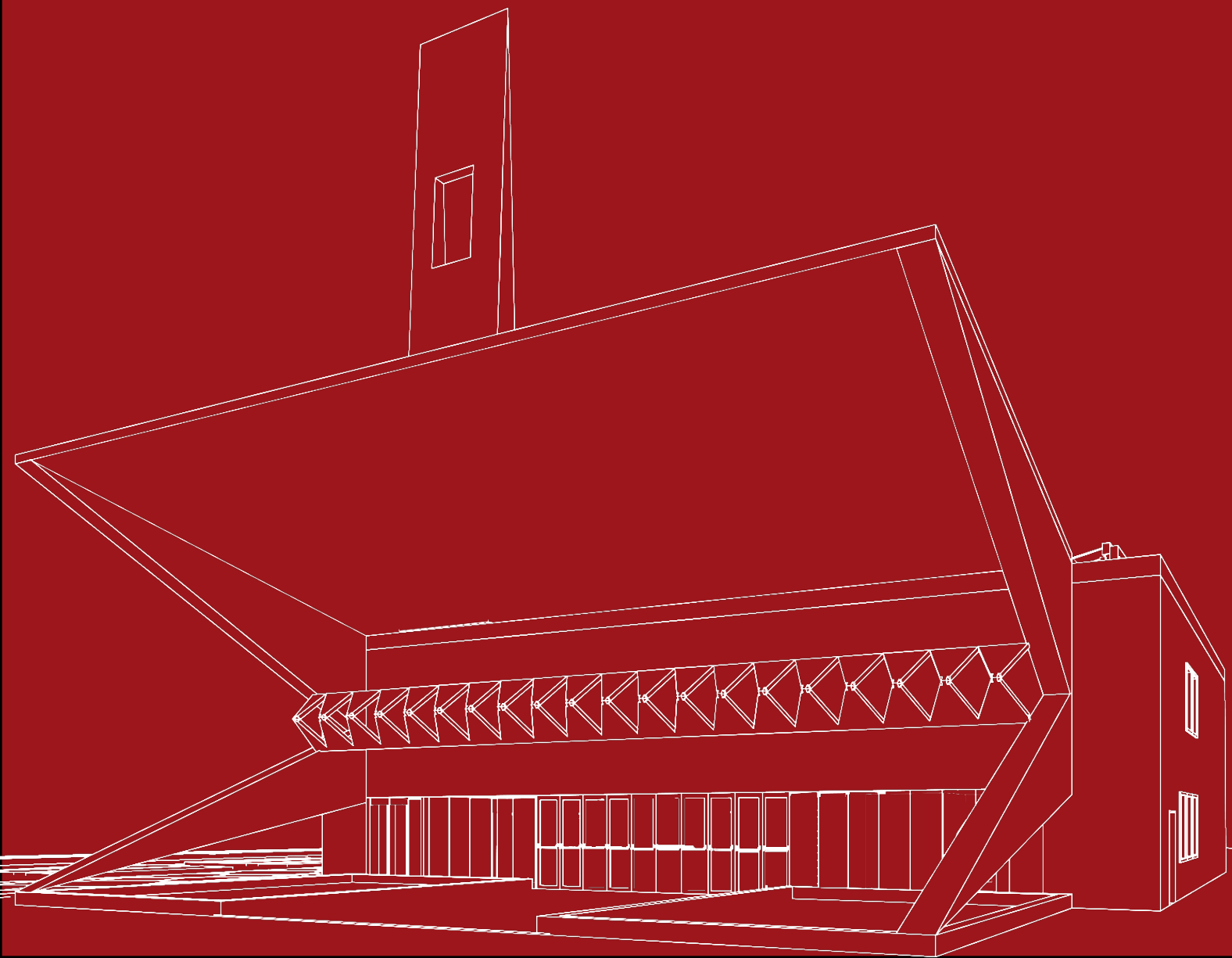


# ZOETOPIA

Adaptive Reuse of the Former Zoo in Michelotti Park





## **POLITECNICO DI TORINO**

Department of Architecture and Design

Master Thesis in Architecture for the Architecture Heritage

A.Y. 2024-2025

# **ZOETOPIA**

## **Adaptive Reuse of the Former Zoo in Michelotti Park**

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# Abstract.

The Ex-Zoo of Michelotti Park in Turin exists today as an abandoned and neglected structure which originally operated as a zoo displaying captive animals. This research examines how adaptive reuse functions as a method to activate both physical space and social dynamics by transforming the area into ZOETOPIA – A Park for Stories, Senses, and Culture.

A new design converts the zoo's architectural cluster into interconnected cultural and community spaces which transforms the area from isolated to interactive. The project combines historical research with urban and architectural analysis and function-based design principles to protect site memories while making the area accessible for modern public use.

ZOETOPIA presents an innovative approach to post-zoo site redevelopment through storytelling and ecological and sensory design elements which transform abandoned areas into public spaces that welcome all people and foster creativity and emotional connection.

# 01

## History of Zoo in West

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The concept of zoos has evolved for many centuries and was at one time treasuries of power and prestige to ancient societies. The hunting reserves, the royal menageries and even the early zoological gardens, collections of exotic animals which were meant to represent political power, scientific exploration and economic gain. Slowly these private collections were transformed into public facilities with educational and entertainment purposes.

This chapter outlines the change in the zoos from being a private display of wealth to public facilities that were meant for education and entertainment purposes. The menageries, garden designs, colonialist exploitation of animals, and the modern democratization of zoos show the complicated human-animal relationship and the cultural interest as well as the ethical issues of captivity.

## 1.1 Exotic Animal Collecting: Hunting and a Symbol of Prestige

The reasons behind the origin of zoos have been part of human life since ancient times. One of the earliest examples is considered to be the animal collection of Queen Hatshepsut (the 18th Dynasty of Thebes, c. 15th century BCE), who organized expeditions to the Land of Punt, bringing back exotic animals as symbols of power and wonder. In China, starting from the 14th century BCE, emperors kept animals within palace grounds; Emperor Wen-Wang is known for creating a 373-hectare park for hunting and fishing, remembered as the “Garden of Intelligence” (Baratay & Hardouin-Fugier, 2002).

While the people of India, Assyria, Persia and Babylon used to have *paradeisos* in their lands, the ancient Greeks collected only domestic birds (Baratay & Hardouin-Fugier, 2002).

The first to show exotic animals (elephants and felines) in Rome, far from their lands of origin, was *Alexander the Great* (Baratay & Hardouin-Fugier, 2002). Even in ancient Rome, only animals such as fish and exotic birds were widespread in villas as a symbol of luxury and wealth. Only in the Imperial age did the taste for ferocious animals begin to spread, reaching its greatest expression in circus games (Spartaco, 1997).

The first important *menagerie* was that of Frederick II, King of the Two Sicilies, in the 13th century, used mainly for celebratory parades or for hunting. It was precisely by maintaining the hunting function that *menageries* spread during the Middle Ages, especially in England, more often in the form of actual hunting estates. Furthermore, the possession of exotic animals continued to be a clear symbol of the owner’s power and wealth (Finotello, 2013).



Figure 1: Frederick II's elephant, described by Richard of Cornwall and shown in Matthew Paris' *Chronica Majora* (Source: shown in the *Chronica maiora*, Part II, Parker Library, MS 16, fol. 151v).

During the Renaissance, *menageries* were present in many Italian cities such as Naples, Parma, Ferrara, in addition to the more well-known ones of the Medici family in Florence and owned by the Pope in Rome (Groom, 2019).

Starting from the 15th century, following the great discoveries, the collecting of exotic animals became

increasingly widespread, first in Portugal and Italy (where the major port cities were located), then throughout Europe (Baratay & Hardouin-Fugier, 2002).

The exotic animal was also used as a gift to seal alliances and submissions, to obtain favors, and as recognition, becoming a true instrument of diplomacy, as well as the object of a flourishing and increasingly specialized commercial activity. During this period, festivals (at the city level or in private homes) involving fights between different species -especially domestic animals versus wild beasts- became increasingly popular. The comparison between unknown and already known species formed the basis of early zoology, which was built on *analogiae* and observational comparisons (Groom, 2019).

## 1.2 Beyond Private Collecting: Garden Design

Between the Seventeenth and Eighteenth centuries, the spread of more refined entertainment led to the decline of hunting and games with felines and other exotic animals. However, the taste for rarity and sought-after objects from distant countries and for the deformed remained as a morbid and attractive sign of the power and variety of nature (Baratay & Hardouin-Fugier, 2002).

At the same time, the spread of printing and the Scientific Revolution led to an ever-increasing circulation and interest in classical texts of naturalistic content, such as Pliny's *Historia Naturalis* and Ovid's *Metamorphoses* (Baratay & Hardouin-Fugier, 2002).

In this historical context, *Naturalia* was born, rooms in which large quantities of the most disparate exotic objects were accumulated in the form of collections. From the mid Seventeenth century and up until the end of the Eighteenth, they were more often known by the name of *Cabinet de Curiosités*. Divided into *Artificialia*, for human creations, and *Naturalia* for those of nature, they constitute very dense and eclectic microcosms, but without precise rational classifications (Baratay & Hardouin-Fugier, 2002).



Figure 2: Cabinet of Curiosities by Ulisse Aldrovandi, 16th - 17th century (Source: *Seeing and Savoring Italy Blog*, 2017).

Alongside collections of inanimate objects, the custom of owning live exotic animals as pets spread at



court, still linked, albeit to a lesser extent, to consumption at the table and hunting activities. In most of the court menageries of the seventeenth century, elephants, giraffes, rhinoceroses and camels are present alongside goats, horses and sheep (Groom, 2019).

It was precisely at the end of the seventeenth century that Louis XIV began to introduce distinctions and classifications in his collection of animals, dividing them into hunting animals, fighting animals and exotic collectibles, similar to practices already widespread for the plant world (*Herbaria*), thus marking the transition from menageries to zoological gardens (Baratay & Hardouin-Fugier, 2002).

This transformation aligns with the already widespread taste for garden design that sought perspective games and scenic views using water features and sculptures. It tended to incorporate the outside world in a controlled and theatrical manner. In this context, collectible animals found a perfect setting in which to become part of larger scenography. Among the most significant examples of this union are the Gardens of Versailles, a place intended for court festivities and, later, for nature walks, designed with theatrical intent according to the Baroque taste (Groom, 2019).

Starting from the 17th century, as court menageries gradually opened to the public and itinerant shows spread, exotic animals became accessible to a wider audience. As a result, more realistic iconographies and representations of animals multiplied, often collected in illustrated anthologies. In this period, menageries became destinations for scientific study and were increasingly linked to academic institutions (Groom, 2019).

### 1.3 Democratization and Institutionalization of Zoos

The transition from exclusive private menageries to public zoological institutions can be considered a significant shift in the history of zoos. One of the earliest examples of this change was the establishment of *Tiergarten Schönbrunn* in Vienna, Austria, which opened in 1752 and is considered the first modern public zoo in Europe (Baratay & Hardouin-Fugier, 2002).



Figure 3: Schönbrunn zoo – polar bear enclosure, postcard from around 1898 (Source: [Schonbrunn zoo](#)).

Unlike earlier private collections reserved for royalty and elites, *Tiergarten Schönbrunn* was an Enlightenment-era institution, designed for education and natural history. It laid the foundation for the rise of public zoological gardens in the Nineteenth century and the development of later European zoos (Baratay & Hardouin-Fugier, 2002).

Starting in the Nineteenth century, thanks also to a growing approach to knowledge as a cultural and interdisciplinary value addressed to a wider audience, efforts were made to transform the zoological garden, once associated with courtly luxury, into an institution accessible to the public, stripped of aristocratic opulence and focused on scientific research and national benefit (Baratay & Hardouin-Fugier, 2002).

In Paris, attention shifted away from the *Jardin de Versailles* toward the *Jardin des Plantes*, which aimed to popularize the sciences. The baroque garden's theatrical symmetry was replaced by the picturesque and irregular layout, where animals were placed in semi-freedom (Baratay & Hardouin-Fugier, 2002).

This new type of zoological garden spread in Europe, becoming a civic symbol which was comparable to museums, theaters, and sports facilities<sup>3</sup>. In addition to the relationships with the academic and scientific world, Zoos engaged with entrepreneurs, administrators, and members of the bourgeoisie, transforming the zoological garden into a space for both leisure and profit (Spartaco, 1997).

There were many goals for this institution: scientific progress, acclimatization experiments, access to nature, popularization of science, control of the wild and development of a new market. This multiplicity of aims later complicated any clear moral or institutional judgment of the zoo itself (Baratay & Hardouin-Fugier, 2002).

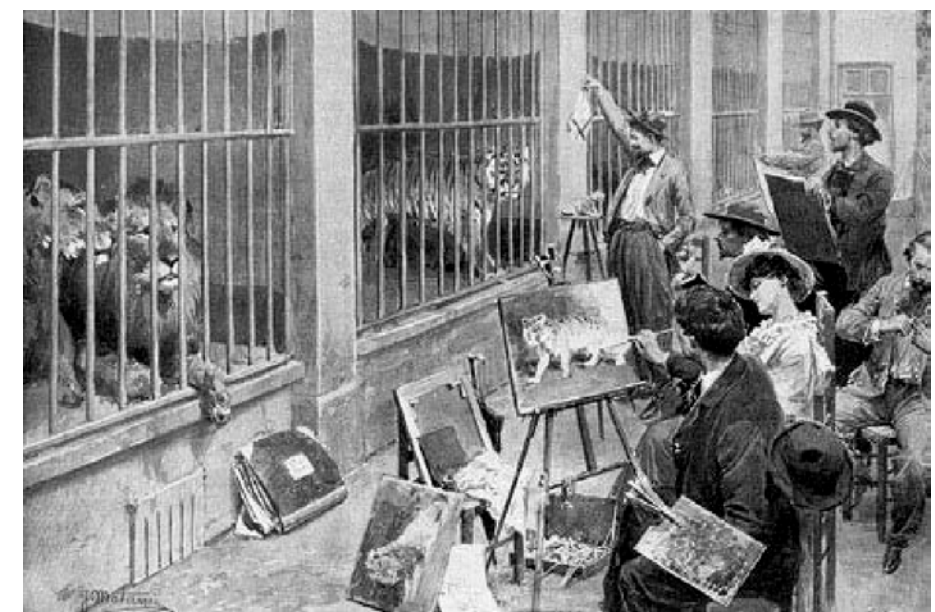


Figure 4: Animal painters at the Jardin des Plantes, 1902 (Source: Wikipedia, “Ménagerie du Jardin des Plantes”).

While animal fights and acrobatic acts were officially banned, by the end of the Nineteenth century, itinerant collections and travelling menageries, such as the Sanger Circus in England and Barnum Circus in the United States, continued to thrive (Baratay & Hardouin-Fugier, 2002).



From the late Nineteenth century into the first half of the Twentieth, as public access increased, the zoo became a powerful expression of imperialism and the power of the State. The methods of acquiring exotic animals, including plunder, acclimatization, and symbolic domination, reflected the practices of colonialism. Explorers often financed their travels by trading animals viewed as colonial resources. In some colonies, reserves were created to preserve fauna seen as threatened by European extraction (Baratay & Hardouin-Fugier, 2002).

At the height of the colonial era, zoos evolved into ethnographic zoos, exhibiting not only animals but also humans dressed in traditional attire. The most extreme example was the 1931 Exposition Coloniale in Paris, where people from French colonies were displayed in recreated villages—marking a stark departure from the older ménagerie model and defining the modern “zoo” (Baratay & Hardouin-Fugier, 2002).



Figure 5: P.T. Barnum & Co.'s Greatest Show on Earth & the Great London Circus, c. 1880–1890 (Source: The Strobridge Lith. Co., Cincinnati).



Figure 5: P.T. Barnum & Co.'s Greatest Show on Earth & the Great London Circus, c. 1880–1890 (Source: The Strobridge Lith. Co., Cincinnati).

As a result of the widespread establishment of public zoos in the Nineteenth and Twentieth centuries, Europe is now home to approximately 700 zoological institutions. These zoos range from large city zoos to smaller specialist wildlife parks. Germany has the largest number of zoos, with over 300 registered centres, reflecting the country's long tradition of zoology. Italy has over 20 large zoos and wildlife parks, including the *Bioparco di Roma* and *Parco Natura Viva*. This growth underlines the continuing fascination with wildlife and the evolving role of zoos in modern society, which is changing from mere entertainment to conservation and education (Finotello, 2013).

#### 1.4 Scientific Claims and Entertainment of The Masses (19th–20th Century)

As evidenced by the many libraries present on zoo sites, scientific research activities continue to coexist in these places, where numerous animals of different species are present together. However, this is often a cover: the study preferably takes place on animals that are already dead, since the living conditions of zoos force animals to adopt completely unnatural habits and behaviors (Baratay & Hardouin-Fugier, 2002).

Already at the beginning of the Nineteenth century, a first attempt had been made to naturalize habitats to respond to this problem, however the need for too large investments and the role that zoos had acquired as a source of profits had transformed these types of initiatives into decorative improvements of the cage without real benefit for the animals. This ambition failed, and the domestication of exotic animals, once useful as a workforce, was now considered obsolete. Zoos seemed to keep as their only objective the entertainment and education of the crowds (Baratay & Hardouin-Fugier, 2002).

The cages are designed according to unhealthy models for the animals, which prioritize visibility and public participation. The desire for the exotic, the extravagant, and the ferocious also becomes an architectural taste. The public demands ever new species; consequently, animals are purchased by zoos based on their potential for attraction or their adaptability to being turned into friendly mascots. They are transformed into characters to which human characteristics are attributed, enabling the public to establish emotional relationships with them, often through feeding rituals, repeated exposure, and staged performances (Baratay & Hardouin-Fugier, 2002; Groom, 2019).

During the Nineteenth century, the total liberalization of access (even to non-members), population growth, the increase in free time, and the spread of the automobile all contributed to the growing success of zoos, which became Sunday destinations for families and were frequently visited by schools and academies, often located outside the city (Baratay & Hardouin-Fugier, 2002).

Following the spread of cinema and television, simply showing animals was no longer enough: the presentation had to be captivating, and the engagement of spectators (especially children) became essential (Baratay & Hardouin-Fugier, 2002).

The fact that each animal was attributed a certain individuality provoked empathy and awareness in visitors, who began requesting better conditions for animals, protection of wildlife, and voiced early criticisms of zoos as institutions<sup>1</sup>. Investigations into their true educational purpose, as well as reports on



accident frequency and animal mortality, multiplied, alongside vivid descriptions of the animals' poor living conditions.

While a *naturalistic* design approach began to gain traction, intended to simulate freedom and hide barriers, zoos also became deeply tied to capitalist culture, emphasizing commercial appeal and functioning as profit-oriented institutions (Baratay & Hardouin-Fugier, 2002).

### 1.5 The 20th Century: The Zoo as a Cultural and Capitalist Institution

Throughout the early Twentieth century, the projects of the *Tecton Group* embody a fully anthropocentric vision of the zoo, producing architectures that visually asserted human dominance over nature and often placed the animal in a secondary position (Baratay & Hardouin-Fugier, 2002).

In the 1960s, organizations were founded to denounce laboratory animal practices and defend animal welfare. Public opinion became divided: some advocated for educational farms limited to native species, while others demanded zoos that were more respectful of animal well-being and environmental values. With the decline of pseudo-scientific justifications for captivity, such as Heini Hediger's theory presented in *Psychologie der Wildtiere*, modern ethology came to define ideal conditions as those that support entire biological systems, free from human control (Baratay & Hardouin-Fugier, 2002).

The history of zoos in the West shows how people collected animals for different reasons during this time. At first, Kings kept exotic animals to show their power and wealth. Later, zoos turned into a place for science, study, and public entertainment. In the Nineteenth and early Twentieth centuries, they grew in size and popularity, although the focus remained more on exhibiting animals than on ensuring their welfare. The shift from private menageries to public zoological institutions marked progress, but many problems related to animal care persisted (Baratay & Hardouin-Fugier, 2002).

During the mid Twentieth century, when *Parco Michelotti* was built in 1955, Europe already had a well-organized network of zoos. At that time, Germany alone had about nine major zoos and over 120 smaller animal collections, reflecting the general interest in zoological gardens across the continent. In the same year, *Tierpark Berlin* opened in the eastern part of the city and quickly became the largest zoo in Europe. In this time also, other major institutions, such as *London Zoo*, *Schönbrunn Zoo*, and the *Berlin Zoological Garden*, also began evolving beyond mere collections of animals, embracing clearer missions focused on conservation and education. While many European zoos were moving toward research-oriented models, *Parco Michelotti* remained primarily focused on entertainment and never developed a structured scientific role (Finotello, 2013; Maschietti, Muti, & Passerin d'Entrèves, 1990).

### 1.6 Evolution of Zoo Styles: Traditional vs. Contemporary Zoos

Zoo designs over the years have changed a lot, and the shift in focus from entertainment to conservation and education is reflected in modern zoos. However, the modern zoos and *zoological parks* focus more on animal welfare, habitat simulation, and ecological sustainability than they do on just exhibiting ani-

mals. The change from zoos as small, enclosed structures to large, open, and simulation of the animals' habitats is due to improved understanding of animal welfare, zoological research, and the public's perception (Baratay & Hardouin-Fugier, 2002).



Figure 7: The post-Enlightenment passion for collecting and classifying: A view of the zoo in 1835.n (Source: [nytimes](#)).

Pre-Twentieth century zoos were cage-based with iron bars and minimal space, and they were mainly for viewing by the public. These facilities were built with the aim of showing exotic animals to the public and not the well-being of the animals. Some of the earliest zoos included *London Zoo*, opened in 1828, and *Berlin Zoo*, opened in 1844, which followed this model, with small, caged animals that were meant to satisfy human interest rather than provide animals' natural environment (Baratay & Hardouin-Fugier, 2002).

In the early and mid Twentieth century, zoos started to move away from unorganized and compact enclosures to more spacious and regulated enclosures. Between the early and late Twentieth century, zoos like *Tierpark Berlin*, founded in 1955, provided more space and focused on education and research. *Zoo Zurich*, which was established in 1929 but was redesigned at a later time, also had some open-air enclosures which provided more free space and movement for the animals. This section documents the gradual move away from the original zoos, which were purely fun based on their design and gradually began to resemble the environments that focused on the physiological and psychological needs of the animals (Baratay & Hardouin-Fugier, 2002; Finotello, 2013).

In the late Twentieth century, the idea of a zoo changed fundamentally. Modern zoos focus on the simulation of the natural environment, the conservation of species and the principles of ecological sustainability. Other new style zoos include *San Diego Zoo* and *Zoo Leipzig*, which have set a good example of zoning to mimic the animal's natural habitat. These new generations of zoos and aquatic centers are affiliated with global conservation projects, have breeding programs for endangered species, and are educational facilities for the public with regard to the need for conservation and management of the environment (San Diego Zoo Wildlife Alliance, n.d.; Zoo Leipzig, n.d.).

