an island city and a city made of islands. This is due to manifold aspects rooted in its geography, history and socio-political conditions.

On the territorial scale, this German city is enclosed by territories with a fundamentally different character and vocation, the Brandenburg region, to which it doesn't belong to as a City-state with a vast hinterland and high population density. Berlin is also fragmented in itself. Since its foundation, it has been divided by its river, the Spree. In time, it was further split in two halves as result of the Second World War aftermath and the construction of its infamous wall. It separated the East from the West and was destroyed only in 1989, still leaving its mark on the city's development to this day.

On an even smaller scale, Berlin is an enclosure of islands of absences, a constellation of smaller lands with uneven edges, leftovers of wartime destruction and lack of transformation pressure. In fact, in the aftermath of the war roughly 28,5 sq. km. of the city's surface was covered in debris and left with an uncertain future. To further complicate the matter, the division of the city between the Allies and the Soviet Union meant the migration of a considerable portion of citizens and the abandonment of countless facilities. The reusable debris and construction materials were implied in the reconstruction, and the unusable ones were destined to be stocked outside the city, mostly constituting the place currently known as *Teufelsberg*. This mound, higher than 120m, is nowadays a thick forest entirely composed of the debris from West Berlin, an altered landscape that appears like a regular forest. A mountain of waste on the outskirts of the city that is perceivable as a nature reserve.

The *rubble lands* that stayed untouched within the city had a different destiny. For these places, the development need was mainly very little due to dire political and economic conditions. The debris and destruction left by the war were generally cleared out without establishing new functions or future plans, leading to the development of spontaneous vegetation allowed here to thrive. Such spaces can be regarded with various names, wasteland or leftovers, *unoccupied and uncultivated land* with a generic negative connotation (Gandy 2013, p. 1302), emphasizing their nature of former anthropic land, now void of use or purpose and left polluted or heavily altered from an ideal original state. However, we can also look at them in a positive light, regarding them as *Third Landscapes* (Clement, 2005) spaces of potential for cities where nothing is yet decided or as *Terrain vague* (Solà-Morales 1995, pp. 118-123), *non-places* in wait to become something else.

Top right: Grundriss der beyden Churf. Residentz Städte Berlin und Cölln an der Spree 1652. Public domain image. Other images: Redrawing of public domain maps of Berlin by Sara Anna Sapone, 2023.



Notably Sola-Morales specifically cites Berlin to define this notion, recalling the condition of Alexanderplatz in the bombing aftermath to describe how these places are formed and transformed by society. These “unproductive” plots are vacant areas with no apparent use but hold significance in relation to their palimpsest or acquired meaning linked to the appropriation and engagement for local communities of humans, animals and plants alike. In Berlin these places are addressed with the specific name of *Brachen*, a word that literally means fallow land.

Stadtbrachen emerged in Berlin after the massive bombings and the destruction of huge areas that could not be quickly rebuilt, impossible financially and not urgent. There was plenty of space. The ruined space became the *Brachen*. How could it be translated in English? Wasteland? No, because *Brach* in German is linked to agriculture, is referred to untilled soil, a field that is left fallow.

Extract of the Interview with Hanns Zischler in the movie (Natura Urbana-The Brachen of Berlin 2017)

However, unlike anywhere else, there was an overall fascination towards these forgotten lands, unlawful places for nature to develop and people to enter.

In Berlin exist two main types of areas of neglect: the ones generated by the destruction of the Second World War and the ones temporarily void of function. This condition was possible due to the lack of development pressure, abundance of space and lack of inhabitants in the wartime aftermath. The permanence of these *stillgelegt* places in Berlin is unique, decommissioned areas still in time, places untouched for decades where nature is allowed to stay throughout the city, that making its distinctive character.

These spaces involuntarily became ground for nature reclamation, unique assemblages of local and adventive taxa and species, open-air terrariums studied by scholars, interpreted by artists, enjoyed by citizens and transformed by designers.

Furthermore, the architectural debate reflected on the city and its island, but with a different outlook. This is shown in the Manifesto *The City in the City. Berlin: a Green Archipelago* (Ungers et al. 1977), which reflected on the condition of Berlin in 1977 facing the mentioned issues of depopulation.

In this frame, the city was understood as a collection of built islands, focusing on chosen fabricated plots to be consolidated through architecture, surrounded by undefined spaces, advocating for the need to rethink their edges instead of further expanding the city.

Looking at Berlin from Teufelsberg.

Overlay of an historical map of Teufelsberg's topography in 1969 and a photo from the US listening station by Sara Anna Sapone in 2016.



In the figure of this *archipelago* lies an overall strategy, an ordering principle that allows the coexistence of programmed decommissioning surrounding these islands, consolidation of the existing and planning for the maintenance of the territory (Protasoni 2022, pp. 37-41).