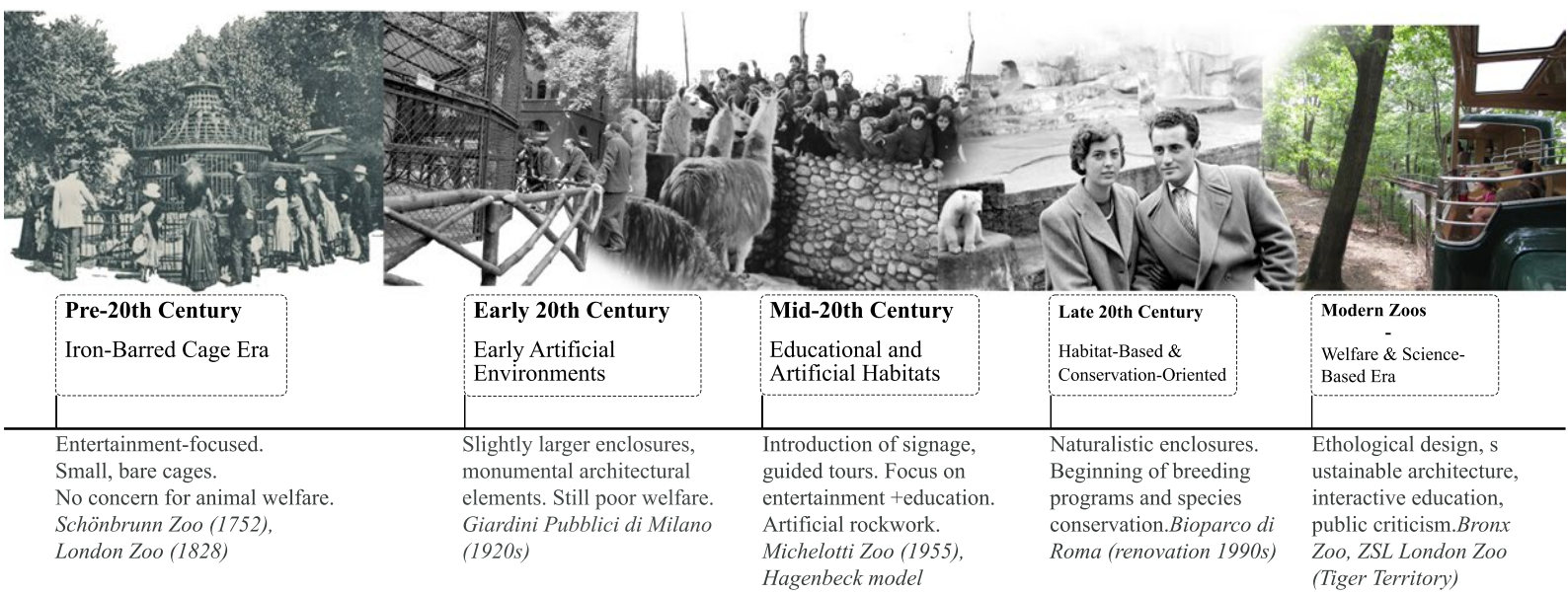




Figure 8: Zoo Leipzig (Source: [Leipzig zoo](#)).

The historical evolution of zoos, from private *menageries* to modern *zoological institutions*, has greatly influenced the development *Michelotti Park*. *Michelotti Zoo* was founded in 1955 and represented the typical mid Twentieth century approach to zoological design with an emphasis on the role of zoos in public engagement and entertainment, rather than in conservation. Its enclosures were traditional, and the design of the enclosures was informed by the desire to allow people to have a close view of the animals rather than the well-being of the animals. Modern zoos were founded on new ethical principles and conservation strategies; therefore, *Michelotti Park* continued to operate under the principles of the old model. This led to the demise of the facility because the expectations of society as well as the standards regarding animal welfare changed and the design of the facility could not meet these new standards (Maschietti, Muti, & Passerin d’Entrèves, 1990).

The transformation of zoos over time can be better understood through the following timeline, which illustrates the major shifts in zoo design from the Nineteenth century to the present.



Zoos have been shaped by cultural, scientific, and ethical changes throughout history. The Nineteenth century democratization of zoos turned them into public institutions in the Twentieth century, and they began to focus on conservation, research, and educational purposes. However, most European zoos were able to transform themselves according to the new zoo principles, while *Michelotti Park* stayed stuck in the past. As other entertainment industries like cinema and television gained popularity, conventional zoos faced a decline in visitors, and *Michelotti Park*, with its lack of conservation activities and new age enclosures like *Bioparco di Roma* or *Zoo Leipzig*, was finally shut down. By the 1980s the change in the perception of the public regarding the welfare of animals and the increasing demand for conservation could be seen as the reason for the shutdown of inadequate zoos. Neglect was not the only factor that led to the decline of *Michelotti Park*; it was a broader picture of how zoos had to change to survive. Whereas *Vienna Schönbrunn Zoo* conserved its historical significance and incorporated contemporary conservation concerns, Michelotti failed to transform into a contemporary zoo, which led to it shut down in 1987 (Baratay & Hardouin-Fugier, 2002; Giaccone, 2019).



Figure 9: The Felidae House in Michelotti zoo (Source: [imgdc.polito](#)).

It is important to know this history when thinking about the future of *Michelotti Park*. The experience of the successful adaptive reuse of the former zoos and historical sites in Europe can help to inform people about the redevelopment of *Michelotti Park*, and any new use must also meet the needs of the modern city, the environment, and the public. No matter if it is an educational facility, cultural center or an ecological project, the history of zoos can be used as a starting point for the discussion of the new role of *Michelotti Park* in the city of Turin.

# 02

## History of Italian Zoos

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The history of the zoos in Italy is connected with power, science, and entertainment. In Rome ancient and in the Renaissance, exotic animals were kept in private collections by rich families. Later, these collections helped to create public zoos in cities like Florence, Turin and Rome. In the 19th and 20th centuries, zoos were important for science, education and colonial exhibitions. This chapter explains how zoos in Italy changed from private collections to public places over time.



## 2.1 Origins of Zoological collections in Italy

In Italian Peninsula, the history of zoological collections begins in practice with the advent of circus games and especially with the performances offered by the Venatio. The Roman period and in particular the great conquests that led Rome to dominate vast areas of Mediterranean Africa and the Near East allowed the availability of enormous contingents of wild species, conditioning and increasing a real industry of trade in live exotic animals (Finotello, 2013).

Despite their often-deplorable use, there were some Roman patricians who housed wild animals, even exotic ones, on their estates for the purpose of study and aesthetic pleasure. From the medieval period, the three menageries of Frederick II of Swabia established in Melfi, Lucera and Palermo remain famous. These collections document the presence of interesting animals: elephants, giraffes, camels, dromedaries, lions, leopards, cheetahs (the latter kept in a special “*Leoparderia*”), various species of monkeys and birds, especially birds of prey, intended for hunting (Finotello, 2013).

A truly singular fact was the custom of bringing many of these species with the sovereign during his travels from one city to another. For this purpose, Frederick had special carts and cages set up that allowed the animals to be observed at any time. The most obvious characteristic of this way of managing collections lies in the very purpose of their institution, namely emphasizing the power and wealth of the aristocratic caste. Live exotic animals were in fact difficult to find, expensive to purchase and much more expensive to maintain than native fauna. Big cats, bears and elephants were also symbols of strength, courage and royalty, and their presence in collections conferred and strengthened the prestige of their owner. In the Middle Ages, animals therefore played an important role, especially for the moral messages they were the object and testimony of: a ruler who owned wild animals wanted to be compared in some respects to the prized pieces of his collection (Finotello, 2013).

During the Renaissance, there was a renewed interest in wild animals. It is very likely that it all began in Tuscany: during the thirteenth century, the custom of exhibiting live zoological collections became increasingly widespread in Florence, always maintained with particular care and interest by the city government. In the fourteenth century, Villani tells in his chronicles of the cage of wild beasts placed in Piazza San Giovanni, which was then flanked, he continues, by a new cage where a young leopard was kept. The menagerie underwent numerous moves until 1350, the year in which it was placed behind Palazzo Vecchio, in the place that still today bears the name of Via dei Leoni and remained there for about two centuries (Finotello, 2013).

The term *serraglio*, which derives from the Latin *seralium* or *serralium* and literally means “fence/enclosure”, spread in Italy, mainly in Florence, for the rich collections owned by the Medici. Also in the Tuscan capital, from the sixteenth century the term “place where rare, exotic or similar animals are kept, for the purpose of entertainment and attraction” was preferred. The expression *menageria* instead has its origins in the old French *ménage* or *mésnage* (from the Latin *mensionaticum*), referring to what concerns the government of the house. The term seems to have established itself from the second half of the seventeenth century following the creation, by Louis XIV, of a *ménagerie pour le bêtes féroces*.

Subsequently, the word spread throughout the Western world to mean any collection of live animals, whether domestic, wild or intended for hunting (Finotello, 2013).

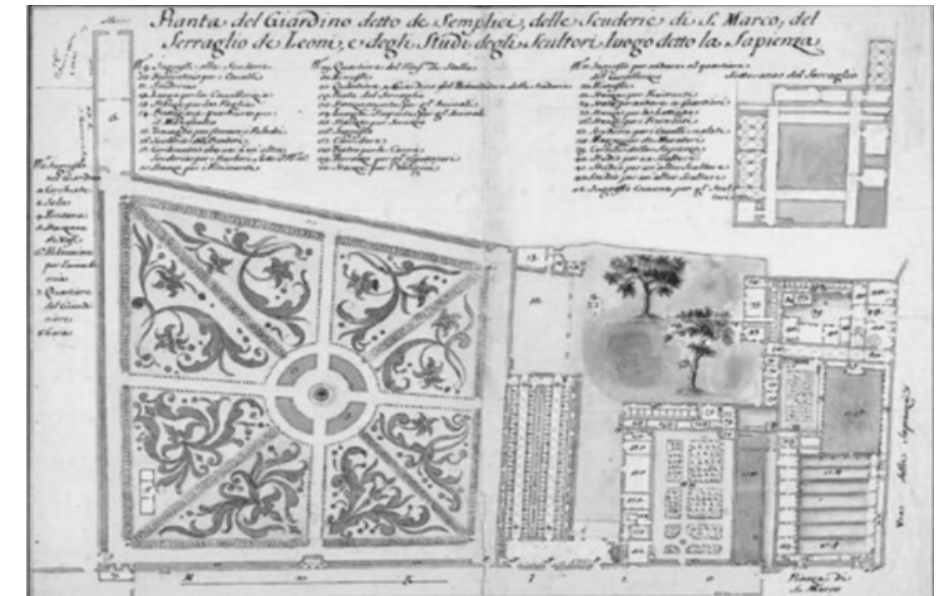


Figure 10: Site plan showing the Giardino dei Semplici, grand-ducal stables, Serraglio de leoni, and sculptors' studio, c. 1740 (Source: Ferdinando Ruggieri, Archivio Storico del Comune di Firenze).

With the mid-sixteenth century, Florence returned to the forefront, having in the meantime moved the famous Menagerie of the Lions to Piazza San Marco. In addition to these felines (the collection remained active from 1550 to 1776), the menagerie hosted several other species: tigers, bears, wolves, monkeys, giraffes, bulls, dogs and horses that were often used in fights, “the hunts”, clearly deriving from the *venationes* organized by the Romans, especially in the imperial era. During the reign of Cosimo III (1670-1723) the collection continued to expand, and the model of the Florentine menagerie was an inspiration to create zoological collections in other contexts as well, outside the geographical borders of the *Bel Paese* (Finotello, 2013).

Beyond their political and scientific significance, exotic animal collections in Renaissance Italy also carried a strong symbolic and aesthetic value. As Groom (2019) highlights, the Medici court in Florence not only maintained live menageries but also promoted the visual representation of exotic species in tapestries, paintings, and decorative arts. These depictions were not mere illustrations; they were carefully curated cultural symbols that reinforced the Medici's image as cosmopolitan, learned, and powerful rulers. In this sense, the *serraglio* and related artistic productions functioned as both physical and iconographic manifestations of dominion over nature and distant lands, deeply embedded in courtly ideology and visual culture.



Figure 11: Giovanni Stradano, *Combat between a lion and other animals*, 1580 (Source: Galleria degli Uffizi, Gabinetto Disegni e Stampe, Florence).

## 2.2 Influence of Italian Menageries on European Zoological Gardens

In the *Annals of Architecture* (2009), Alexandre Cojannot, the author examined graphic documents from the archives of Paris and the State Archives of Florence. His research not only revealed the Italian origin of the menagerie as the most developed architectural model of its time, but also demonstrated that, due to the involvement of Cardinal Mazarin and his superintendent Colbert, the Grand Duchy of Tuscany played an active role in the development of a similar structure in France. The Menagerie of Lions in Piazza San Marco in Florence had been visited in its time by several French travellers and by the Duke of Modena who had reported to Mazarin how this collection was rich in rare species and shows involving wild beasts and other animals. As reported in his weekly dispatch dated November 16, 1657, by Father Pietro Bonsi, who represented the Grand Duke of Tuscany Ferdinand II de' Medici at the Court of France, transmitted to Giovan Battista Gondi, First Secretary of the Grand Duke, Mazarin asked for detailed information and technical clarifications on the Florentine menagerie. The Cardinal had been governor of the old fortress of Vincennes since 1652 and had been given the task of modernizing and embellishing it to make it a worthy habitual residence of the Court. He decided to also create a menagerie in the castle similar to the one in Florence where "one could hunt and see all types of animals". To comply with the requests of His Eminence, Ferdinand II and his secretary therefore decided to send to France a specialist in hunting big game and one in the management of wild animals in the persons of Ottavio Ricci and Giulio Mangani. Following this, Mazarin commissioned Louis de Vau, one of the court architects, to create a project for a lion menagerie in Vincennes based on the Florentine model, with housing for the animals identical to the Florentine structure, equipped with compartments and services for each animal and an arena where lions, tigers and other species could also fight (Cojannot, 2009).

In the intense correspondence that was established, perhaps due to problems related to the imperfect

understanding of languages, several misunderstandings also arose that slowed down the work on several occasions (Finotello, 2013).

Ricci, for example, proved technically unable to organize and manage the fights between the beasts. He was supported by Francesco Giulioni, "the man capable of governing the progress of the fights between lions and other animals" (*Giardini zoologici e acquari in Italia*, a cura di S. Gippoliti, p. 8). Cardinal Mazarin's request ended up being adequately listened to, thanks to the strong commitment of the men of the Court and the Grand Duke himself. However, the original project was modified, and the new structure of Vincennes only partially followed the Florentine original. Le Vau later further elaborated the architectural model of the menagerie, arriving at a development that would find its synthesis in the zoological structure of the Court of Versailles. Finally, the menagerie was built with seven enclosures that converge towards an octagonal pavilion from which guests could observe the animals undisturbed. The spaces dedicated to the different species are named according to the main animal housed there (pelican court, ostrich court, stork quarter, etc.); the fighting arena is then eliminated, recognizing, in fact, the menagerie's function as a place for the observation and study of animals. Louis XIV did not spare money for this jewel, and it is therefore not surprising that it was exhibited like his other treasures, such as horses, vases, goldsmith's work, tapestries and carpets, and that a considerable amount of documentation remains. Thus, the fauna collection maintained for the sole purpose of the circus show, on the model of imperial Rome, is abandoned to create a review of rare and unusual animals in which we can trace a rough model of a scientific collection (Cojannot, 2009). The increased sensitivity towards an approach to the study of exotic fauna relaunched these collections throughout the Western world, and in Florence itself the Medici inaugurated a second menagerie, the Menagerie of Rare Animals, inside the Boboli Gardens (the name of the park of Palazzo Pitti), this time inspired by the new model developed in France (Finotello, 2013).



Figure 12: Giuseppe Santini, *View of the Serraglio degli animali in the Boboli Gardens*, after 1677 (Source: Galleria degli Uffizi, Gabinetto Disegni e Stampe, Florence).

Around 1670 the Boboli menagerie was substantially modified and enlarged, which since the end of the sixteenth century (1587) had housed exotic animals, although kept without a specific order within the garden. Several travellers who were lucky enough to visit it speak of it in this sense. Giraffes, hippopot-



amuses, elks, gazelles, cheetahs, lions, pumas and monkeys were kept in Boboli, as well as notable collections of parrots and pheasants housed in special aviaries. The menagerie remained in existence until 1785, when Grand Duke Peter Leopold of Lorraine ordered its definitive closure. However, some species of wild mammals, including exotic ones, continued to appear in the garden, even if only occasionally, as is the case of a giraffe that arrived as a gift in 1835 (Finotello, 2013).

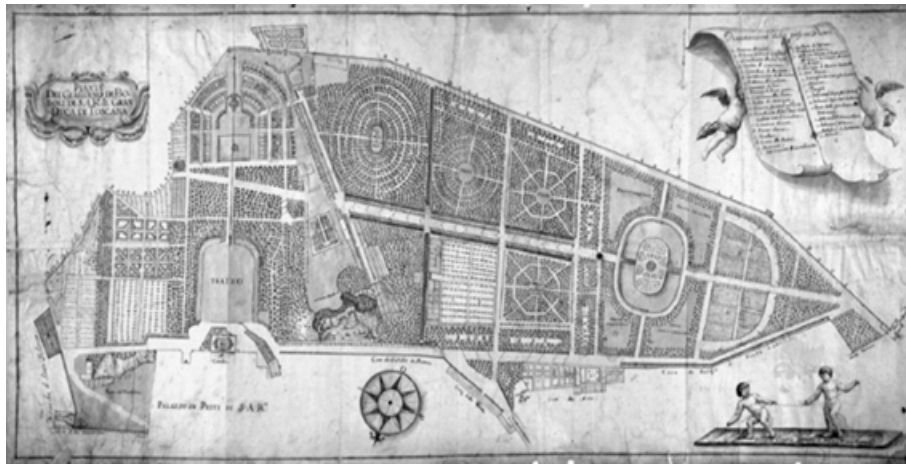


Figure 13: Michele Gori, Plan of the Boboli Gardens (*Pianta del Giardino di Boboli di S.A.R. il Gran Duca di Toscana*), 1709 (Source: Biblioteca Nazionale Centrale, Florence).

## 2.3 The Rise of Public Zoos in Italy

In Piedmont in the seventeenth century there was a Regium Vivarium located in the park of the Castello del Viboccone. Probably established by Emanuele Filiberto, large game was raised there along with some species of exotic animals. In 1627, in addition to deer and wild boars, there were certainly some exotic felines present - tigers, lions and servals - which were looked after by a “groom and governor” (Torre Navone, 1986). The Vivarium persisted until 1706, when the park that housed it was destroyed during the French siege, although it seems that very few species remained there. Also in Rome, since the mid-1600s, there was a rich menagerie established by Scipione Borghese (Finotello, 2013).

From a plan of the park drawn up by Simone Felice in 1670, we can see how the structures that housed the animals were arranged organically in a part of the garden in front of the palace. The architecture of the sections, the drinking troughs and the carefully painted and highly evocative backgrounds contributed to creating a sort of “garden of wonders”, much appreciated by guests and visitors who often took advantage of the garden’s opening to the public. In 1787, with the decline of the Borghese family, this menagerie, often also referred to as the Menagerie of the Lions, was definitively closed (Finotello, 2013).

Also, in the city of Naples, around 1750, a zoological collection was organized: the Serraglio della Maddalena. The main building, converted from old stables, consisted of a U-shaped building, preceded by an enclosure, which was accessed by a large staircase that opened into a circular shape with two wings. The animals were imprisoned in 36 cells, three of which were large for elephants and giraffes, a lion house and 4 smaller ones for camels and ostriches. On the first floor, which was accessed via a large gallery, there were the royal suites, while guests could be hosted on the second floor, which also had lateral

logic for enjoying the shows. The structure remained more or less unchanged until the beginning of the nineteenth century, when it was converted into a stable warehouse; it was then completely destroyed in the bombings that Naples suffered during the Second World War (Finotello, 2013). The nineteenth century marked the beginning of an extremely fruitful period for zoos, which were established almost everywhere, but especially in the major European and North American cities. In Italy too, some of these structures were created, especially by the House of Savoy and some companies specifically formed on the model of the acclimatization garden, which arose with great success in the Bois de Boulogne Park in Paris (Giaccone, 2019).



Figure 14: Simone Felice, Plan of Scipione Borghese, 1670 (Source: CalcoGrafica.it).

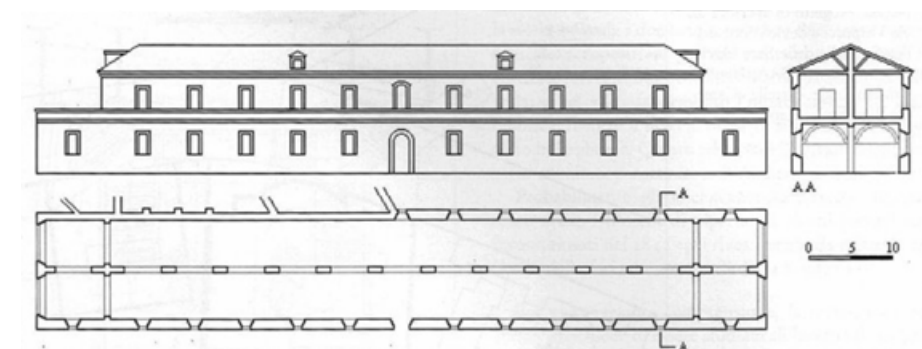


Figure 15: Plan, elevation, and section of Naples Serraglio delle Fiere, 1842 project (Source: ASNA, Pizzofalcone section, Ministry of War and Navy, fs. 2022, inc. 2033, fg. 3955).

The basic concept, undoubtedly revolutionary, which clearly distinguishes the old menagerie (or menagerie) from the new zoo consists in having restructured an asset for the exclusive use of princes, created as a place where mainly oddities and rarities were collected, into a public cultural heritage, the primary center, together with the nascent museums, of the progress of the Natural Sciences and at the service of popular education. The *Ménagerie* of the Jardin des Plantes, inaugurated in 1794 in Paris, is rightly considered the first modern zoo, as it was conceived for the exclusive use of the public and at the service of scientific research. The definitive recognition of these institutions as centers of zoological dissemina-



tion and scientific research, however, occurred with the spread of the evolutionary theories developed by Darwin and Wallace (Finotello, 2013). The impulse that the new current of thought gave to zoology, favored the birth of zoological gardens in Europe and in the rest of the world. Many zoological societies were established by governments, local authorities or even by private citizens. If scientific research and the desire to make new zoological discoveries known were the prerequisites for the birth of the zoological garden, the attempt to make the most of the new knowledge will lead to the creation, also in Italy, of some societies that aimed at developing techniques and methodologies for the acclimatization of wild species. The acclimatization garden therefore becomes the place where techniques of domestication and breeding of exotic species begin to be experimented (Finotello, 2013).