In this vision what is represented as solid, the islands, is what is built whereas its *Brachen*, the unbuilt, are represented as white space. The mentioned mappings of the ecologists can fill these voids with data, potentially complementing the archipelago vision with aspects that can play an active role in the city in relation with their ecology and development trough time, with a time and space dynamic unlike the one of constructed grounds.

MAPPING AND TRANSFORMING VOIDS – ECOLOGY, LANDSCAPE AND ART

There is an inherent fascination towards the flora growing in the aftermath of decay. This has been experienced in various territorial contexts and times, like for the aftermath of the bombed areas of London (Salisbury 1943), the one of the atomic bombs in Japan or even the ecology of post-atomic wastelands of Chernobyl (Marder and Tondeur 2016). Ruins have the potential to stimulate creative power, push for a shift in established mentalities and change the way we perceive the world around us and its future. What made this tension stronger in Berlin was also a site-specific reaction towards the strict control imposed on society by its socio-political history, creating a yearning for the immersion in nature and unrulid spaces. This can also be connected to the notion of *Heimat* (Eigler 2012, pp. 27-48), a sense of belonging traditionally linked to politics and defining property boundaries, that can also symbolize the special connection between the city's vacancies and its inhabitants. The latter tend to resist the potential disturbances to the traces left by the passage of time, both in the past and nowadays, building narratives to defend them and establishing new perceptual value.

Formerly, in the island city devastated by the war its citizens started to explore and enter its forgotten lands, after few years appearing as unexpected garden throughout the city. And this interest was widespread both for the artistic and scientific community alike. In this sense, it is particularly relevant to mention the history of Berlin's School of ecology and its role in protecting the *Brachen* of Berlin. Their recognition and inscription as areas worth preserving went through extensive lobbying and discussions between citizen and public authorities, following the abandonment stage and the renewed development pressure during the 1980s.

Since the 1960s, Herbert Sukopp, founder of the school, and other ecologists started to explore and document the urban flora, before being disregarded as object worthy of study in favour of naturally occurring habitats, shifting now the focus on man-influenced environments (Kowarik 2022, p. 141).

Instead, they considered the city of Berlin as an “open-air laboratory” where they could document the debris floristics and the plants that happened to colonize former anthropic lands altered by the Second World War or neglect. The *Brachen* were used as experimental laboratories that allowed monitoring without external pressure from the presence of local and adventive species, and their interplay in such unique environments. In the 1980s, the Berlin School of Ecology mapped 142 significative wastelands in West Berlin as “biotopes dominated by wild nature” (Kowarik 2022, 139-145) ↓↓.

The importance of their discoveries led to the establishment of a new subfield, Urban Ecology (Gandy 2022, p. 91). Throughout the mapping and catalogue work with more than 6000 surveys in west Berlin, they were able to demonstrate how the city is a mosaic of different biotopes, with specific ecologies, ordinary plants with unlike assemblages, with a higher degree of biodiversity than many wilder or countryside environments (Sukopp 2003, pp. 295-316). The importance and role of local and adventive species was questioned, also engaging with the complexity of ordinary landscape as something to study and protect for its unique assemblages of flora and fauna and, ultimately, its role as cultural landscape withholding the site’s anthropic past. In this frame, ecologist Ingo Kowarik defined a new concept that will also be very influential for the future city’s transformation, the notion of *Fourth Nature*. Moving in the cultural debate around the anthropic understanding of nature, he built upon existing categories, spanning from the *first nature*, pristine wild space without human interference, to types of nature that see a progressive anthropic influence, with the *second nature* as productive land or agricultural fields and *third nature* linked to gardens or cultural artefact (Hunt 2000). To these he added *fourth nature*, the type of nature that emerges unpredictably from industrial remains, such as those developing in Berlin’s post-industrial spaces, a unique mix of alien and native species formerly disregarded but crucial for the urban flora (Kowarik 1995, pp. 45-55).

The importance of urban ecology also entailed a political stance, opposed to the nativist and antiurban approach of traditional ecology, linking urban spaces to their specific socioecological dynamics.

Experimental maintenance techniques.

Signs and grazer in the Gleisdreieck Park and the Tempelhofer Feld.

Photos by Sara Anna Sapon, 2022.



Former Brachen Transformed into urban Parks.

Current pictures of three parks in Berlin (Park am Nordbahnhof, Südgelände and Gleidreieck Park) and the different solution to shelter nature conservation areas (fences, elevated path, signs). Photo by Sara Anna Sapone, 2022.



So public spaces could also host different nature types and uses, allowing less rigidly defined programs and planting design, accepting the unexpected flow of natural dynamics and working with it instead of against. Their work was also strictly connected to social engagement and political lobbying, to discuss the regulations at the time and inscribe also urban nature as worthy to preserve and not anymore as a weed problem to eradicate.

This became paramount at the end of the century, when the city was finally willing to reclaim its voids for new functions. To do so, it was going to completely erase the complex ecosystems developed there, which were considered unlawful since they did not fit the planning tools at the time. The debates between concerned citizens, ecologists and the city council were able to shift this mentality, bargaining the permanence of spontaneous nature in certain areas. However, this led to the sacrifice of some of these biodiversity hotspots, a tradeoff between plots more or less appealing for development, like in the case of Lützowplatz, an unassuming plot that was nonetheless the first place of urban flora documentation in 1953 and a model site for the Berlin school of ecology, transformed into a hotel (Gandy, Jasper 2020, pp. 18-21). Another area that was a recurrent object of study was Schöneberger Südgelände, a former freight station abandoned in 1946 that ended with an opposite fate. Here ecologists were able to carry out extensive mapping campaigns throughout the years^Λ that helped to advocate for its inscription as natural conservation area in 1994, fighting the will to reconvert it in infrastructural space at the beginning of the 80s. Another aspect that made it possible was the consideration of the site as compensation for the closeby Potsdamer Platz, more economically appealing to investors. Thanks to the cooperation between public authorities, ecologists, artists and landscape designers a new type of park was conceived, a hybrid between a natural conservation area and fourth nature, protecting biodiversity whilst allowing human access. A pivotal aspect of this place's success lies in its interplay with art, which creates moments throughout the park to observe natural dynamic and makes the place perceived as cared for. The key for this park, and many other successful interventions in Berlin, was the interplay between natural preservation and accessibility for users, considering ecology as a driver for spatial design, whilst using art as mediator^Λ.

The acknowledgement of ecological succession and the spatial condition it entails, with open areas, thick forests and in-between patches, creates interesting views throughout the

The preservation of Fourt Nature in the Südgelände Park.

Former railyard transformed into park devoted to the preservation of urban nature. Picture of the elevated path and the viewpoint ideated by the artist group Odious. Photo by Sara Anna Sapone, 2022.



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park, with quieter or more socially active parts that contribute to its success, both for public uses and biodiversity preservation. Overall, at that time many other transformation projects for former infrastructural areas or smaller plots were channelling this view with more or less successful output, both in relation to art and in giving more or less space to nature preservation, with formal or informal interventions. These *Terrains vagues* also contribute to higher urban floristic diversity, acting as connective habitats and providing sources of plant species to colonize newly vacant sites (Mariani, Barron 2013, pp. 1-24).

They also can imply cost-effective creation of biodiverse green spaces, fostering space justice in accessing green spaces and the provision of valuable ecosystem services, like CO₂ sequestration, heat island effect reduction, phytoremediation and human well-being thanks to biophilia (Kowarik 2023).

Finally, the ecologist's interest in these voids was paramount in shaping the city's transformation, considering that the mapped biotopes ended up shaping the Landscape program of Berlin since 1988, with guidelines for biodiversity preservation and the development of open spaces (Kowarik 2022, p. 143). Overall, the constant experimentation with the maintenance of the city's green spaces, that aims for biodiversity protection is notable. This is also due to the creation of a dedicated entity, Grün Berlin, in charge of the upkeep of such places. The latter manages most of the city's public spaces, among which the Südgelände Park, Gärten der Welt, Park am Gleisdreieck, Tempelhofer Feld and many others. In some of them, like Tempelhofer and Südgelände, they are experimenting with alternative maintenance techniques that are less impactful on the biotic community, like the use of grazers, minimal pruning intervention and mowing with rotational techniques. In many of these places there are areas dedicated to biodiversity protection, with different devices designed to protect them: in some cases in the form of walls and fences, like in the Park am Nordbahnhof, in others separated through elevated paths, like in Südgelände, or simply indicated by signs, like in Gleisdreieck or Tempelhofer Feld (Fig 04). Some have been proven more effective than others, since it also varies according to the park extension and the maintenance funds, with the one in Südgelände more successful in terms of biodiversity preservation thanks to the combination of reduced size and careful maintenance.

Ultimately, Berlin was and is a unicum, both in relation to the sensitivity towards spontaneous nature and the political-economic background that supported it, with many designers that engaged with wilderness as material for design in its open spaces.

We are familiar with the notion of terraria as spaces for beauty, perfect reconstructed environments with a tailored setting to allow chosen assemblages of plants to thrive, for aesthetic, productive or scientific purposes.

If we think of them metaphorically as places, picturing them in the form of greenhouses or even parks, they become places of retreat and comfort, displacements within cities where we can rest and enjoy beauty. Here the development of something unpredictable, a plant spontaneously growing by chance, is usually regarded as a weed problem to eradicate, ruining a perfect tailored image of the place or controlled environment.