If 1794 is the date of birth of the modern zoological garden, the nineteenth century is undoubtedly the century in which these institutions definitively established themselves and spread, while the acclimatization gardens often took over due to their eminent commercial function. It was therefore in this spirit, and perhaps also with the hope of easy profits, that the Zoological Society of Acclimatization was founded in Florence on 9 November 1861, the first support for the creation and management of a future zoological garden. It is impossible not to mention in this regard Anatolio Demidoff (1812-1870), certainly the most motivated and enthusiastic of the founding members of Florentine society. As early as 1852, this passionate zoophile had begun to breed various exotic species in the vast and well-equipped park of his villa in San Donato near Florence. Correspondent of the Imperial Society of Acclimatization in Paris, Demidoff invested resources and money in order to obtain significant results. Under the direction of Giuseppe Desmeure, later director of the Florentine Zoo, the San Donato estate obtained important reproductions. The first birth of the ostrich in Europe took place here and several publications were written following this event. Nilgau antelopes and various deer increased their numerical consistency within the enclosures of the vast park thanks to the attention and expertise of the staff. In 1860, specimens of nilgai antelope were given to the Real Parco di Acclimatazione della Mandria, near Turin, established by Vittorio Emanuele II following the example of those operating in other European cities (Finotello, 2013).

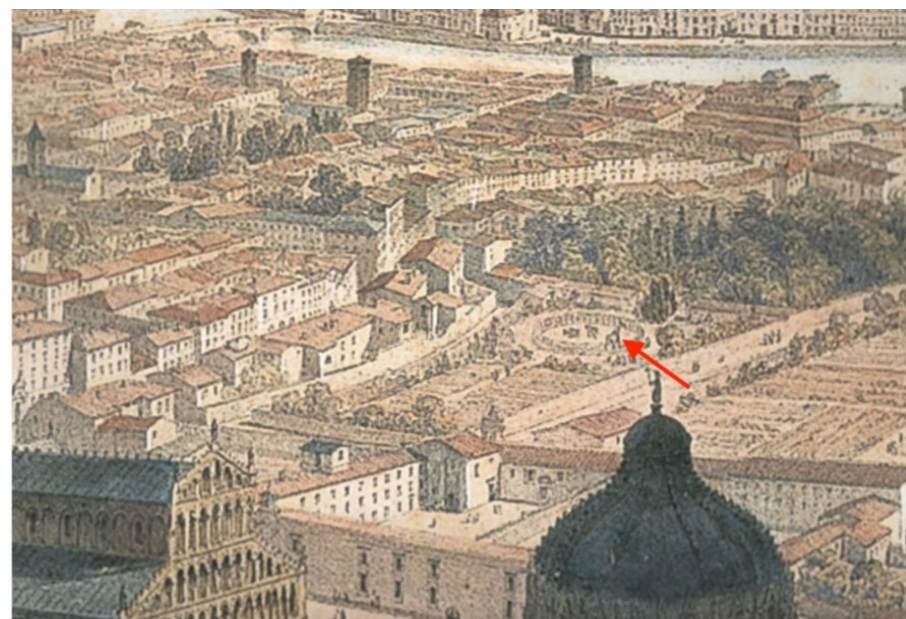


Figure 16: Close-up of Guesdon's drawing of Pisa, c. 1849. The red arrow points at the giraffe (Source: Bedini & Farina, 2022, p. 172).

## 2.4 Establishment of Major Italian Zoos

It was on the occasion of the Italian Exhibition of 1861, held in Florence in the Porta al Prato area, that the president of the company Cosimo Ridolfi, Demidoff, De Cambry Digny, other members and the new director Giuseppe Desmeure (also in charge of supervising the Royal Aviaries in the Tuscan Provinces since 1874) decided to open the new zoological garden for acclimatization to the visits of the citizens, the preparation of which seems to have begun around 1858. The company, then unofficially established, financed the first works and received the necessary land in the Cascine Public Park from the Municipal Administration of Florence. The success of the Exhibition and of the company's zoo was great. However, it was necessary to wait until 1863, the year in which the Royal House took over the institution, for the official inauguration of the renamed Royal Florentine Zoological Garden to take place. With the arrival of the Royal House, the management of the collection also changed radically: the exhibition of utility animals was joined by the "classic" species that would dominate the scene of the traditional zoological park, big cats, bears, wolves, hyenas, giraffes, etc. (Finotello, 2013).

The zoo, at the time of its greatest splendor around 1870, extended over an area of 5 hectares. From the main gate, the visitor, having paid the ticket (50 cents on weekdays, but there was also an annual subscription) and using a special printed guide, could enter the paths of the garden following precise indications and receiving exhaustive information on the species he encountered along the way. Important structures were made for elephants and giraffes; an imposing pavilion was built for the big cats, the bears, the hyenas and a large "monkey enclosure" was also erected on the model of those in vogue in many other zoos of the time, made with cast iron columns and netting. Some large aviaries, ponds and enclosures with various species of antelopes and deer completed the exhibition. The service area, with its own entrance, consisted of a slaughterhouse, a building for the head keeper's accommodation, offices, a warehouse, a kitchen for preparing the animals' meals and numerous stables. The Florentine zoological garden was subject to subsequent expansions and improvements presumably until around 1870-72; it remained like this, without further intervention, until its closure was decreed largely by the disinterest of Umberto I, who succeeded his father Vittorio Emanuele II in 1878, as well as due to the restructuring of the park designed by the architect Poggi in 1880 (Finotello, 2013).

1863, the year in which the Florentine institution was transferred to the House of Savoy, saw the creation of a similar zoo in Turin, which, inaugurated the following year, would quickly become one of the most prestigious zoological gardens of the time. The presence of numerous zoological collections, such as the zoos of Florence and Turin, the acclimatization park of La Mandria and the hunting and acclimatization estate of San Rossore (Pisa), induced the Royal Administration to create a Central Office for the General Management of the Royal Gardens and Zoological Collections of H.M., to whose superintendence Cavalier Enrico Verasis di Castiglione (1830-1879) was called. The office, based in Florence since 1865, was responsible for managing the innumerable matters relating to the royal zoological gardens: projects, renovations, expansions, supplies, acquisition and transfer of animals, veterinary care, personnel affairs, regulations and contacts with other institutions. In 1872, for example, Geoffroy Saint-Hilaire, an illustrious scientist and director of the Jardin des Plantes in Paris, visited the Piedmont zoological collections,

and in those years, there were frequent exchanges of specimens and information with the zoos of Paris, Antwerp and London. The first years of the Kingdom of Italy placed Turin in a position of international prestige, and it is therefore probable that Vittorio Emanuele II took advantage of this opportunity to provide the city with a modern zoological garden (Finotello, 2013).

The park was conceived both as a place of public education, open free of charge on beautiful holidays, and as a real scientific institution in direct contact with the Faculty of Veterinary Medicine and the Zoological Museum. This active collaboration produced notable scientific publications, some truly important, which made the Turin collection famous internationally. The architectural style of the buildings and cages included the presence of rich friezes and complicated decorations and was in close relation to the exotic animals present in the collection. This style, markedly oriental, was intended to give the visitor the immediate idea of the exotic, thus instilling the idea of the “rare” and the “distant” and was frequently used in zoological gardens of the time. In 1873 the construction of the lake that occupied a central portion of the garden was completed and, in 1874, the Royal Zoological Garden of Turin could also be considered complete. For another ten years the garden continued its existence even if, starting from the 1880s, it witnessed a slow but constant decline. For some animals it was decreed that they should be transferred to Monza Park or to the Mandria estate, for others they should be sold to sister institutions or to owners of circuses or travelling menageries (Finotello, 2013).

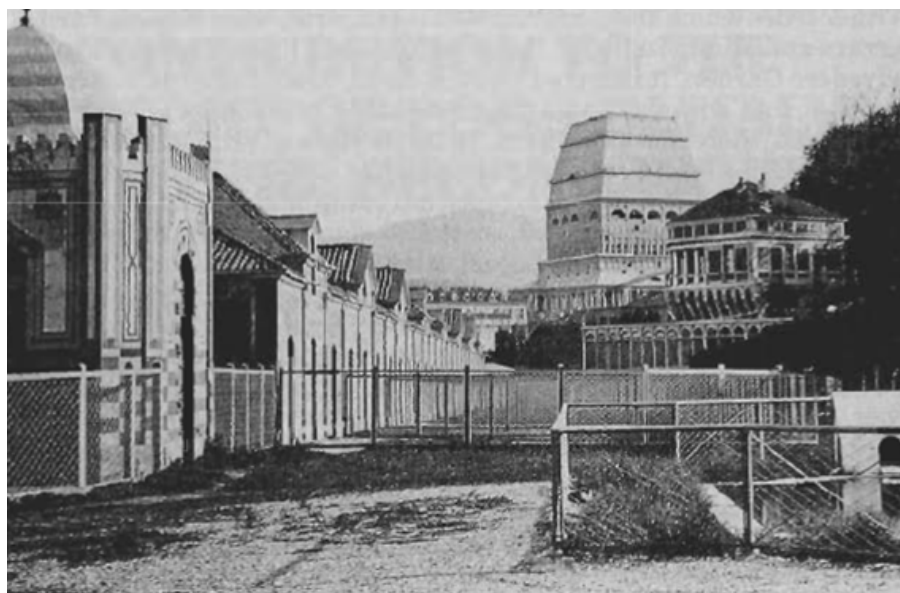


Figure 17: Enclosures for hoofed stock, Turin Royal Zoological Garden, 1865  
(Source: [Researchgate](#)).

## 2.5 Colonial Zoological Exhibitions during the Fascist Period

A manifestation that in many technical aspects can be considered a carbon copy of the traveling menagerie was the zoological (or faunal) exhibition. Such events spread mainly during the Fascist period in relation to the strong propaganda desired by the regime on the colonial possessions in Africa. There is no doubt that such events left a deep mark on the public of the time. The strong impact caused by the presence of wild beasts and large exotic animals was certainly a guarantee of success. During the twenty

years of the Fascist regime, propaganda related to the Colonies had a strong boost, which materialized in the flourishing of popular manifestations in which the exhibition of animals could not be missing. Who better than animals, in fact, could fulfill the task of recalling distant, mysterious places rich in resources of all kinds? The governors of the Colonies, at the request of the Governorate and the Government, were invited to send animals from overseas to the mother country, mainly from Somalia, but Eritrea, Ethiopia and Libya also provided their zoological peculiarities (Gippoliti, 2013). These were therefore real events with strong multimedia characteristics; in the fusion of text, images, objects and representations, the exhibitions almost always attracted crowds of visitors and had a popularity that neither books, nor newspapers, nor conferences were ever able to match. In the early 1930s, Captain Vittorio Tedesco Zammarrano, an officer of the Royal Army, explorer and hunter, promoted a project hypothesis that contemplated the creation in Somalia, in the province of Beyond Juba, of a collection and acclimatization center for species to be sent and sold to various zoological gardens, primarily the one in Rome, but also to others that were expected to open in the main Italian cities. Here we can therefore glimpse a clear plan by the regime for the development and creation of new zoos in the country. (Finotello, 2013).

The use of fauna as an economic resource was in fact a budget item that necessarily had to be referred to: licenses for big game hunting, skins, ivory and trade in live animals could represent a significant financial income for territories such as central and southern Somalia, for the western part of Eritrea and for southern Ethiopia. In 1930 the Ministry of Colonies with its Office of Studies and Propaganda published the volume Fauna e Caccia edited by Vittorio Tedesco Zammarrano, in which the Author listed in detail the vertebrates present in Libya, Eritrea and Somalia with indications not only on the biology of the different species, but also, for some of them, on the level of exploitation to which they were subjected and on the profits that could be obtained from exportation. For the Somali leopard, for example, the harvest reached over 10,000 specimens per year with a profit of approximately 2,800,000 lire (a considerable sum for the time!). The book then continued with a series of information on the hunting legislation of the three different colonial possessions and with an interesting appendix, drawn up by the Management of the Zoological Garden of Rome, which reported information on “the adaptability to life in captivity and the acclimatization of the various mammals arriving from our colonies” (Finotello, 2013).

In this period there were some important commercial companies in Italy for the import/export of live animals: the Molinar company, the Terni company and the one managed by Angelo Lombardi who mainly dealt with specimens of Somali and Eritrean origin. These last two were involved in a flourishing exhibition activity that would see Florence as a venue for repeated events with live animals. In 1933, in the park of the Horticultural Garden, Lombardi organized the exhibition “Exotic Fauna and Big Game Hunting Exhibition”, with 300 wild animals imported from Italian East Africa. In May 1937, the exhibition of Ethiopian, Indian and Australian fauna by Terni was inaugurated at the Velodromo “Luigi Pontecchi” in the Cascine Park in Florence and was repeated for several years. About three thousand animals of a hundred species were presented: large felines, monkeys, antelopes, zebras, elephants, kangaroos, reptiles, etc. (Finotello, 2013).



## 2.6 Zoos in the 20th Century: Growth and Decline

During the mid twentieth century, Italy saw a growth in the zoological institutions and most of the zoos were established between 1950 and 1980. During this period, most of the zoos were privately owned and developed very fast, which posed a problem on the quality and sustainability of the zoos. In 1950 Italy had only a few large zoological gardens including Bioparco di Roma (1911) and the Zoological Garden of Naples (1940). However, by the late twentieth century, the number of zoos had increased and there were at least 8 large zoological collections including Parco Natura Viva (1969), the Zoological Garden of Pistoia (1970) and Punta Verde Zoo Park (1979). At present, there are about 15 zoological parks and wildlife sanctuaries in Italy, which can be attributed to the shift from the traditional zoos, which were established for entertainment purposes to the present-day zoos and aquatic complexes, which focus on conservation and education. The Rome Zoological Garden, the first to be opened in the twentieth century, has some connection with its precursor, the park of Scipione Borghese, which was initially conceived as a place to put exotic animals. However, in 1930, the administration of Milan entrusted the city's public animal collection to the Molinar company which established a small but efficient zoo. In 1931, the Zoological Garden of Genoa-Nervi was created as a natural extension of the Civic Museum of Natural History of Genoa. The Genoa Zoo was soon known all over the world and was even presented in the German magazine "Der Zoologische Garten". (Finotello, 2013).



Figure 18: The entrance of the Zoological Garden of Rome (Source: [Bioparco di Roma](#)).

Unlike other zoos, it was built with a strong scientific foundation by zoologist Oscar De Beaux, who introduced an innovative biogeographic enclosure concept. But when the war broke out, the zoo was closed. In 1940, Naples established a wildlife park in the Campi Flegrei area which was established for the purpose of exhibiting animals from the British territories abroad. This zoo was closed during the war but was reopened in 1949 as a public zoological garden. It became a leading breeding and conservation center during the leadership of Franco Cuneo (Finotello, 2013).



Figure 19: Naples Zoo 1984 (Source: S.Gippoliti).

The last of the large zoos of this period was Michelotti Park in Turin, which was founded in 1955 by the Molinar company in collaboration with the Municipal Administration, which had provided the land in Villa Michelotti Park. Although its animal populations were subject to change through purchase and addition, it contained many species of interest to science, including Italy's first white rhinoceroses, black-backed tapirs, gorillas and orangutans. In 1960, Michelotti Park opened a modern aquarium-reptile house with twenty aquariums, ten large tanks and three large enclosures which were copies of the Amazon rainforest, Central Africa and Indonesia. Whereas Bioparco di Roma was laid out with more elaborate landscaping and more naturalistic enclosures, Michelotti Park was designed in a more linear fashion, following a river front and incorporating its cages into the existing park structure. In the same manner, the Florence and Naples zoos were modeled after colonial exhibitions, whereas Michelotti Park was created after the war and was much more oriented towards the entertainment of the public than towards the purposes of science or the nation. (Finotello, 2013).

But from the beginning of the 1970s, the uncontrolled growth of zoos in Italy was recognized as a problem. Professor Ermanno Bronzini of the Zoological Garden of Rome was one of the first to level criticisms at the proliferation of inadequate, privately run zoos for the latter, he argued, that they harmed scientific credibility rather than promoting serious naturalistic education. The Italian Union of Zoological Gardens ((UIDGZ, later renamed UIZA in 1991) was founded in 1972 to set professional standards for zoos. Its mission included:

- Guaranteeing good conditions for keeping animals in zoos.
- Establish a national register of all the zoo animals in order to enhance cooperation.
- Encouraging scientific investigation of species conservation.
- To increase public awareness of the conservation of biodiversity.
- Request for the government to regulate the ownership of wild animals.
- Prevention of illegal trade in exotic animals.

Although these improvements had been made, Michelotti Park was coming under increasing pressure as a result of political debates, changing priorities in urban development and growing concerns about animal welfare. In 1984 the Turin Municipality refused to grant a new lease, and the zoo was closed down for good in 1987.

By the end of the twentieth century, many new zoological collections were also created outside the large cities. Some of the most successful and still operating facilities include:

Faunistic Park “La Torbiera” (Piedmont)

- Parco Natura Viva (Veneto)
- Punta Verde Zoo Park (Friuli-Venezia Giulia)
- Zoological Garden of Pistoia (Tuscany)
- Falconara Marittima Zoo Park (Marche)
- Reptile House of Città della Domenica (Umbria)

In the late 1980s, Italy also introduced new and innovative zoological concepts such as the first Butterfly House (Montegrotto Terme, Padua) and a Speleovivarium in Trieste for cave living species. (Finotello, 2013).

The evolution of zoos in Italy reflects a multi-layered historical process, starting from the show-based animal collections in Ancient Rome, to the aristocratic managers of the Renaissance, who were indicators of power and prestige, to the public zoos established in the Nineteenth century under the influence of scientific curiosity and colonial ideology, and finally to the institutions focused on conservation and education that developed towards the end of the Twentieth century. This transformation is not only architectural or administrative, but also a reflection of radical changes in the perspective towards animals and nature.

Michelotti Park is a critical example at the very center of this historical continuum. Established in the 1950s as a result of the post-war social revival and the need for entertainment among the urban population, this park represents the typical “public entertainment” zoo concept of the period. However, with the increasing scientific awareness, ethical sensitivity to animal welfare and new approaches focused on conservation, structures like Michelotti Park have become increasingly outdated. The closure of the park in 1987 is not only the end of an institution, but also a symbol of a social transformation in the perspective towards animals.

Although Michelotti Park does not present an original model on an international scale, it is an instructive case in terms of understanding how zoological areas were shaped and what they failed to achieve in the Italian context. Although it was established in accordance with the economic and political dynamics of the period, it could not undergo a transformation compatible with conservation awareness over time. In this respect, it is not only an example of closure, but also represents the end of a system that is incompatible with modern nature ethics.

Today, the legacy of Michelotti Park does not only carry the traces of a past; it also raises questions about

how the relationship established with nature within the city can be reconstructed. The re-functioning of the park can become not only a transformation of physical space, but also an example of contemporary public policy aimed at environmental sustainability, the protection of biodiversity and the reconnection of society with nature. Thus, Michelotti Park can cease to be a nostalgic relic of the past and become a symbolic area that establishes a balance between nature and culture for the cities of the future.

# 03

## History of Michelotti Park

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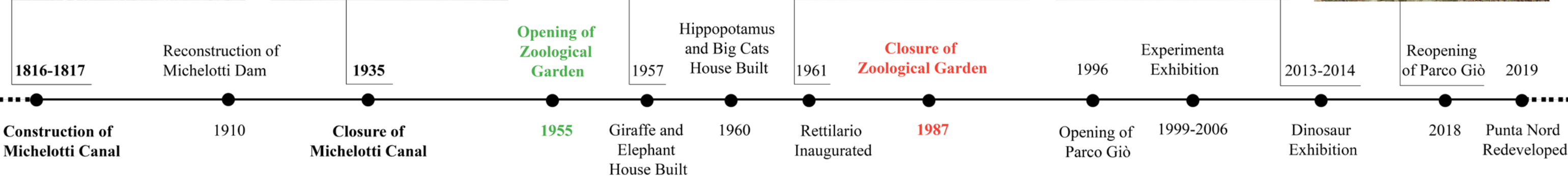
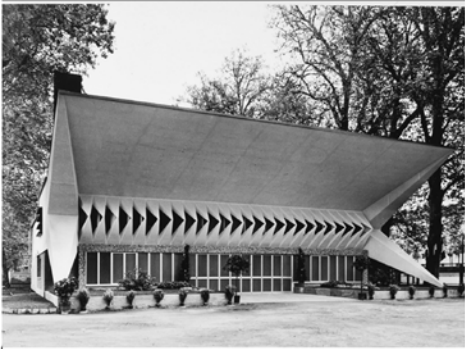
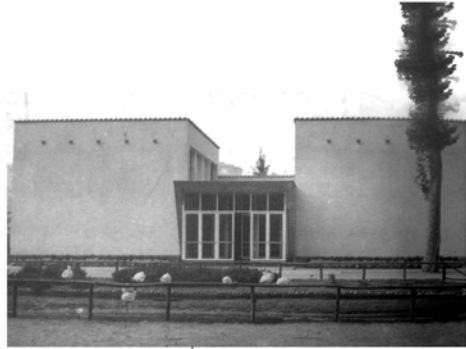
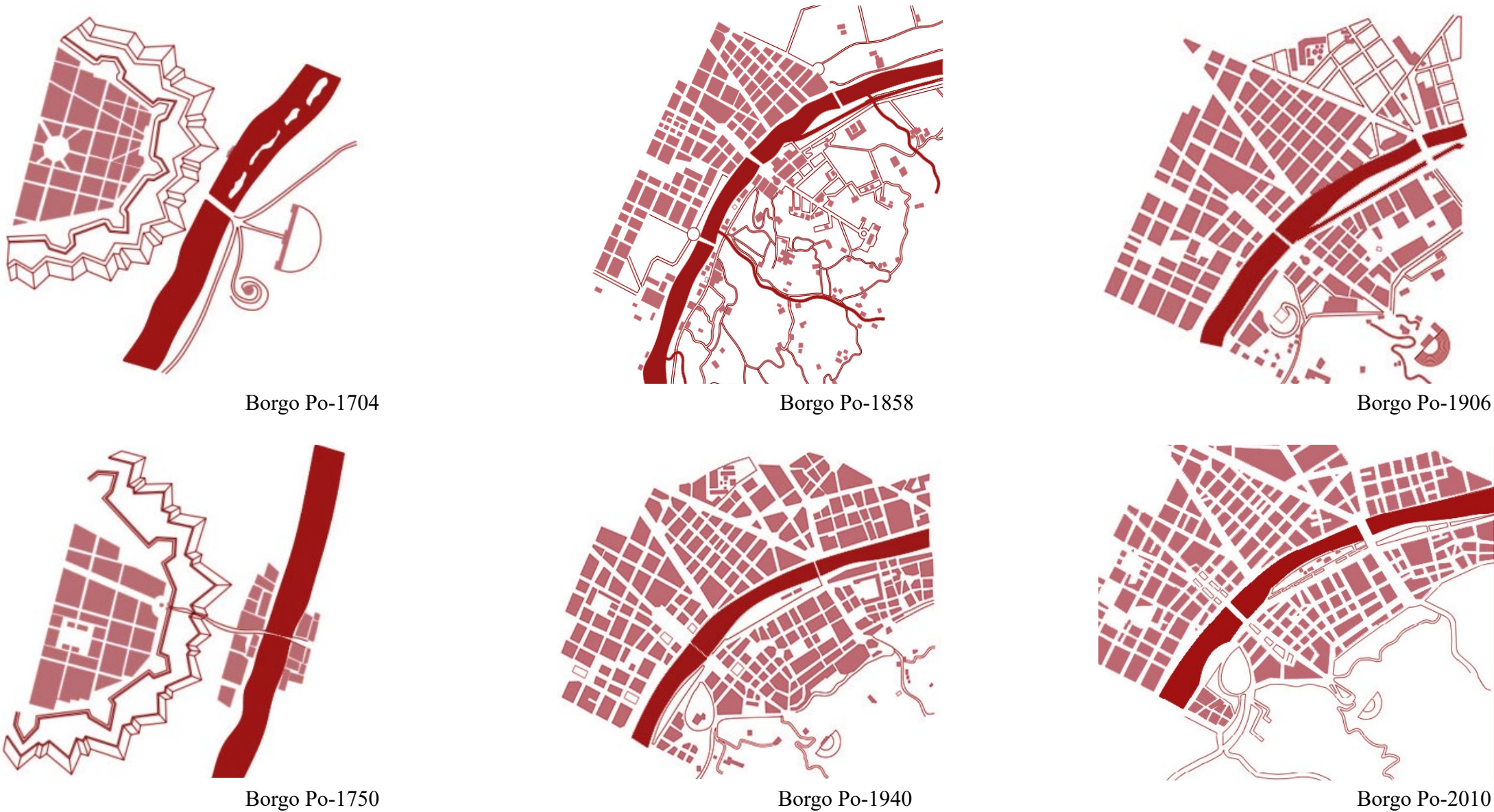
Michelotti Park, rich in history, is located along the right bank of the Po River in Turin. This area has changed a lot over the past two centuries. Firstly, it was started as an area formed by the Michelotti Canal, then became a zoo, and later was abandoned. In this chapter, we review its history which began with the canal's construction and decline, followed by the opening of the zoo in 1911 and its later development and challenges and the fate and situation of the park after closing the zoo till today to understand the park's role in Turin over time.



Historical Overview

In this chapter we start with an overview of the site’s historical transformation, by presenting series of maps and related timeline. These visual elements, show how the Michelotti Park area and the nearby Borgo Po area being developed; starting with the canal, later the rise of zoo, fall and recent revival. By presenting these changes, it provides a clear picture of the sit’s complex background. It also helps explaining how changing the space, infrastructure and society shape the are today and affect its future.

Figure 20: Evolution of Borgo Po (1704–2010).  
Redrawn by the authors based on [historical maps of Torino](#)





### 3.1 Before the Zoo (Pre-1955)

Before it became a zoological garden, the land on which *Michelotti Park* sits had been used for agriculture, industrial activity, and urban development (MuseoTorino, n.d.). It was first a rural and working-class district on the right bank of the *Po River* and then became an industrial site with the construction of the *Michelotti Canal* (1816-1817), which powered the region's mills and factories. By the early Twentieth century, industrial use declined, and the area began to transition into a public park, thus preparing the ground for the zoo's foundation in 1955 (Devoti, 2018).

#### 3.1.1 Original Land Use and Industrial Influence

In the first decade of the Nineteenth century, the region which is today called *Michelotti Park* was on the outskirts of Turin, a largely agricultural and rural area. The park was in the *Borgo Po* district which was not part of the city walls during the Roman period and was linked to Turin by the *Porta Fibellona* and a single bridge. The land along the *Po River* was fertile and the area had modest housing and small-scale industries. The early settlers were workers; boatmen and laundresses who lived modest lives and depended on the river for their means of livelihoods. *Borgo Po* was even referred to as “the borough of laundresses” due to their prevalence in the region along the riverbanks (MuseoTorino, n.d.).



Figure 21: Washerwomen on the Po (Source: Contini, E. 2018).

The creation of *Michelotti Park* is closely linked with the construction of the *Michelotti Canal*. Its development in 1816-1817 was a turning point which led to the transition of the area from an agricultural to an industrial area. The canal powered mills and facilitated the local factories, thus stimulating the economic development of the district (Devoti, 2018).

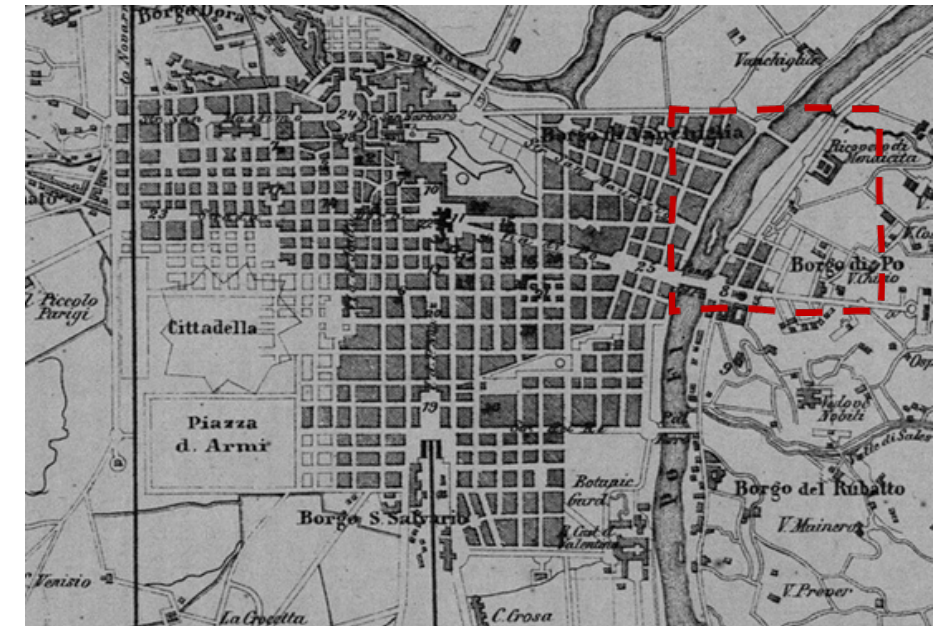


Figure 22: Topographical map of the city of Turin, circa 1858  
(Source: MuseoTorino).

#### 3.1.2 Connection to the Urban Context

By the mid Nineteenth century, Turin grew beyond its historic center and *Borgo Po* was becoming much more a part of the city's urban fabric. The *Michelotti Canal*, which was first meant for industrial use, also influenced the area's physical and social development, that in the end led to its conversion into a public park where people could take their walks on the embankments (Politecnico di Torino, 1984).

- 1850: Planting of Double Rows of Plane Trees - The planting of these trees formed a green belt along the canal which indicated the future use of the canal as a recreational area.
- 1891: Growth Beyond the *Po River* - The urban growth extended to the *Borgo Po* area thus increasing its link with the city.

#### 3.1.3 The Michelotti Canal (1816–1935)

The *Michelotti Canal* was the only one derived from the *Po River* in the Turin area. Stretching approximately 3,500 meters from the *Vittorio Emanuele I Bridge*, it followed the river's right bank and rejoined it at Sassi. Constructed to power the mills of *Madonna del Pilone*, the canal was a prominent feature in the *Oltrepò* for over 150 years, though it did not succeed in fostering industrial development in the region (MuseoTorino, n.d.; I Canali di Torino, n.d.).

By the late Eighteenth century, the lock at *Madonna del Pilone* had fallen into disrepair, with multiple structural damages rendering it incapable of properly containing or elevating water. The estimated cost of repairs was exceedingly high, largely due to the significant length of the structure. Moreover, these repairs would not have resolved persistent issues, such as inefficiency, which limited the mills to operating



only two- or three-wheels during periods of low river flow, So The decision to build a canal (in Piedmontese *bealera*) to supply hydraulic energy on the right bank of the Po was taken (I Canali di Torino, n.d.).

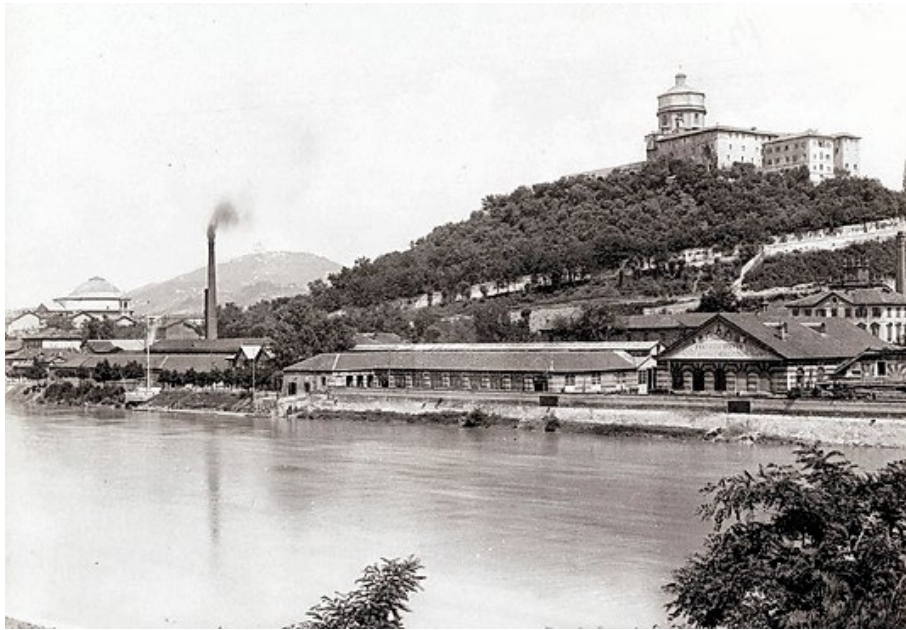


Figure 23: 19th century panorama of the industrial area behind the Vittorio Emanuele I bridge (Source: [I Canali di Torino](#)).

The *Michelotti Canal* greatly contributed to the formation of the identity of the park. The construction of the canal was initiated in 1816, and the supervision of this activity was done by a hydraulic engineer named *Ignazio Michelotti*. The canal was completed in 1817 by his son, architect *Ignazio Maria Lorenzo Michelotti*, and It provided energy to various production plants and an irrigation branch, but in particular it powered the chain mill which was located in *Madonna del Pilone*. It started from the right bank of the *Po River* and continued up to *Corso Casale* that ran parallel to it until it connected with the *Po River* near the *Madonna del Pilone Church* (MuseoTorino, n.d.).



Figure 24: The expansion of the city of Turin beyond the Po in 1891 (Source: [I Canali di Torino](#)).

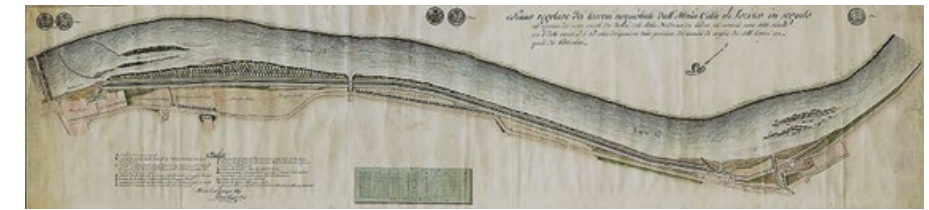


Figure 25: Lorenzo Panizza's drawing of the newly completed Michelotti Canal, January 10, 1817 (Source: [I Canali di Torino](#)).

### 3.1.4 Challenges and Decline of the Canal

However, there were some problems regarding the *Michelotti Canal*. One of the biggest problems was flow regulation since the *Po River* could not have enough water to maintain a constant flow in the canal. Additionally, the canal's navigability faced many difficulties, especially for Boats and barges. Because water levels should be controlled. So, a dam was built to help manage the water (I Canali di Torino, n.d.).

The *Michelotti Dam*, which is downstream of *Ponte Vittorio*, was strengthened in 1881 and was rebuilt in 1910 to meet the need of the Universal Exhibition to increase its efficiency in controlling water flow for river traffic (MuseoTorino, n.d.).



Figure 26: Michelotti Dam (Source: [Contini, E. 2018](#)).

But by the 1930s, the canal was no longer required for industrial purposes as the factories and mills that had been located along it were no longer in use and were being gradually abandoned. To solve these problems, the canal was shut down and filled with rubble from the demolition of *Via Roma*. The ground was raised to form walks, beds of flowers and recreational space in *Michelotti Park*. This was a significant change from industrial use to public leisure (MuseoTorino, n.d.).

The *Michelotti canal* was the only one to earn a place among the most famous images of the city. The walk that wound along its banks during the Nineteenth century was considered one of the most loved



by the people of Turin, thus also fulfilling an implicit function of urban leisure. The tourist guides of the time did not fail to describe the embankment that separated the canal from the river as one of the most charming places in Turin; a quiet, secluded and romantic walk, well known and frequented by those seeking peace and freshness in the shade of its large trees (MuseoTorino, n.d.).

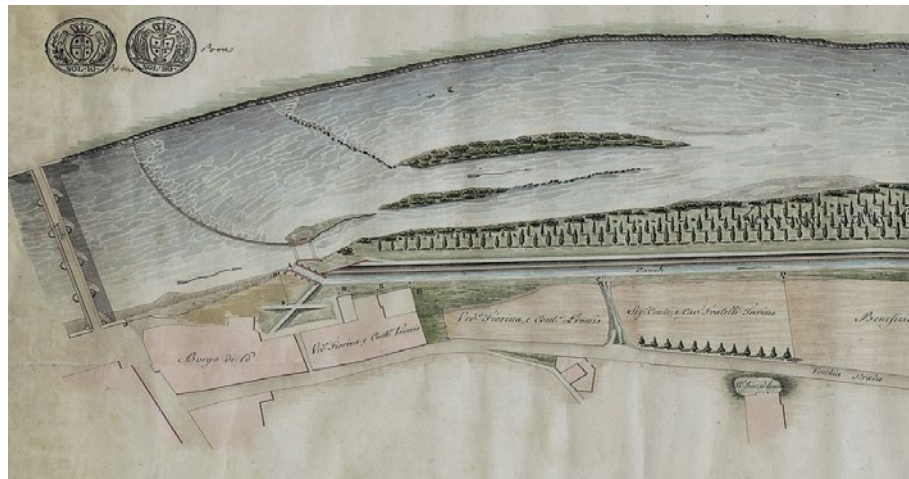


Figure 27: The new 'Ficca' (small dam structure), located just downstream from the Vittorio Emanuele I Bridge, featuring the boat passage on the left and floodgates on the right. This structure was critical for regulating water levels in the Michelotti Canal, ensuring a controlled flow for industrial and irrigation purposes. However, it also posed navigational challenges, requiring frequent maintenance and adjustments (Source: *I Canali di Torino*).

### 3.1.5 Transformation into a Leisure Landscape (1909–1955)

The early Twentieth century was the milestone of the park when the use of it gradually altered from industrial to recreational. This change was facilitated by the close location of the *Po River* and the change of the function of the *Michelotti Canal*. Over the years, *Michelotti Park* developed into a lively social center containing sport facilities, cultural buildings and family zones, which corresponded to the increasing importance of the urban green areas in Turin (MuseoTorino, n.d.; Comune di Torino, n.d.).

The first recreational facilities in *Michelotti Park* created the basis for its changing into a public venue. The first addition to *Michelotti Park* included two key recreational facilities.

- Bocce and Tennis Courts (1909–1910)

In 1909, bocce courts were established and immediately became so favorite among the locals. A year later, the park provided its first dedicated sports facility, a grass tennis court and clubhouse located close to the *Vittorio Emanuele I Bridge*. These initial additions captured the city's increasing desire for leisure and communal activities (MuseoTorino, n.d.; Comune di Torino, n.d.).

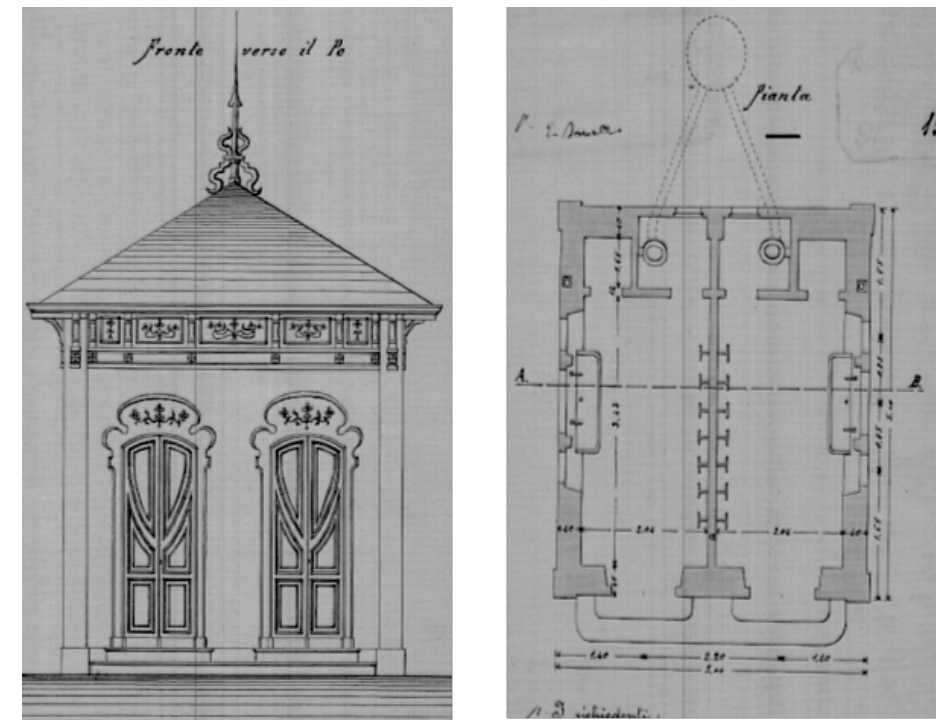


Figure 28: Project drawings of the Junior Tennis Club shed (Source: Gabrielli, G., *Il complesso monumentale dell'ex Zoo di Torino*, Master's thesis, Politecnico di Torino, 2020, pp. 104).

- Fiandra Beer Garden and Theater (1911)

The opening of a beer kiosk by Umberto Fiandra in 1911 provided the social aspect to the park. By 1913, the venue had evolved into a fully-fledged complex incorporating: A covered theatre with tents for live performances and cultural events and a terrace and slide track (*scivolodromo*) which was much enjoyed by visitors looking for some form of entertainment. This change made the Fiandra complex a significant cultural and recreational asset of the park, which people of all ages visited during seasonal events and spent their leisure time socializing (MuseoTorino, n.d.; Comune di Torino, n.d.).

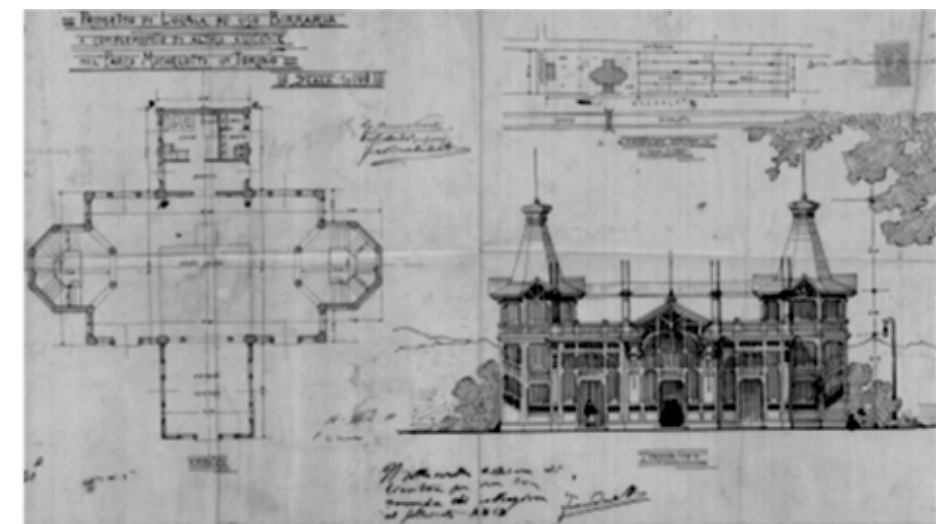


Figure 29: Arch. G. Vivarelli, G. Gussoni, Project for the modification and expansion of the Brewery at Michelotti Park, 1910 (Source: ASCT, *Building projects, 1910/140*).



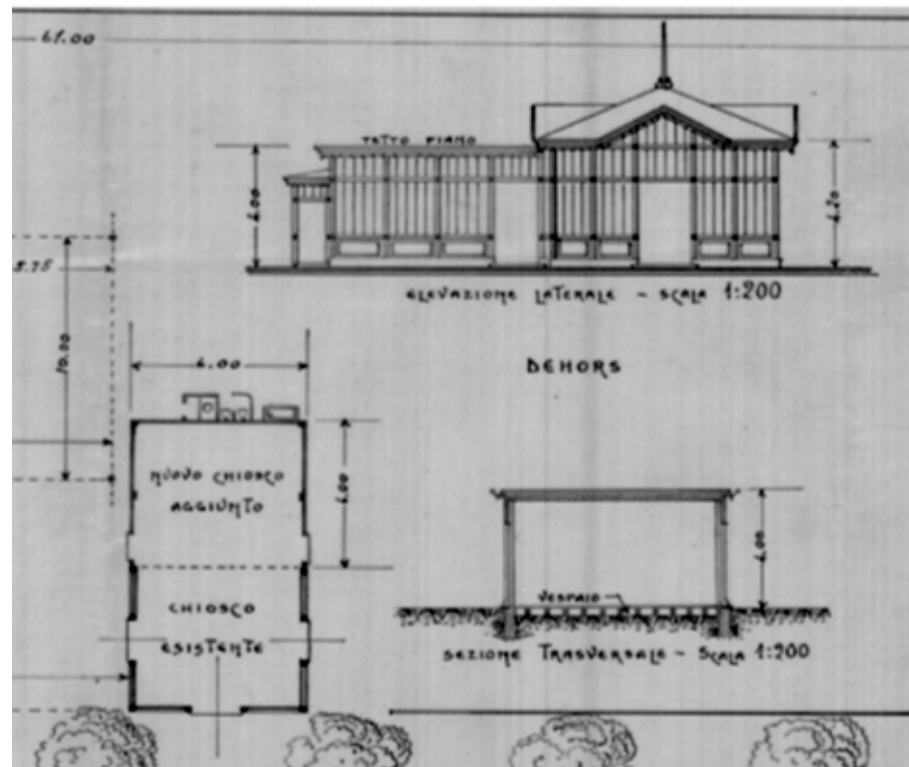


Figure 30: Project drawings of the kiosks and dehors and of the Fiandra brewery, 1913 (Source: Gabrielli, G., *Il complesso monumentale dell'ex Zoo di Torino*, Master's thesis, Politecnico di Torino, 2020, pp. 105).