We tend to imagine these enclosed environments as ideal laboratories offering one singular result.

Nature is seen as a museum that we look at.

Berlin offers a different notion of terrarium: a place in the aftermath of destruction, where nature reclaims the anthropic use and humans observe it from the outside, expecting the unexpected both in time and space dynamics. It is an experimental ground to make discoveries and test new theories, both scientific and in relation to experimental spatial practices.

These *Terraria* are not only made of plants and soil but have humans in them, reflecting on the anthropic influence on urban flora and the importance of conserving it.

In the contemporary age, to escape the anthropocentric outlook, we are realizing that we are and need to consider ourselves as part of our environment and that our worldview doesn't necessarily coincide with the one of the rest of the biotic community. With a certain given environmental condition, *Umgebung*, each species can interpret its ecosystems, *Umwelt*, differently (Uexküll 1934, pp. 5-80).

Looking at the biotic community, like the ecologists in Berlin, allows us to appreciate how animals and plants have different life rhythms, temporal scale as perceptive potential. We usually consider plants as still, but if we change our perspective possibilities through technological tools, like photographs or videos, we can appreciate their movement (Mancuso and Viola 2013, pp. 49-52). There is a potential today to evaluate and recognize even more on the smaller scale the presence of such spaces, engaging first-hand with wild nature and documenting it with our smartphone.

The *Brachen of Berlin* are therefore enclosed microcosms seen as testing grounds for ecologists, evaluating the anthropic influence on spontaneous nature to acknowledge the contemporary urban condition and predict the future of natural development.

Terrarium of Debris.

Former infrastructure conquered by spontaneous vegetation in Berlin.

Photo by Sara Anna Saponi, 2022.



In hindsight, looking back at their work today, they could also see which taxa were likely to spread and survive in the Anthropocene and the environmental changes entailed by climate change and anthropic contexts. An experimental terrarium where few information are known, like former uses, soil type, and sun exposure, whereas other are partially known or unpredictable, like seed dispersal paths, in an interplay between “natural and cultural determinants” (Gandy 2022, p. 225).

Therefore wastelands, or better yet *Brachen*, can also assume in other contexts the role of testing ground for the future city and its biodiversity, to evaluate and rethink our role on and in it. They can be landscapes under a magnifying glass, transformed through designs that tell a story about the past and the layering through time, about the future of urban flora and the indeterminate spaces within urban contexts, in contrast with the sharp edges of modernity.



This Manifesto was the result of a summer workshop of 1977 held in Berlin by the Cornell University. Here Ungers, together with other colleagues, presented their vision for the polycentric city, focusing on the interplay between the built and unbuilt in the shrinking city, after the depopulation phenomena as consequence of the wartime. The emphasis here was on the role of architecture to shape and sharpened the built environment, leaving what is outside its action as less ordered and organized, a space for decomposition and nature.



A relevant instance in this sense can be found in Arata Isozaki's collages in “The city of the future is the ruins”, part the XVI Triennale exhibition of 1968 *Electric Labyrinth*. Here he combined traditional Japanese cultural imageries with pictures of the atomic bombs in Hiroshima, showing the displacement of the society in the aftermath of this tragedy combined with architectural utopias, potential for new futures.



The Biodiversity atlas, Kostler Biotoptypen Berlins, is still visible today and constantly updated as open access datasets. It collects the different biotope type in Berlin and their protection measures. It can be accessed at <https://www.berlin.de/umweltatlas/biotope/> [accessed 15 December 2023].



Specifically, the first floristic campaign was carried by Ulrich Asmus in 1980 and then repeated in 1995 by Ingo Kowarik, as ÖkoCon, and the landscape firm Planland. See for more details (Kowarik, Langer, 2005)



Exemplary of this outlook is the quote on the park's entrance: *Die Kunst ist der nächste Nachbar der Wildnis*. Karl Ganser”. Meaning that Art is the closest neighbor to wilderness, linking metaphorically art as medium able to connect humans to nature.



For further info see <https://gruen-berlin.de/projekte/parks> [accessed 15 December 2023].



In fact, as stated by Ingo Kowarik in his interview with Matthew Gandy in (Gandy 2022, p. 225): “In the 1960s Herbert Sukopp developed a model that divided the city in zones to examine what type of vegetation would occur on what type of substrate. That was very innovative because we considered not only unusual and rare biotopes but also urban habitats as whole. We really wanted to find out where plants and animal existed, in what patterns, and the relation to climate, soil and water availability. We mapped the whole west Berlin through fieldwork [...] it shows that Berlin is a mosaic of different biotopes”.