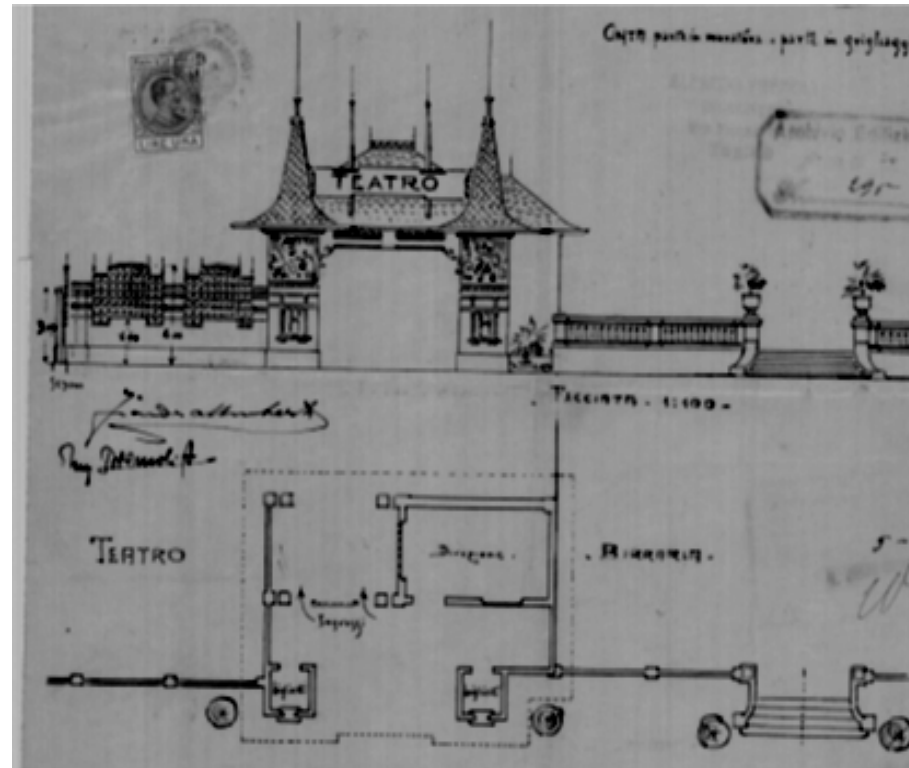


Figure 31: Entrance to the Theater Mr. Fiandra in Park Michelotti, 1915 (Source: Gabrielli, G., *Il complesso monumentale dell'ex Zoo di Torino*, Master's thesis, Politecnico di Torino, 2020, pp. 105)

### 3.1.6 The Filling of the Canal and Post-Canal Transformation (1931–1950s)

As mentioned before, the *Michelotti Canal* was outdated and filled up between 1931 and 1935 as it was no longer required for industrial purposes. Safety, hygiene and beauty issues together with the need for new uses of the area made the municipal decision to develop the area as a recreational area (MuseoTorino, n.d.).

This was a turning point in the history of the park because the area it covered was used to develop new recreational facilities. The even surface created by the canal's fill allowed for the construction of pathways, flowerbeds and landscaped promenades that enhanced the beauty of the park. The two rows of plane trees planted in 1850 remained a hallmark, linking the historical past with the changing park's roles as a public domain (MuseoTorino, n.d.).

After the canal was filled, *Michelotti Park* was greatly improved to make it a more predominant public leisure space. This period also marked the expansion of existing facilities and the provision of new structures that suited the new life of Turin's people. The process of leveling the ground enabled the formation of beautiful flower beds and walking tracks which were a great place for people to sit and watch the world go by (Comune di Torino, n.d.).

In the Thirties, the *Fiandra Complex* was further developed, and it further strengthened its position as a social and cultural center. New facilities included a dance hall with a terrace, which soon after its establishment became a popular evening destination, together with a café and a custodian's house to support its daily operations. These additions made the venue become a lively place for social and cultural activities and many people from Turin used to visit this venue (MuseoTorino, n.d.).

In addition to the permanent structure, *Michelotti Park* was the central place for community events and seasonal festivals. One of the most significant events, *Torinopoli*, brought temporary pavilions, exhibitions, and festivities to the park that was visited by many people and which proved that the space could be used for public use (MuseoTorino, n.d.).

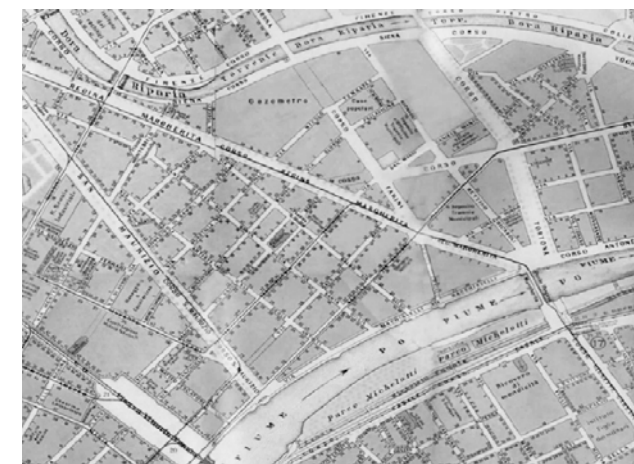


Figure 32: Michelotti Canal (1927) before its transformation. The map highlights its full route along the Po River before it was filled in the early 1930s (Source: [Torino map](#)).



Figure 33: Michelotti Park (1940) after the canal's transformation. The area was repurposed into green spaces and walkways following the canal's closure (Source: [Torino map](#)).



3.1.7 Post-War Developments

In the 1940s and 1950s, *Michelotti Park* kept on growing as a place for recreation and civic use. The development of the park was consistent with the general urban development in Turin, which meant combining public use with civic purposes (MuseoTorino, n.d.; Comune di Torino, n.d.).

The first major construction request came in 1948, when *Società di Incoraggiamento Sportivo (S.I.S.)* asked for the construction of a bowling alley and beer hall, which was the first phase of organized development in this part of the park. In 1951, the *Provincial Butchers' Association* wanted more land to build its headquarters, thus expanding the role of the park. By 1953, the final architectural plans were completed by Amedeo Clavarino, Renato Ferrero and Bruno Foà, with the reinforced concrete works being taken care of by engineer Giorgio Gheorghieff. The building was built in 1954 near the *Fiandra Complex* and became part of the civic role of the park (Politecnico di Torino, 1984; Magnani, 2014).

As a sports and social club, the structure was designed in a modernist two-level plan with a semi-underground floor, ribbon windows, terraces and green roof sections that were to blend in with the park's natural environment. In addition, a wide entrance ramp for accessibility, and large windows to bring in natural light and the visual connection between the interior and exterior of the spaces were other features of this building.

During this time, the family areas of *Michelotti Park* were also upgraded to include landscape gardens, shaded promenades and picnic areas. These improvements kept the park's social role alive, to suit both the organized events and the spontaneous leisure (MuseoTorino, n.d.).



Figure 34:Michelloti park (Source: Contini, E. 2018).

Year	Event	Type
1816-1817	Construction of Michelotti Canal	Industrial
1850	Planting of double rows of plane trees	Industrial (landscape feature)
1881	Reinforcement of Michelotti Dam	Industrial
1910	Reconstruction of Michelotti Dam	Industrial
1909	Bocce Courts Established	Recreational
1910	First Tennis Court Built	Recreational
1911	Opening of Fiandra Beer Garden	Recreational
1913	Fiandra Theater Expansion44	Recreational
1931-1935	Filling of Michelotti Canal	Industrial → Recreational Transition
1930s	Torinopoli Seasonal Festival	Recreational
1948	Bowling Alley & Beer Hall Construction	Recreational
1951	Provincial Butchers' Association Headquarter	Civic Function
1953-1955	Final landscape renovations before the zoo	Recreational

Table 1: Timeline of Michelotti Park's Evolution

During the period 1816 to the 1930s, Michelotti Park was a hub of industry being fueled by the Michelotti Canal and its dam. It became a recreational area between 1909 and 1955 with bocce courts, tennis courts and the Fian-dra Beer Garden. The filling of the canal took place between 1931 and 1935 which enabled the growth of public parks, festivals like Torinopoli and new civic spaces. By 1955, the park had already been completely converted into a public leisure area thus ready to welcome the zoo.

### 3.2 The History and Development of the Michelotti Park Zoological Garden (1955–1987)

The change in the use of *Michelotti Park* to a zoological garden marked one of the most significant transformations in its history. With the aim of revitalizing a dormant part of the city, the Municipality of Turin developed a new kind of zoo that integrated educational, recreational, and conservation roles. The *Giardino Zoologico Municipale* opened in 1955 and was initially regarded as one of the most advanced zoological parks in Italy; numerous visitors came from across the country to see its animal collections and architectural innovations (Giaccone, 2019; Maschietti et al., 1990). In the years that followed, the zoo continued to grow, adding new facilities like the *Acquario-Rettillario* and expanding its collection of exotic animals to attract and educate the public (Astengo, 2019). But over time, shifting social values and declining financial support took their toll. Interest faded, maintenance suffered, and by 1987, the zoo was officially closed (Giaccone, 2019; Maschietti et al., 1990).



Figure 35: Michelotti Park 1910 (Source: [Zoo1910](#)).

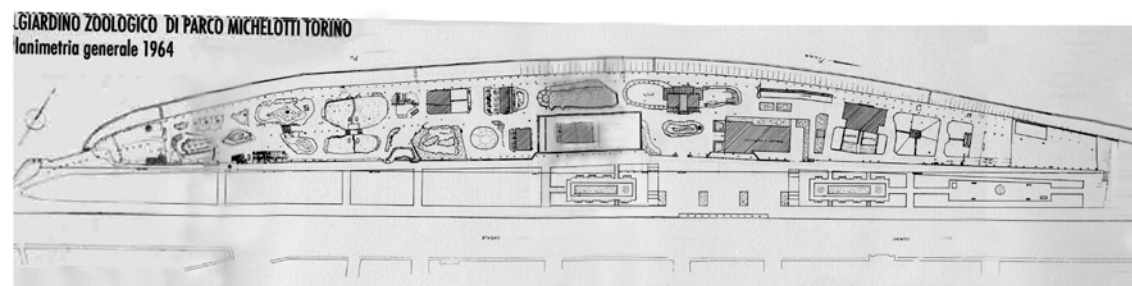


Figure 36: Michelotti Park 1964, Zoo Expansion (Source: [Zoo1964](#)).

#### 3.2.1 Establishment of the Zoo (1955)

Until the 1950s, *Michelotti Park* was no longer the vibrant space it once was. Activities like *bocce courts*, beer gardens, theater and seasonal events had become less popular, and many cultural facilities had closed. The decline of industry along the *Po River* and fewer visitors left the park feeling empty and “silent and melancholic”. Because the park was slightly outside Turin’s busiest areas, it had trouble attracting new visitors (Giaccone, 2019; Magnani, 2014; Maschietti et al., 1990).

When the Municipality of Turin faced this decline, they started to find a way to bring the park back to life and to bring it back to the life of the city. As stated by Baratay and Hardouin-Fugier (2002), modern

zoos in Europe were seen as places that combined entertainment, education and conservation. Inspired by this, the idea of creating a new type of zoological garden in the heart of the city at *Michelotti Park* was born. Its location on the bank of the river, as well as the fact that the park was not fully used in recent years, made it the perfect site for transformation. It allowed for the creation of animal enclosures and visitor facilities without disturbing the existing green areas (Maschietti et al., 1990; Giaccone, 2019).

On February 25, 1955, the Municipality of Turin approved a 30-year lease to the Molinar company to develop Michelotti Park as a zoological garden. The agreement stated that the Municipality would construct the general facilities including fencing, sewage, water and electricity supply; only the guardian’s house and the administrative offices were not included. The concession covered about 24,500 square meters and ran from the *Po* dam to the *Teatro Parco Michelotti* (Maschietti et al., 1990; Giaccone, 2019).

At first, the zoo was a large, new facility for reception and sorting of animals coming from other continents and mainly from abroad. It was also used as an adaptation center to help animals adjust to climate conditions completely different from their natural habitat. The continuous turnover of animals ensured that the public saw specimens in the best condition and provided a way of presenting a wide range of species (Maschietti et al., 1990; Astengo, 2019).

For the zoo, there were two entries. The main entrance was on *Via Romani*, and the secondary entrance was near the *Teatro Parco Michelotti*, an open-air theatre famous for its cultural and musical events. This theater was built in 1931 and was damaged during the Second World War, but by the mid-1950s it was losing its importance. Having realized the importance of the location, the Molinar company bought the site and demolished the building. In its place, a large structure for giraffes and elephants was erected, with both indoor and outdoor enclosures to enable the public to view the animals throughout the year (Maschietti et al., 1990).

The construction work started on 18 March 1955, and the first work was to provide homes for the zoo’s first animals. The first structure built was a building with eight large enclosures for big cats like lions and tigers. These enclosures were four meters high and had heated and open-air parts to keep the animals comfortable all year. They also had unique features, including glass or *vetrocemento* cones for natural lighting and ventilation systems at the top, which ensured airflow and also entertained visitors (Maschietti et al., 1990; Giaccone, 2019).

Right next to the feline enclosures, 12 cages for monkeys and other small animals were built. To create a more complex environment, a separate monkey island was made with structures for climbing and spinning. Not far from there, a small hill was formed using dug-out soil, topped with rock spikes for mountain animals like goats, llamas, and wild sheep. Once the boundaries of the main sections were defined, a large pond for seals and a bear pit were constructed behind the feline area (Maschietti et al., 1990).

Elephants were among the first inhabitants of the new zoo, and they were kept near the *Teatro Parco Michelotti*. This proved to be a good strategy, as it allowed people to be very close to these large animals, making them one of the most attractive features of the zoo in its early years (Astengo, 2019; Maschietti et al., 1990).





Figure 37: The pond for the seals (Source: [piemonte top news](#)).



Figure 38: Monkey island (Source: *Torino Piemonte Antiche Immagini*).

### 3.2.2 Official Opening

The construction of the *Michelotti Zoo* was completed in a short time and the zoo was opened to the public on the Twentieth of October in 1955. When everything was ready at *Michelotti Park*, the public came to see the zoo and even though the weather wasn't good, about 20,000 people from Turin attended the first day (Maschietti et al., 1990). The event attracted significant local and national attention, and the zoo was presented as one of the most modern zoos in Italy, comparing to the famous Milan Zoo. Its new and creative design, optimal use of space and numerous species of animals presented made it a reference for other zoos in the cities of the post-war period (Maschietti et al., 1990; La Nuova Stampa, 1955).

### 3.2.3 Expanding the Zoo (1955–1960s)

The great success of the *Michelotti Zoo* after its opening quickly resulted in plans for expansion. One year after the zoo's opening, it had welcomed over 400,000 visitors, which pushed both the Civic Administration and the Molinarcompany to consider how to meet the growing demand (Maschietti et al., 1990).

In September 1956, the Molinar company presented a formal suggestion to the Mayor of Turin to expand the zoo by buying two important buildings near the park: *Teatro Parco Michelotti*, a historical theatre built in 1910, and the Butchers' Association building, a civic building which was completed recently (Maschietti et al., 1990).

The proposal detailed an ambitious transformation. First, the Butchers' Association building was to be adapted as a dual-purpose facility with a section of it being used as an aquarium and reptile house, which were to be incorporated into the educational and exhibition facilities of the zoo. The other part was to be used as a library and conference hall. The Municipality of Torino was to acquire the building, while Molinar would bear the cost of restoration and renovation and pay an annual rental charge to the city for 30 years, after which the city would own the building. However, the discussion about the Butchers' Association building was halted due to bureaucratic delays, and by the early 1960s, the idea was scrapped. Therefore, the emphasis was put on the development of the zoo near the theatre (Maschietti et al., 1990).

- ***Flamingo Pond and Aviaries (1957)***

On the 11th of September in the year 1957, the first expansion of the zoo was opened to the public. This comprised a new section on the left of the entrance, which consisted of a small stream where *Gruidae*, *Anatidae* and geese could feed, as well as a separate pond for flamingos. The aviaries for tropical and native birds were also built, with naturalistic landscaping and water features to enhance the well-being of the animals, as well as the experience of the visitors (Maschietti et al., 1990).



Figure 39: Flamingo Pond (Source: *Torino Piemonte Antiche Immagini*).



- **Giraffe and Elephant House (1957)**

The same expansion phase, which followed the demolition of the *Teatro Parco Michelotti* mentioned in part 3.4.1, included the construction of a permanent structure for giraffes and elephants. The giraffe shelter was  $9 \times 7$  meters, and the elephant shelter was  $9 \times 6$  meters, both structures being 6.3 meters in height. Each of the enclosures had outside squares that the animals could use to move around. A food supply storage warehouse was also put in place to support these new additions, and at the back, there was a large aviary ( $14 \text{ m} \times 5.5 \text{ m} \times 4.5 \text{ m}$ ) to house red diurnal birds of prey of various types (Maschietti et al., 1990).



Figure 40: Elephant and giraffe houses at the Turin Zoo, 1957 (Source: Maschietti, Muti, and D'Entrèves, 1990: 92).



Figure 41: Elephant and giraffe houses at the Turin Zoo, 1957 (Source: Maschietti, Muti, and D'Entrèves, 1990: 92).

- **Acquario-Rettillario (1958-1960)**

Another of the most ambitious expansions to the *Michelotti Zoo* was the *Acquario-Rettillario*, which was designed by architect *Enzo Venturelli*. The idea for this modern structure was introduced in January 1958, when the Molinarcompany submitted a preliminary project along with estimated construction costs for an aquarium and reptile house to the mayor for approval. The total cost was to be initially borne by Molinar, with reimbursement requested from the Municipality (Astengo, 2019).

After Molinar's proposal to initially fund the project and then be reimbursed, the municipal council accepted the conditions in October and assigned the aquarium-reptile house design to architect *Enzo Venturelli* (Astengo, 2019).

The T-shaped building was completed and inaugurated on May 28, 1960. It covered an area of 980 square meters (Maschietti et al., 1990). The main distinctive feature of the entire building was the internal layout, designed to allow uninterrupted observation of both the aquarium and reptile house exhibits. This was achieved by placing the aquarium two meters below ground and the reptile house two meters above, so that the ceiling slab would not interrupt the continuity of the glass enclosures (Astengo, 2019; Vitrum Supplement, 1961).

#### Ground Floor (Aquarium):

This area had ten large tanks which replicated various aquatic environments from all over the world, such as the *Mediterranean*, *Congo* and *Indonesia*. All the tanks were fitted with advanced filtration systems to keep the water clean, and with specialized lighting to simulate natural sunlight. The aquarium offered the visitor a scientific and educational tour of the world's marine and freshwater environments (Astengo, 2019).



Figure 42: Side of the acquario-rettillario, 1960 (Source: AEV b.20, © Archivio di Stato di Torino).



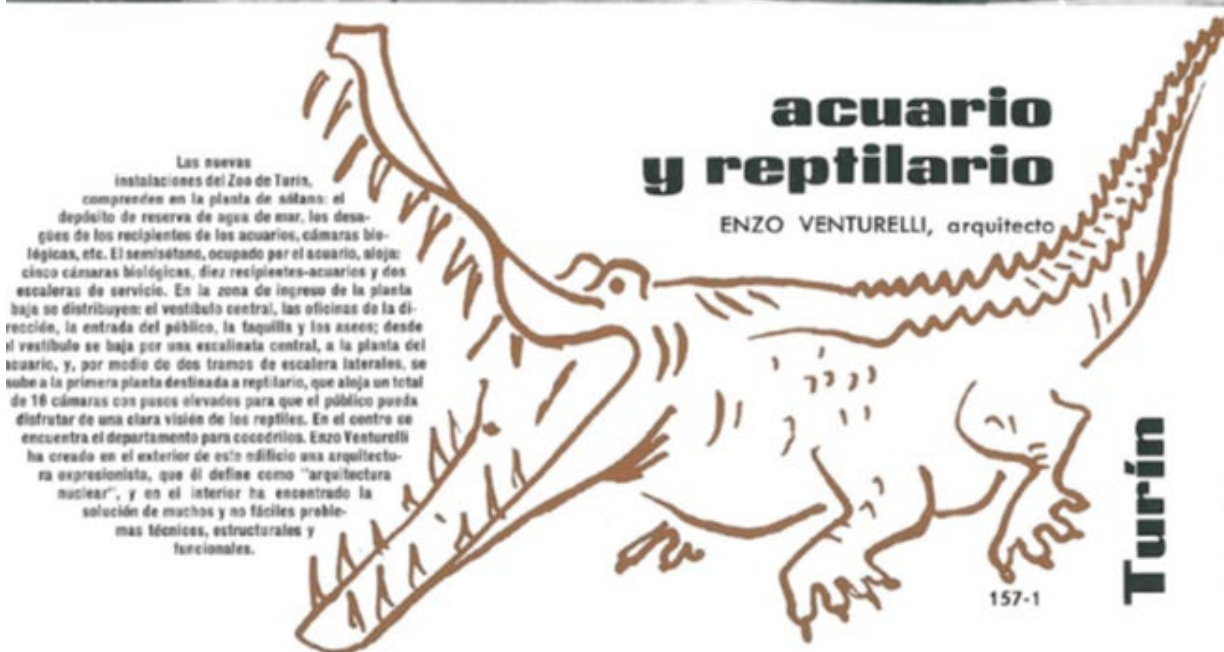


Figure 43: The acquario-rettillario, as presented in the journal *Informes de la Construcción* (Source: Francesco Carota, "Archaeology, Memory, and the Post-War Reconstruction of Turin's Historic Centre," *Architectural Histories* 11, no. 1

### First Floor (Reptile House):

The reptile house had twelve enclosures which were provided for various types of reptiles, including snakes, lizards and crocodiles. The most notable feature of the upper level was the central crocodile enclosure, which was lit by a skylight to create a more natural atmosphere for these ancient animals (Astengo, 2019).

The building's façade was another striking architectural feature. The exterior was dominated by a large continuous glass section with anticorodal window frames, which were surrounded by a rough gravel frame. Above the windows, a series of serrations acted as brise-soleil, helping to control internal lighting and temperature. These elements, together with the glass frontage, formed the dominant architectural identity of the building, consistent with the modernist approach to the zoo's architecture (Astengo, 2019).

When the *Acquario-Rettillario* was inaugurated, it had already become a popular destination for educational tours and scientific research, thus enhancing the reputation of the *Michelotti Zoo* as one of the leading zoological and conservation organizations in Italy. Its design and emphasis on environmental realism made it a unique facility of its kind in Europe (Maschietti et al., 1990; Astengo, 2019).



Figure 44: Interiors of the acquario-rettillario, 1960: entrance hall, central corridor on the ground floor, and raised crocodile cage (Source: AEV b.20, © Archivio di Stato di Torino).



- ***Quarantine Station (1958)***

The constant movement of numerous animals, mainly exotic, with their arrivals and departures, caused the Provincial Veterinary Office to raise concerns about the quarantine that the animals had to undergo before they could be exhibited to the public. The zoo director suggested that the structure of the Bowling Club should be used for quarantine purposes, so that newly arrived animals could adapt to new conditions and be examined by a veterinarian before being shown to the public. However, this proposal was turned down, which gave rise to several problems. The Molinar Company arranged for quarantine in another facility, since no suitable setup was available onsite (Maschietti et al., 1990; Giaccone, 2019).

- ***Final Expansion: The Pachyderm and Felidae Houses (1960-1962)***

At the end of the 1950s, *Michelotti Zoo* had already grown to become one of the biggest and most popular zoological collections of the country, with visitors in hundreds of thousands every year. But the zoo management understood that the facility had to be expanded further in order to fit in with species that required special conditions. Perhaps the biggest problem was the absence of suitable enclosures for hippopotamuses and rhinoceroses that could not be kept in the open air during the winter in Turin. In the same way, the existing facilities for big cats were inadequate as the zoo endeavored to improve living conditions for lions and tigers (Maschietti et al., 1990).

In November 1960, the zoo administration demanded funding for the construction of two large enclosures: the Pachyderm House, for hippos and rhinos, and the Felidae House, which was to replace and improve the existing enclosures for lions and tigers. This demand was made at a time when the prestige of *Michelotti Zoo* was at its highest zenith, having garnered international acclaim following the visits of Walt Disney and the Prince of Monaco. The zoo being at its peak, the Municipality of Turin approved the project in December 1962 and enabled the construction of its last major expansion (Maschietti et al., 1990).

The Pachyderm House was built behind the *Acquario-Rettillario*, which placed it near other large mammal houses. As for the needs of rhinos and hippos, the structure was built with two partially underground enclosures, and each had its own heat to keep the animals warm during the winter. The hippos were also provided with an indoor tank in which they could move around and play when the weather was cold. There was a small internal observation which enabled people to see these animals through big glass windows and therefore interest them throughout the year. Outside, the structure had two large dirt paddocks, each of which had a safety moat to prevent the animals from escaping, as well as two additional bathing tanks in which the animals could swim when the weather was warm (Maschietti et al., 1990).



Figure 45: Pachyderm House, 1955 (Source: [Archivio Storico di Torino](#)).

At the same time, the Felidae House was built right in front of the original feline enclosures, which gave the zoo's big cats larger and more naturalistic enclosures. The new facility consisted of two large outdoor enclosures for lions and tigers respectively. The tiger enclosure was provided with a small underground pond with water flowing in it, which was quite similar to the natural environment. The lion enclosure had a raised platform which mimicked the rocky places where lions like to sit in the wild. Both enclosures were connected to a reinforced masonry building in which the animals were kept during the night and in the winter. This facility was an internal corridor with glass observation panels through which the animals could be seen by the visitors all year round (Maschietti et al., 1990).

With the construction of both the Pachyderm House and Felidae House, the expansion of the *Michelotti Zoo* was finally finished. These last structures solved the last problems of climate control and proper housing for all the main groups of animals in the zoo (Maschietti et al., 1990).



Figure 46: The Felidae House, 1955 (Source: Maschietti, Muti, and D'Entrèves, 1990: 72).



Figure 47: The Felidae House in 1955 (Source: [Maschietti, Muti and D'Entrèves 1990: 72](#)).

Apart from structural development, the zoo also served as an educational center and received children and schools, teaching them about wildlife and science. It helped to advance the knowledge of animal behavior and habitat or environment and carried on building its educational displays in the 1960s, with the *Acquario-Rettillario* becoming a popular stop on the educational tour. The seasonal activities contributed to enhancing the visitor's experience and thus cemented the zoo as a cultural and recreational destination in Turin. Its focus on education, conservation and people's engagement made it one of the leading zoological institutions of Italy (Maschietti et al., 1990; Giaccone, 2019).

### 3.2.4 The Biblioteca Alberto Geisser and Its Evolution (1965–1971)

After the failed attempt to integrate the Butchers' Association building into the zoo, Turin sought alternatives. At first, in 1965, plans to transfer the building to the Institute of Genetics were not implemented. By 1968, *Arduino Terni*, the zoo's director, suggested using it for educational and laboratory purposes related to the zoo, but the city only allocated 1,100 square meters of adjacent land and not the building itself (Maschietti et al., 1990).

Instead, in 1969, the facility was assigned to the Institute of Anthropology of the University of Turin, and a Center for Primatology and Animal Genetics Research was created (Maschietti et al., 1990). By the early 1970s, concerns about the welfare of animals and the moral issues surrounding zoological gardens began to shift priorities.

In 1971, the building was finally redesigned as the *Biblioteca Civica Alberto Geisser*, the first decentralized public library in Turin. The transformation of the building demonstrated the city's changing focus toward community-based educational facilities instead of the previous plans for zoological expansion (Maschietti et al., 1990; Giaccone, 2019).



Figure 48: Biblioteca Civica Alberto Geisser (Source: [MuseoTorino](#)).

### 3.2.5 The Last Years and the End (1970-1987)

Even though the Michelotti Zoo was considered one of the best zoos in Italy and its early success, it began to have many problems in the 1970s that led to its closure in 1987. The factors that led to its decline include financial constraints, outdated facilities, society's changing perceptions, and the failure of the relocation attempts (Maschietti et al., 1990).

By the 1970s, the costs of the maintenance of the zoo were rising, and the infrastructure was deteriorated, which made it a struggle for the zoo to stay financially solvent. The zoo faced a shortage of budget, and this led to debates on the need to relocate the zoo to a new and bigger and better facility. The first attempt to transfer the animals to *Stupinigi* was made in 1970, and only the aquarium and aviaries were to be left at *Michelotti Park*. Nevertheless, logistical issues, underdeveloped infrastructure, especially the transport sector, and cost concerns led to the rejection of this proposal (Maschietti et al., 1990).

The attention was then shifted to *Parco della Mandria*, but the site presented ecological challenges, especially due to wild deer carrying parasites, something that had to be eliminated at a high cost. As there was no other suitable solution, the *Michelotti Zoo* remained on the site, and the failure to comply with contemporary standards only worsened the financial situation (Giaccone, 2019).

In the late seventies and early eighties, animal rights activism was gaining momentum and public opinion towards zoos started to change. In 1978, the incident in *Ghigi Park* in Bologna where violent protest by extremist *zoophiles* led to animals being forcibly released heightened media concern on the proper handling of zoos. The headline of *Stampa Sera* on July 5, 1978, captures the changing perception:



“Zoos, as they are now, have served their time and must change or disappear” (Giaccone, 2019).

In light of this growing backlash, in 1981, the *Turin zoophile* community launched a large-scale attack on *Michelotti Zoo* and filed a judicial complaint against the zoo’s director. The accusations were not linked to the animals in the park but rather to pigeons in the zoo’s kitchen, which were suspected of being prepared as food for the reptiles (Maschietti et al., 1990).

That same year, the *Ente Nazionale Protezione Animali* (E.N.P.A.) distributed a poster showing a caged feline with the slogan:

“AGAINST LIFE SENTENCE” (Giaccone, 2019).

This advertising campaign stirred up public opinion and demands to shut down the zoo and support the idea of replacing zoos with more humane educational facilities. *Silvano Traisci*, the head of *E.N.P.A.* Turin, was one of the most vocal opponents of the idea of zoos, arguing:

“A zoo is nothing to learn. It is just a way of making free-born animals suffer.”  
(Giaccone, 2019)

At this point, even the zoo’s management acknowledged its outdated conditions. Molinar had constantly advocated for the need to relocate the zoo, but funding and bureaucracy made it impossible. In the face of this increasing pressure, the Public Administration of Turin showed some interest in the renovation of the existing structure, but opposition from the *Cavoretto-Borgo Po* estate committee prevented redevelopment, based on disease risk posed by the zoo animals (Maschietti et al., 1990).

By the 1980s, *Michelotti Zoo* had become the perfect example of the past and the demands to shut it down were louder than ever. In 1985, 2,000 signatures were collected and submitted to the authority calling for the zoo to be closed. Some non-governmental organizations also made reports against the zoo claiming that the management had been abusing the animals; however, many of them were unsubstantiated (Giaccone, 2019).

The Municipality of Turin revoked the concession made to the Molinar Company in 1987, which marked the end of the zoo. The animals were moved to other places or, in some cases, returned to the wild. But, especially for old and sick animals, some of the transfers proved to be quite complicated. On April 1, 1987, *Michelotti Zoo* officially closed to the public, leaving behind an abandoned site that would remain neglected for many years (Maschietti et al., 1990).



Figure 49: News report on the scheduled closure of the zoo (Source: *La Stampa*, 4 March 1987).

### 3.3 After the Zoo (1987-2024)

When *Michelotti Zoo* was closed in 1987, the site remained largely unoccupied, partially reused in different periods and abandoned for many years. During the same period, different options, consultations and redevelopment plans were suggested, which demonstrates the effort made to change the function of the area. While some parts of the former zoo were repurposed, much of the site remained neglected, caught between debates over preservation, redevelopment, and public use (Giaccone, 2019).

#### 3.3.1 Repurposing (1987-1995)

When the zoo was shut down, the Municipality of Turin once again got back the *Michelotti Park* without knowing what to do with it. The *Acquario-Rettillario* was still functional for some time, and the rest of the site was largely neglected. The animal houses and other facilities of the zoo were left to dilapidate while some of the buildings were occupied or damaged illegally (Giaccone, 2019).

Nevertheless, the park was not idle for the whole decade. In the early 1990s, several short-term activities were undertaken in a bid to bring the space back to use. In 1989, the site hosted *Café Chantant*, a series of events that consisted of fashion shows, music concerts and performances. In the same year, the *Hic Sunt Leones* contemporary art exhibition took place, and the former animal enclosures were converted into modern art installations. This was the first attempt to change the function of the park to cultural use, though the attempt was not long lasting (Giaccone, 2019).

By 1995, the first serious attempt at redevelopment led to the reopening of part of the former zoo as *Parco Giò*, a children’s play area in the southern part of the park. This was the first attempt of bringing back *Michelotti Park* to the public domain. Nevertheless, the park was still in very bad shape and only a few parts of it were developed (Giaccone, 2019).



Figure 50: On the left, a photo of the dancers from the shows organized by *Café Chantant*; on the right, a photo of one of the works from the exhibition *Hic sunt leones* (Source: *Torino Piemonte Antiche Immagini*).



### 3.3.2 Experimenta and Cultural Revival (1998-2006)

*Michelotti Park* was the venue of *Experimenta*, a scientific and technological exhibition for children and youths, held from 1998 to 2006. The temporary revival of the former zoo during this period was due to the initiative that promoted the temporary use of buildings and outdoor areas for educational purposes. Some of the enclosures were adapted for science-related demonstrations, while others hosted temporary exhibits promoting environmental consciousness. The exhibition was a major success, with over two million visitors attending during the seven years it was held (Giaccone, 2019).

Even though *Experimenta* was highly successful, the event ended in 2006, leaving *Michelotti Park* once again without use. The buildings that had been repurposed for the exhibition were left idle, and the park began to deteriorate once more (Giaccone, 2019).



Figure 51: *Experimenta*, an interactive scientific exhibition in Turin (Source: [Quotidiano Piemontese](#)).

### 3.3.3 The 2000s: Decline and Temporary Revivals (2006-2017)

When *Experimenta* closed its door in 2006, the park was left with no use for the next few years. The structures that had been repurposed for the exhibition were left unused, and the park once again became abandoned. The City of Turin followed up in 2007 with an international competition to find ideas that would change the face of the park as part of the wider urban redevelopment plan *Torino Città d'Acque*. The competition aimed at enhancing the pedestrian and cyclist access, the natural and historical aspects of the park, and the formation of a new cultural focus. Nevertheless, none of the plans could be implemented into practice and the park kept on deteriorating (Giaccone, 2019).

In 2011, the management of the park was handed over to *DNArt*, which set up a dinosaur exhibition in 2013. Although the exhibition brought some life into the park, it mainly used the outdoor areas, and the buildings were left to deteriorate. At the same time, the Street Art Museum project by BorderGate association brought street artists to paint the walls of the abandoned zoo buildings. This effort was to revive the park socially and culturally, but since it was street art, most of the murals were damaged or faded (Giaccone, 2019).



Figure 52: Painting on the wall in Michelotti Park (Source: [MuseoTorino](#)).

By the year 2010, new options for the use of the site appeared, but most of them were opposed by the public. The most controversial plan was introduced in 2015 when Zoom Torino, a private zoological park operator, wanted to establish a “Zoom City” biopark in *Michelotti Park*. The plan included enclosures that represent different themes, a children’s farm, and games and exhibits that simulate tropical environments.



Figure 53: The Zoom City project proposal for Michelotti Park (Source: [Quotidiano Piemontese](#)).



But the plan was strongly opposed by environmentalists, animal rights groups, and locals who did not want captive animals to be brought back to the park. The No Zoo campaign gained a lot of momentum, and there were demonstrations and legal actions brought against the concession. In 2017, due to the controversy and financial issues, Zoom Torino left the project and the plan was abandoned (Giaccone, 2019).

3.3.4 The Zoom Controversy and the Redevelopment of Michelotti Park (2017-2025)

When the Zoom project failed, the Municipality of Turin was forced to turn its attention to the reconstruction of the public park. After years of argument and uncertainty, *Parco Giò* was opened to the public in July 2018 in the southern part of the park and extended 9,000 square meters for children only. The area was also developed to include safety and renovation work such as tree assessment and trimming and a new public lighting system which used new LED streetlamps provided by Iren (Comune di Torino, n.d.; Giaccone, 2019).

Nevertheless, this was a major step towards the revival, the central and the northern parts of the former zoo remained abandoned. In 2019, the redevelopment was extended to *Punta Nord* (the northern tip) to include landscape conservation and access enhancement. These works went on until 2022, and a more intense intervention was made to the central area, which used to be the location of the zoological garden. New entrances and gates were constructed to link the park with the cycling path and pedestrian walkways were constructed with drainage to make the surface more convenient. Some rest areas with benches were provided and 8,000 square meters of newly designed green areas contributed to the recovery of the park as a green area. The *Ginkgo biloba* avenue, with its beautiful autumn colors, was also renovated and expanded to include more trees that would give visitors a beautiful view of the river and the city (Comune di Torino, n.d.; Giaccone, 2019).



Figure 54 : Parco Giò (Source: [TorinoToday](#)).



Figure 55: Michelotti Park (Source: Contini, E. 2018).

Nevertheless, most of the park and the buildings are still not in good condition, for example the *Acquario-Rettillario* is still shut and in very poor condition. This has been compounded by the presence of homeless people who have taken shelter in abandoned structures and vandalism including a fire incident that broke out in July 2020 and affected some parts of the buildings. Furthermore, the murals painted on the remaining structures as part of the Street Art Museum project have suffered damage due to weather conditions and further vandalism of the park, which is still a battle between neglect and community revitalization efforts (Giaccone, 2019; MuseoTorino, n.d.).

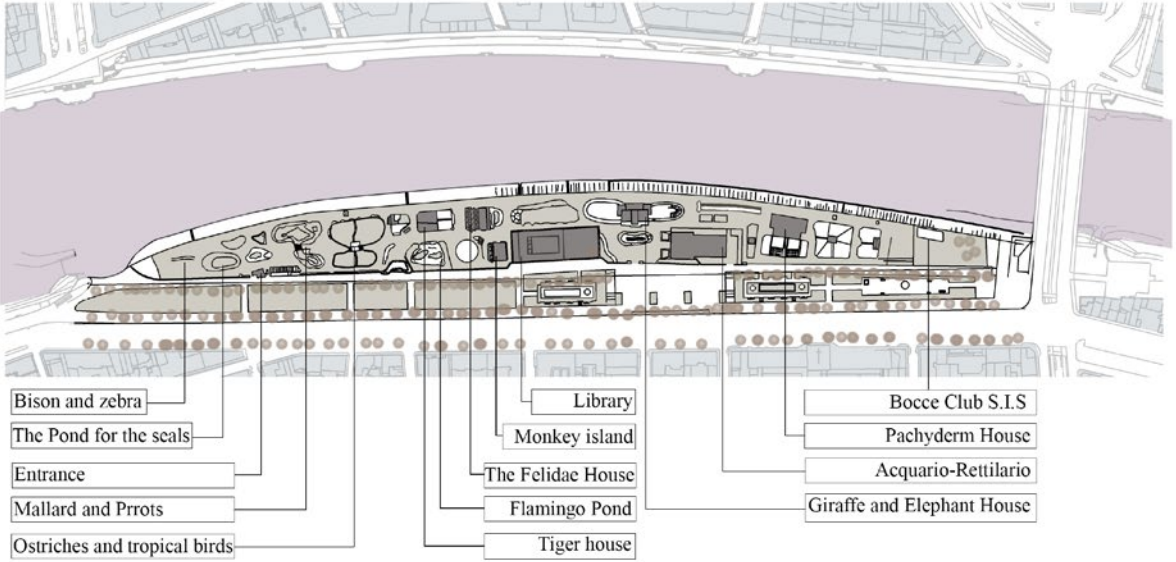


3.4 Architectural Documentation of the Current State

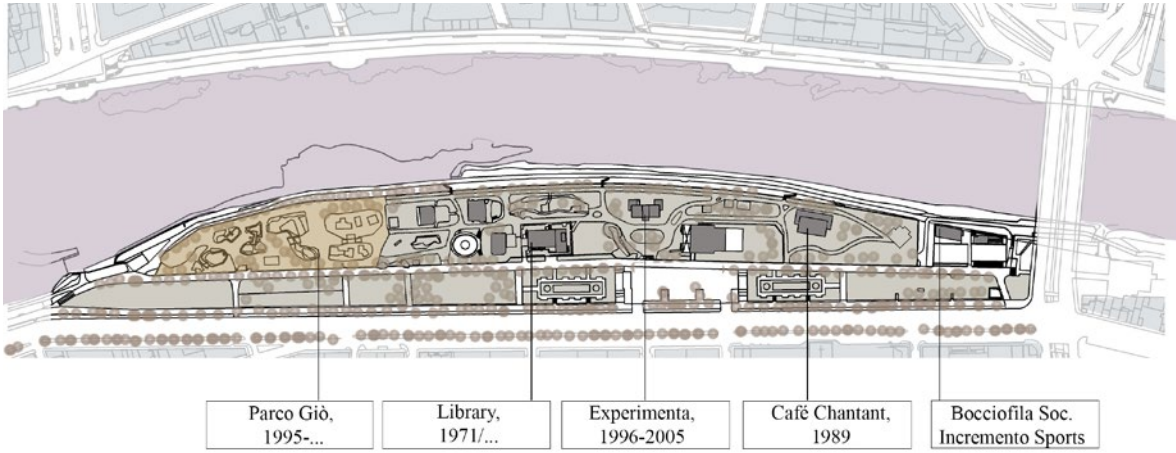
In this section we present the current condition of old zoo buildings via architectural documentation. It includes floor plans, sections, elevations, 3D images, and photos that capture how the buildings look today. These materials being gathered based on visits to the site, archived researches, and precise measurements of the drawings. These provides a visual base for the analysis and design ideas discussed in next chapters.

The following maps shows the historical development of the site which include the additions, removal, functional transformation of the buildings in the park over the time and at the end the current situation of the buildings.

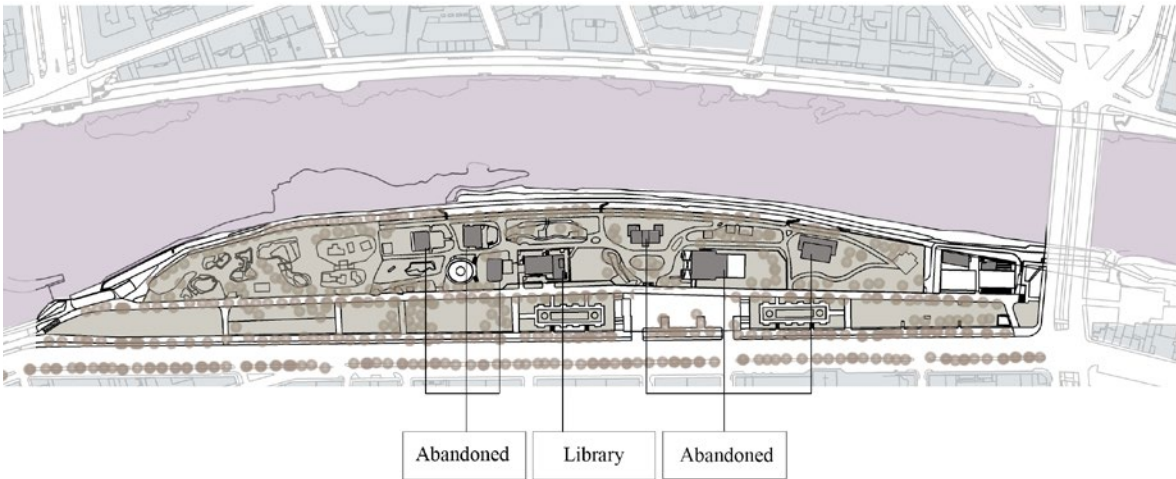
Parco Michelotti 1955-1987



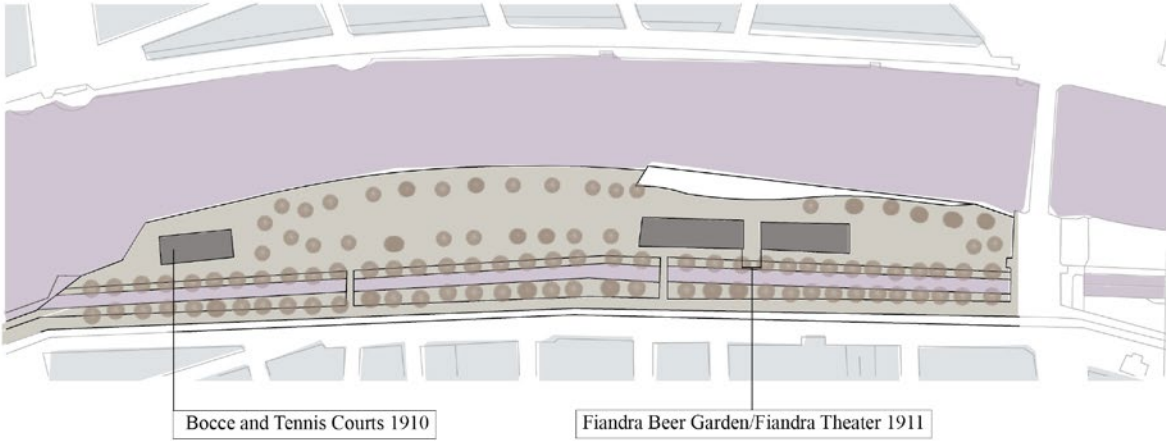
Parco Michelotti 1987-2005



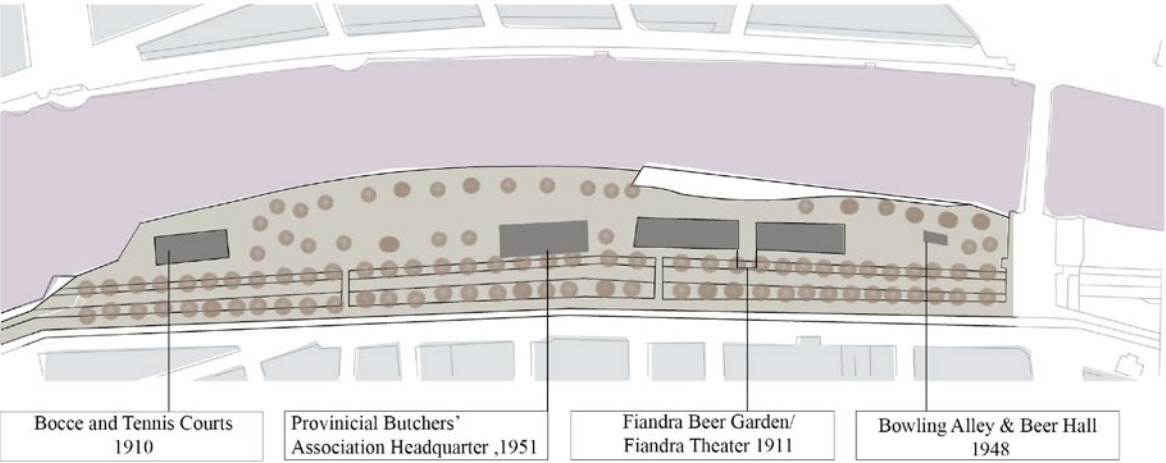
Parco Michelotti 2025



Parco Michelotti 1811-1935



Parco Michelotti 1935-1955





3.4.1 Acquario-Rettilario

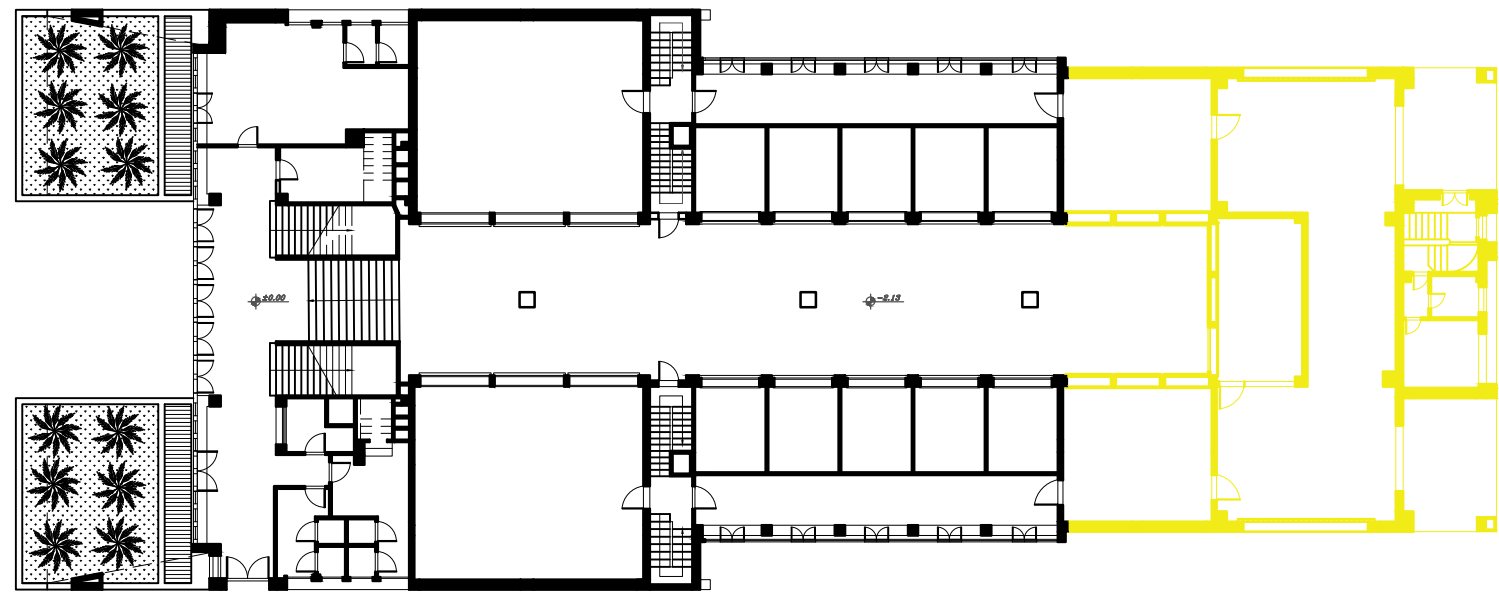
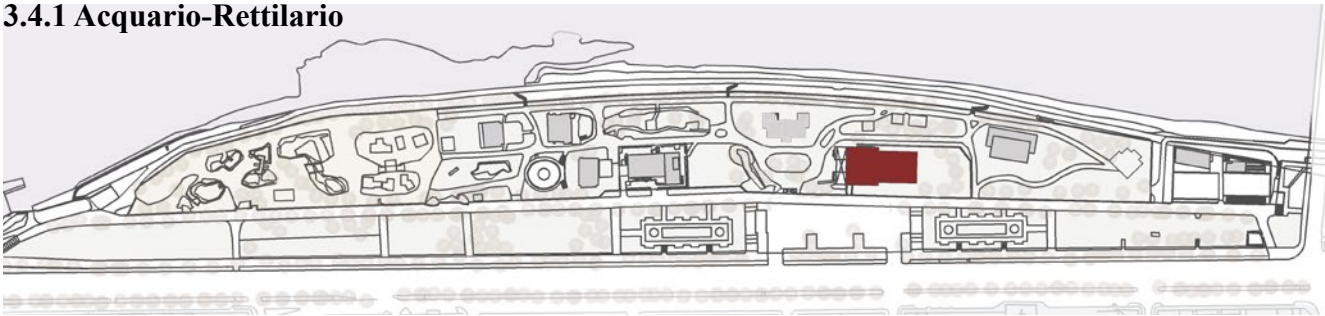


Figure 56 :Ground Floor Plan, drawn by the authors.

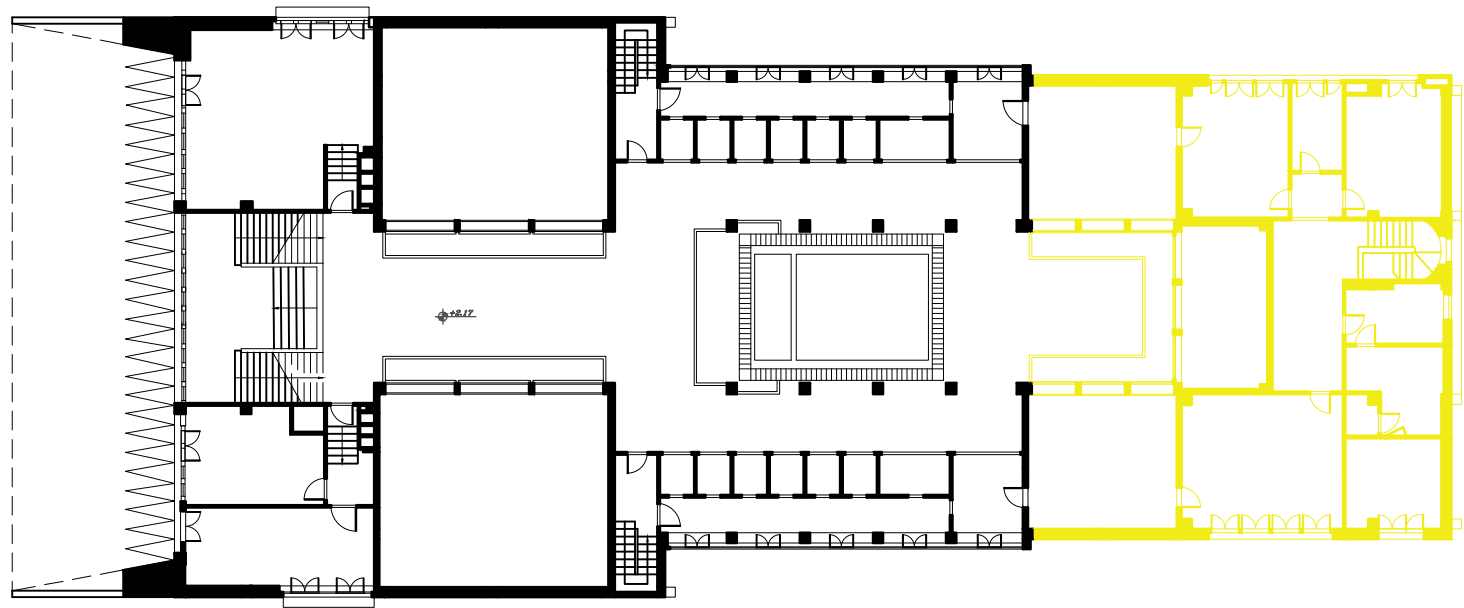


Figure 57 : First Floor Plan, drawn by the authors.



Figure 58 :Exterior view of the Acquario-Rettilario, showing current condition (2025)  
(Photograph by the authors).



Figure 59 :Exterior view of the Acquario-Rettilario, showing current condition (2025)  
(Photograph by the authors).



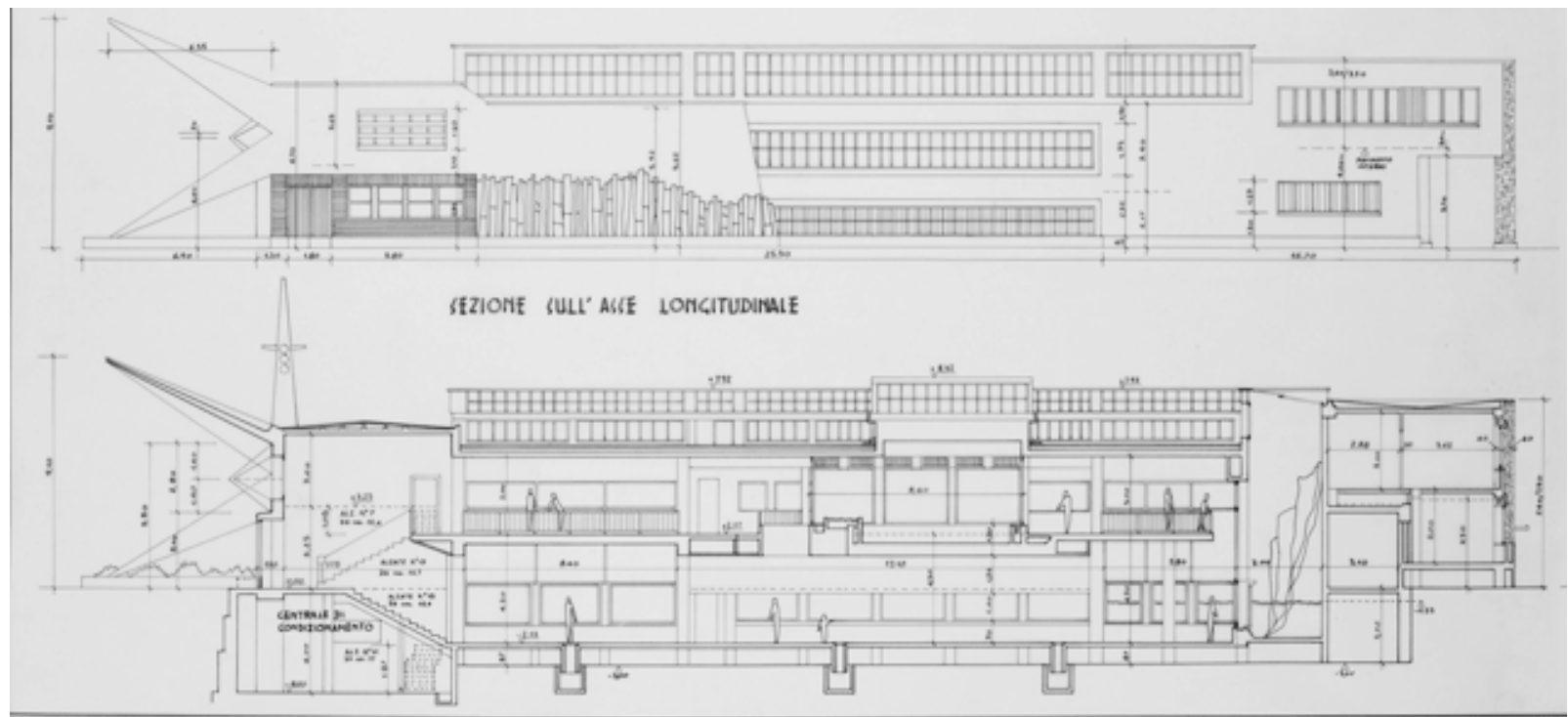


Figure 60: Enzo Venturilli's elevations of the acquario-rettillario at the Turin Zoo, 1958 (Source: AEV c.3/c.1, © Archivio di Stato di Torino).



Figure 62: Exterior view of the Acquario-Rettillario, showing current condition (2025) (Photograph by the authors).

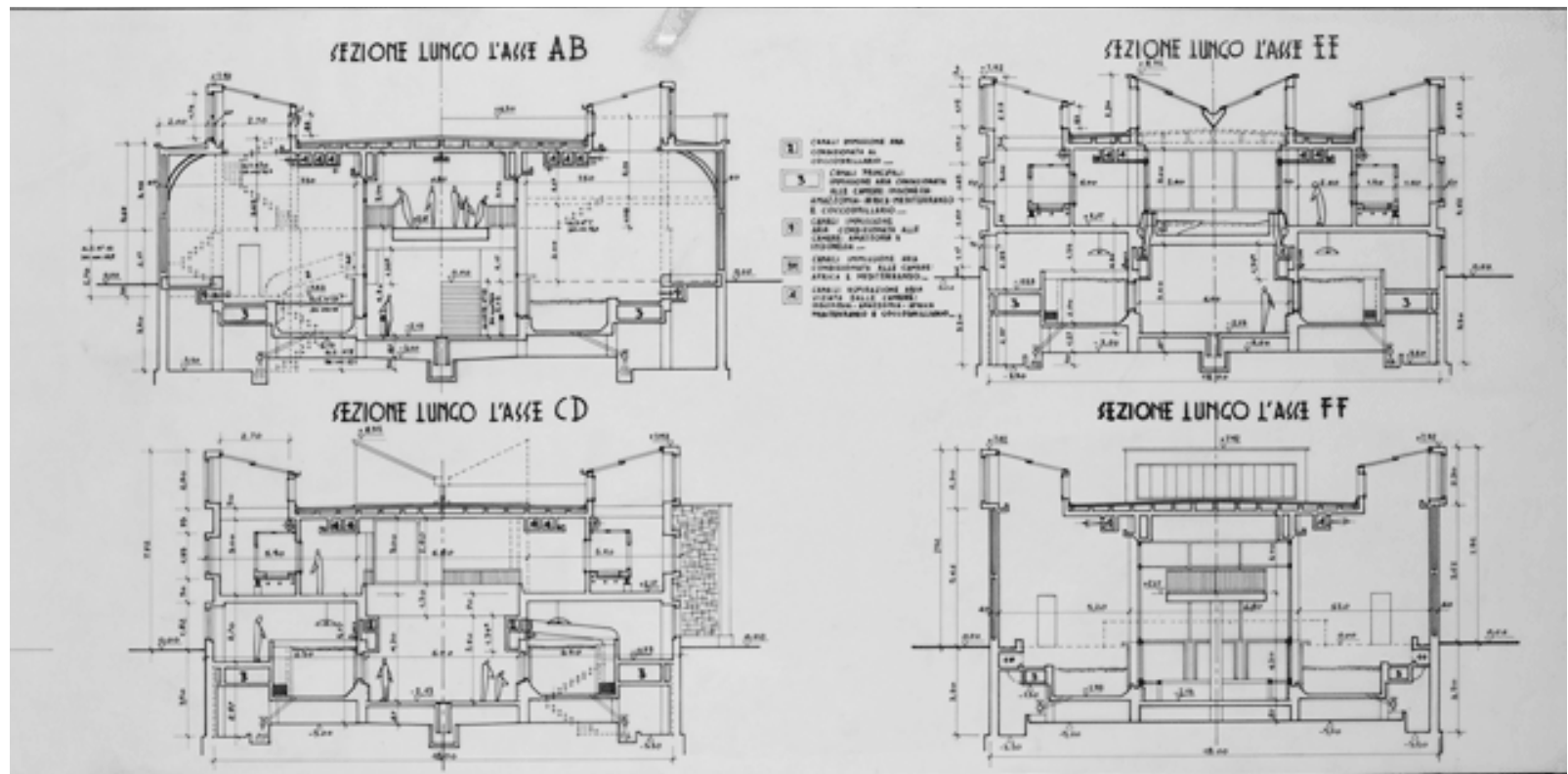


Figure 61: Enzo Venturilli's sections of the acquario-rettillario at the Turin Zoo, 1958 (Source: AEV c.3/c.1, © Archivio di Stato di Torino).



Figure 63: Exterior view of the Acquario-Rettillario, showing current condition (2025) (Photograph by the authors)



3.4.2 Pachyderm House

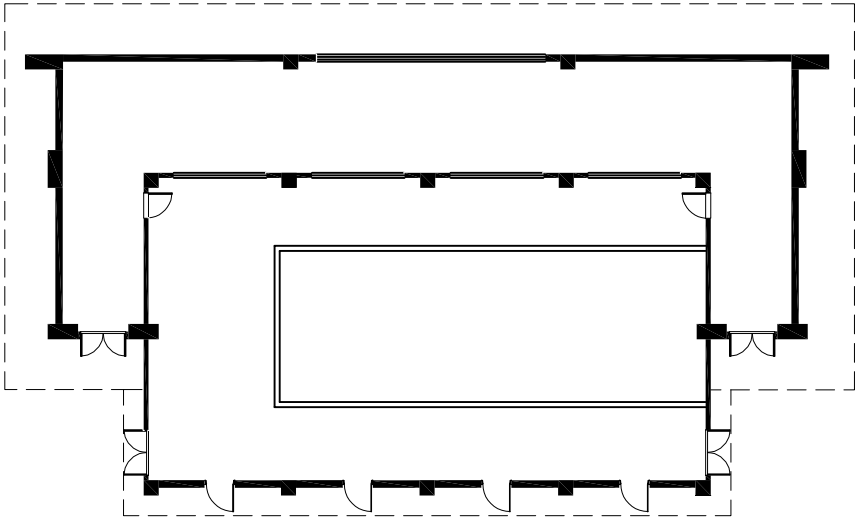
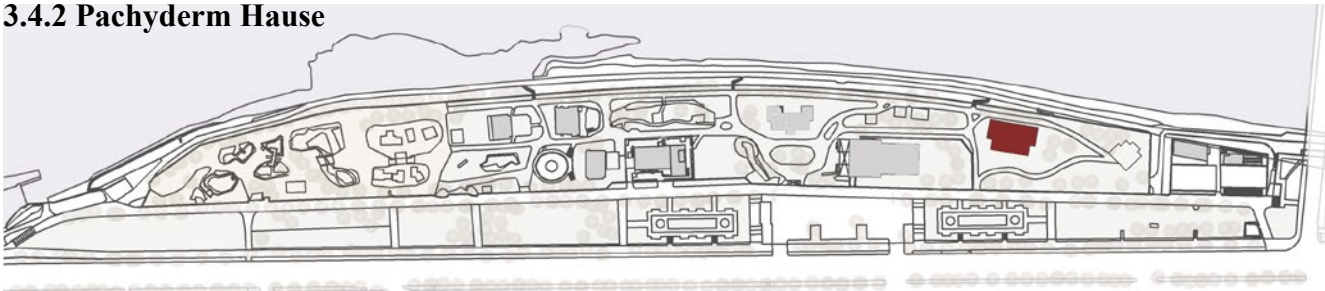


Figure 64: Ground Floor Plan, drawn by the authors.

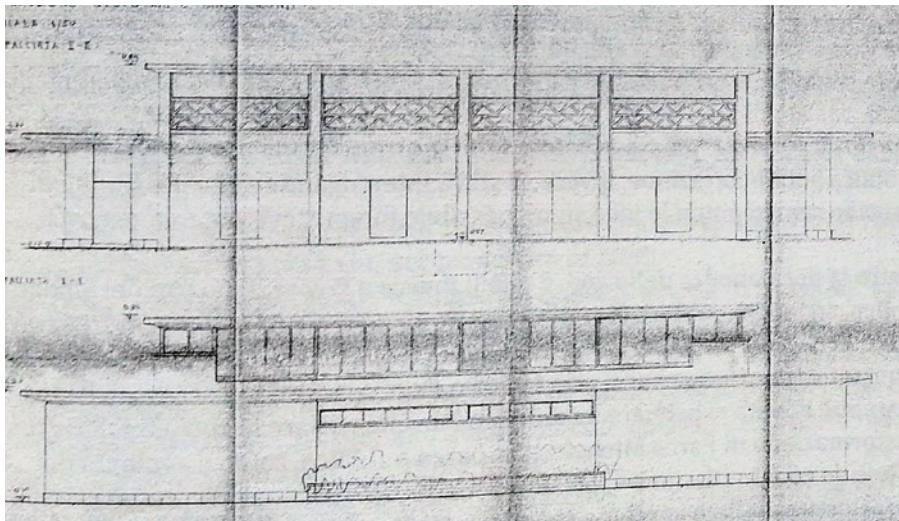


Figure 65: North-south elevations (Source: De Lucchi & Gaido).



Figure 66: Exterior view of the Pachyderm House, showing current condition (2025) (Photograph by the authors).



Figure 67: Exterior view of the Pachyderm House, showing current condition (2025) (Photograph by the authors).



3.4.3 Giraffe and Elephant House

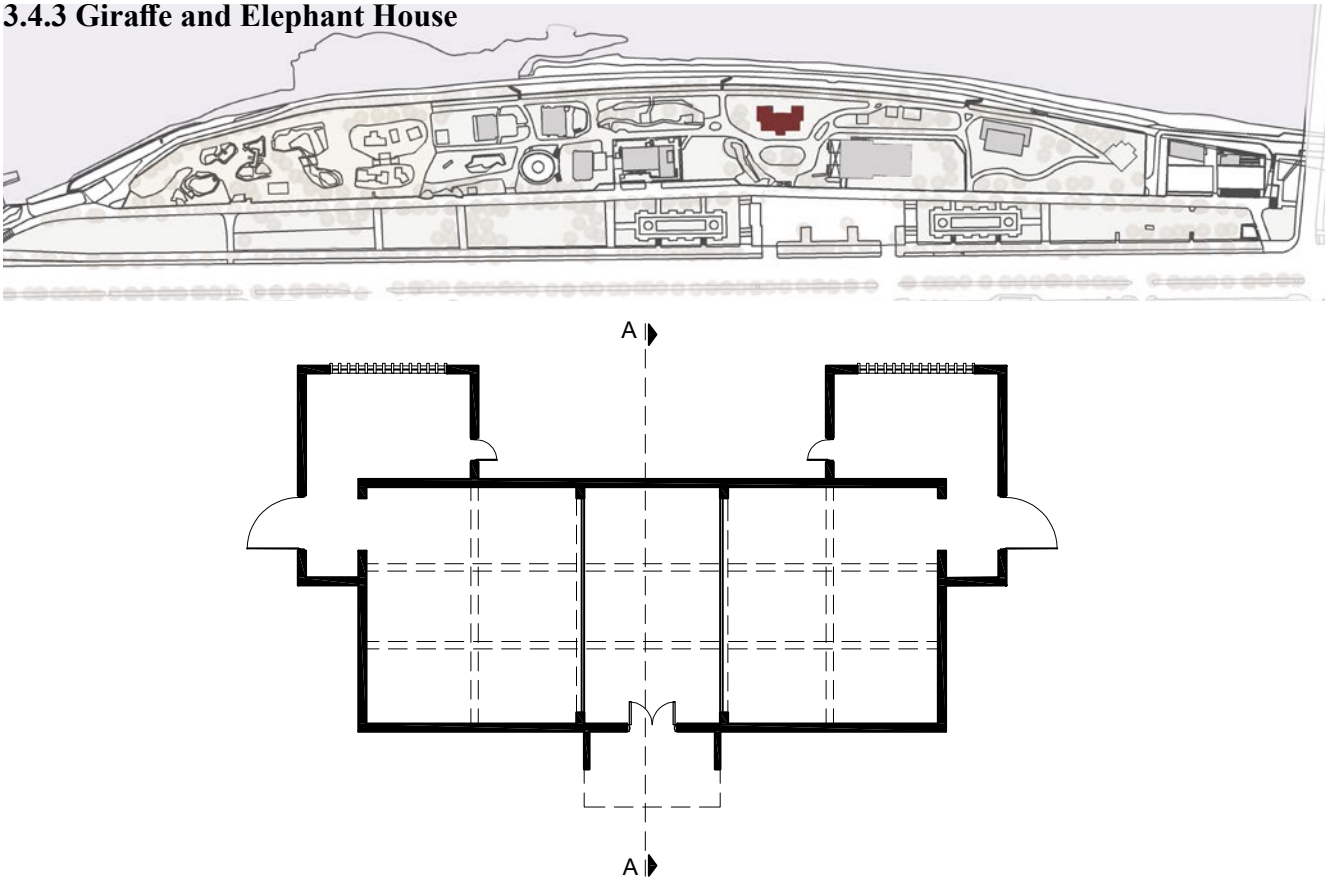


Figure 68: Ground Floor Plan, drawn by the authors.

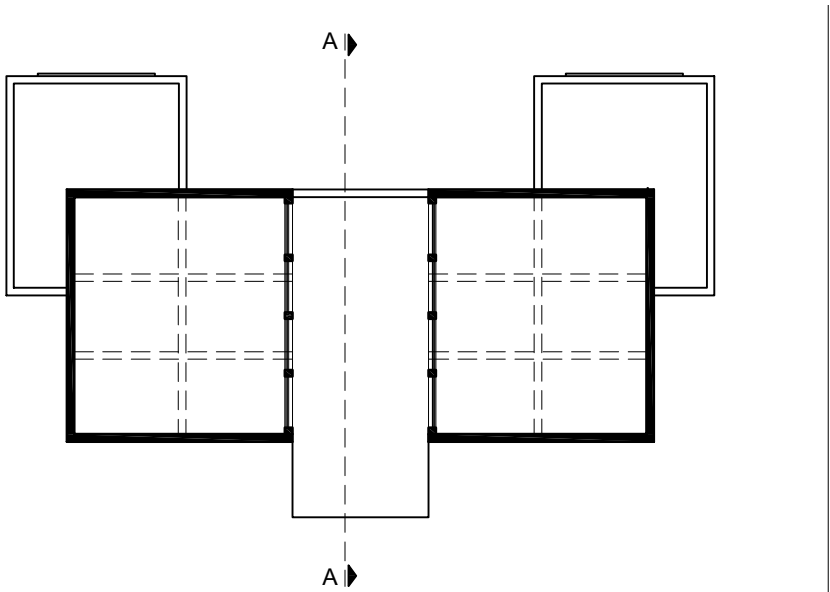


Figure 69: First Floor Plan, drawn by the authors.

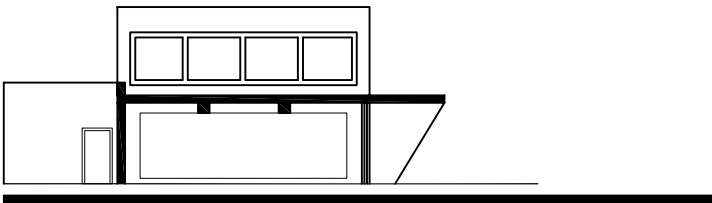


Figure 70: Section A-A, drawn by the author.



Figure 71: Exterior view of the Giraffe and Elephant House, showing current condition (2025) (Photograph by the authors).



Figure 72: Exterior view of the Giraffe and Elephant House, showing current condition (2025) (Photograph by the authors).



3.4.4 The Felidae Hause

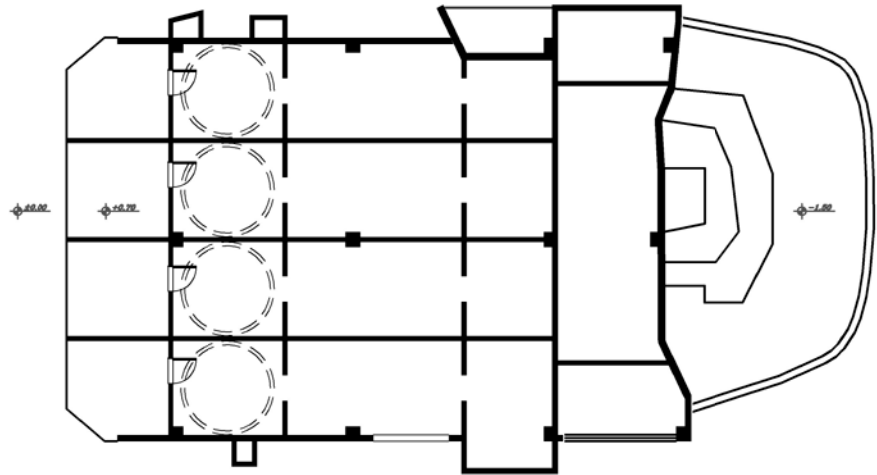
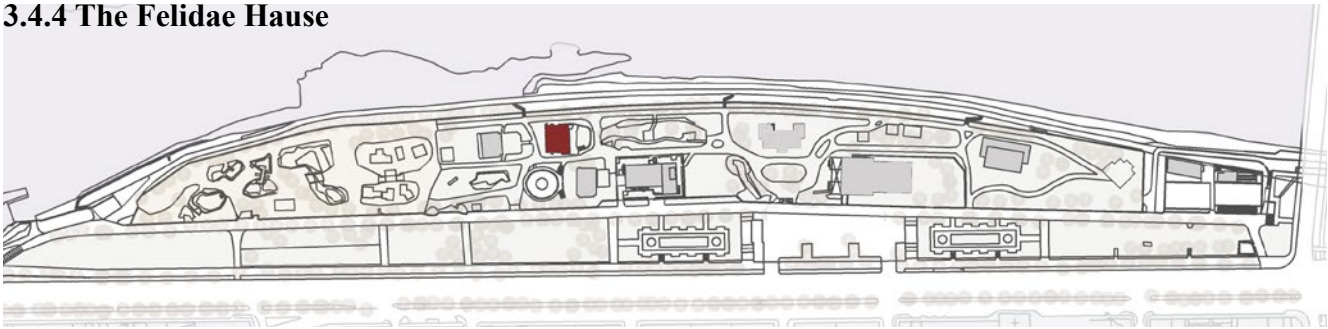


Figure 73: Ground Floor Plan, drawn by the authors.



Figure 74: Exterior view of the Felidae Hause, showing current condition (2025)  
(Photograph by the authors).



Figure 75: Exterior view of the Felidae Hause, showing current condition (2025)  
(Photograph by the authors).



Figure 76: Exterior view of the Felidae Hause, showing current condition (2025)  
(Photograph by the authors).



3.4.5 Tiger Hause

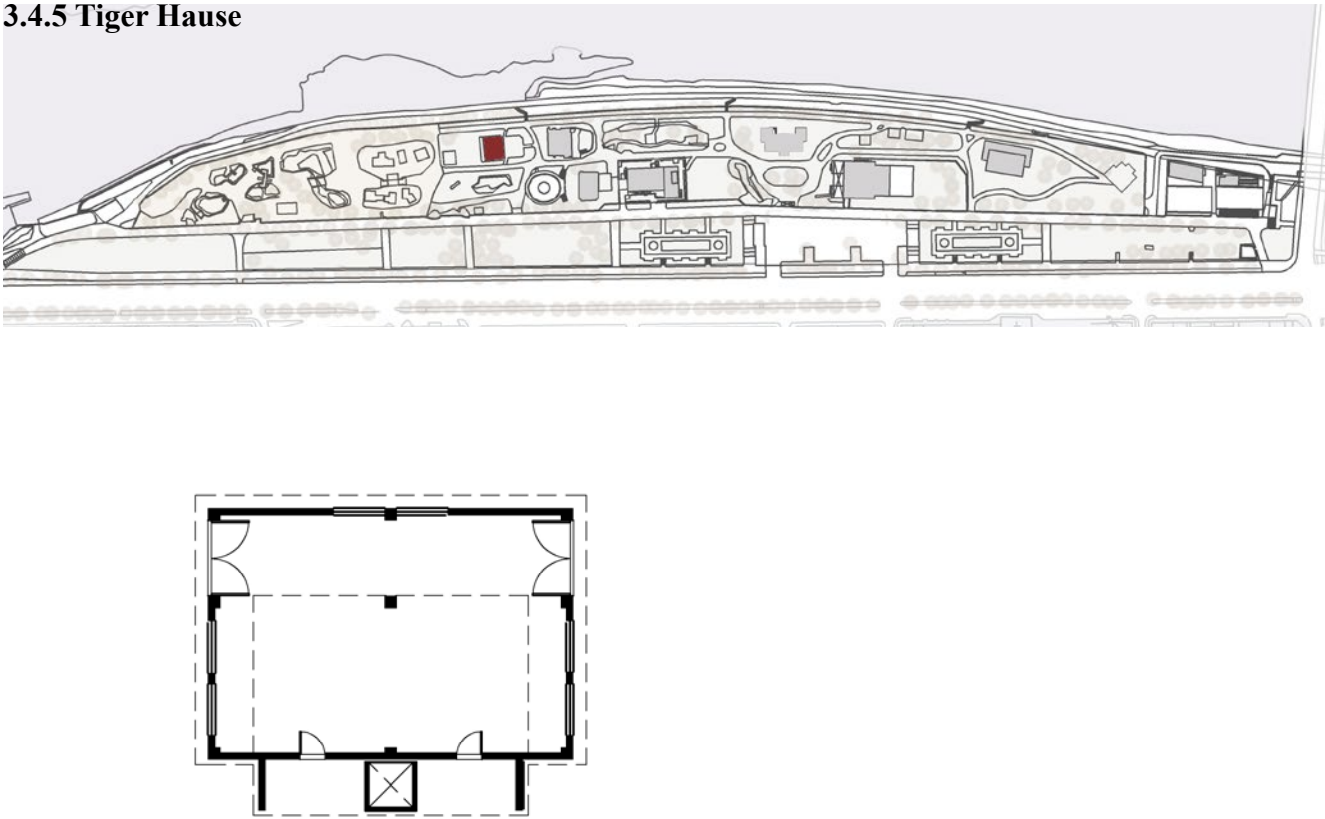


Figure 77: Ground Floor Plan and Section, drawn by the authors.



Figure 79: Exterior view of the Tiger House, showing current condition (2025)  
(Photograph by the authors)



Figure 78: Exterior view of the Tiger House, showing current condition (2025)  
(Photograph by the authors).



Figure 80: Exterior view of the Tiger House, showing current condition (2025)  
(Photograph by the authors).



3.4.6 Monkey House

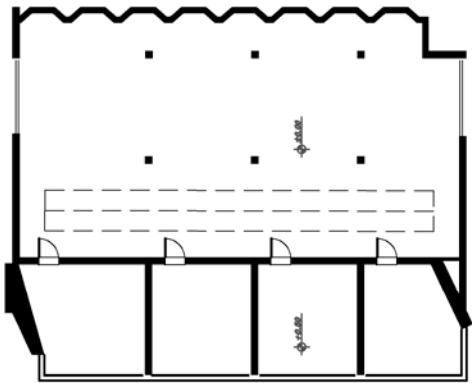
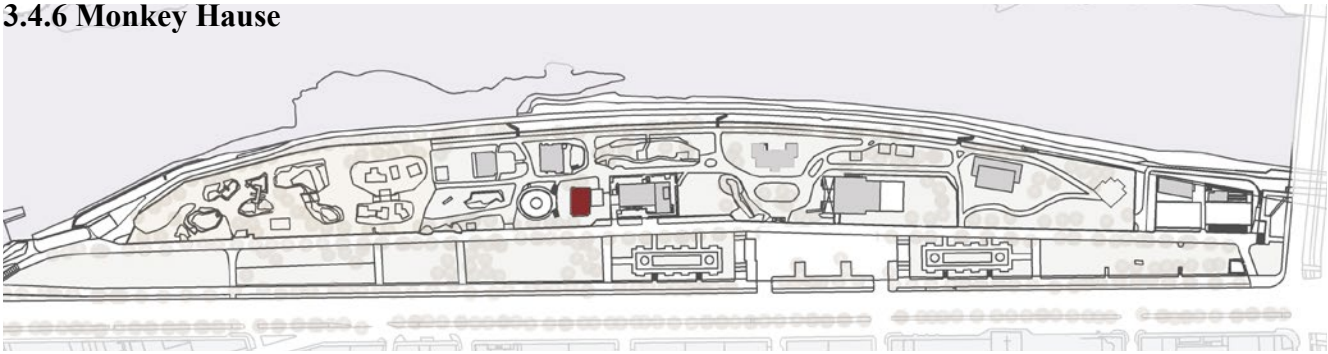


Figure 81: Ground Floor Plan, drawn by the authors.

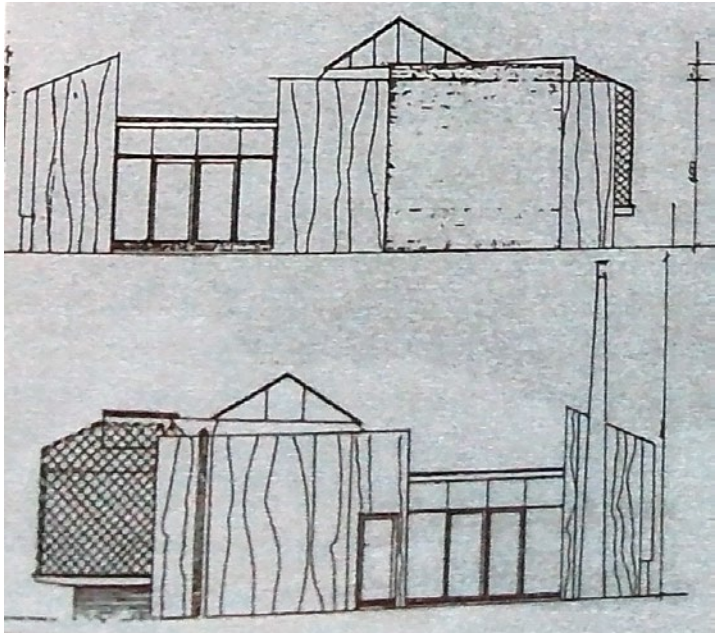


Figure 82: North-south elevations (Source: De Lucchi & Gaido).



Figure 83: Exterior view of the Pachyderm House, showing current condition (2025) (Photograph by the authors).



Figure 84: Exterior view of the Pachyderm House, showing current condition (2025) (Photograph by the authors).



3.4.7 Library

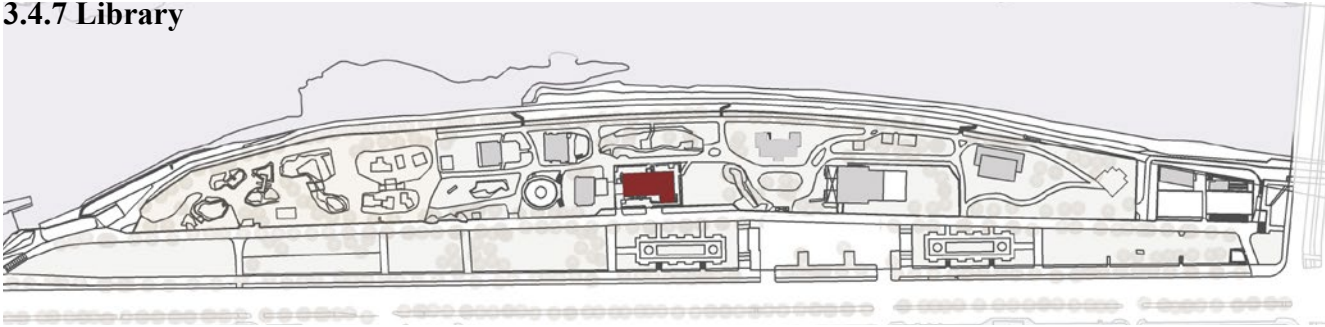


Figure 85: Exterior view of the Pachyderm House, showing current condition (2025)  
(Photograph by the authors).



Figure 86: Exterior view of the Pachyderm House, showing current condition (2025)  
(Photograph by the authors).

# 04

## Urban Analysis

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To plan a meaningful and sustainable transformation of the former zoo site in Michelotti Park, First of all, understanding the situation of park with its surrounding is important. This chapter explores the park's connection to the city, looking at both its opportunities and challenges. Through various spatial and functional maps-covering land use, transportation access, the condition of existing structures, physical and visual barriers, and how people move through the area-we assess how well the park is integrated into Turin. The findings show that, although the park is centrally located, it remains somewhat isolated. This sets the stage for considering how adaptive reuse could help reconnect it to the city.



## 4.1 Site Analysis & Vision

Michelotti Park, despite having an important place in the historical and cultural continuity of Turin, is an area with high potential but is currently defined by dysfunctional structures and disconnected public spaces. This area, which was known for its zoo function for most of the 20th century, has lost both its function and the ties it established with the city over time. However, its characteristics such as its natural environment, proximity to the Po River, the presence of various structures and its distance from the city center offer unique opportunities for the re-functioning of the area. In this direction, multi-layered area analyses carried out at the beginning of the design process allowed for the consideration of not only the physical space but also the historical background, social context, environmental values and user behaviors.

As a result of these analyses, design decisions will be shaped by a data-based understanding rather than intuitive approaches based on subjectivity. A holistic evaluation of the current conditions of the area will not only answer the question of “what can be done?” but also “why should it be done?”, “with which priorities?”, “within which boundaries?” and “for whom?” It is of critical importance to be able to produce answers to these questions. The analysis strategy developed within this scope was planned to include both spatial data and socio-cultural parameters.

The analyses were carried out with a multi-scale approach. First, the physical structure of the area, the status of existing buildings, usage scenarios and infrastructure level were evaluated; then, the park’s relationship with the city in terms of accessibility and mobility was examined. In this process, elements such as access roads, vehicle and pedestrian circulation, current and potential barriers and the perceptual continuity of the park were addressed in detail. These physical analyses allowed us to understand the extent to which the area was permeable or isolated, to define points requiring intervention and to develop user-oriented scenarios.

In addition, not only the physical space but also the historical and cultural layers of the area were analyzed. Architectural elements such as old zoo structures were evaluated in terms of their relationship with the city’s memory; factors such as the fact that these structures were not recognized by the younger generations were considered as a weakness in terms of cultural continuity. The fact that the area needs to be re-functionalized not only spatially but also in an emotional and collective context has emerged in the light of these evaluations.

In terms of ecology, the area hosts a natural diversity rarely seen in the urban fabric of Turin. For this reason, the analysis process was not limited to the built environment, environmental data, the ecological status of the Po River, green infrastructure and sustainability potentials were also included in the scope of the research. Finally, a strategic database was created for the revitalization of public life in the area, considering softer data such as social use potentials, user perception and security.

The main purpose of this analysis process is to ensure that the intervention to be designed is not only a

formal proposal; it is transformed into a public space vision that establishes a connection with the city, responds to the real needs of the users, is in harmony with nature and is sensitive to cultural memory. For this reason, Chapter 4 presents the data set that forms the backbone of the design; it prepares the scientific basis for the architectural and landscape strategies to be developed in the next section.



4.2 Existing Structures and Land Use Analysis

This map shows the variety of building uses within a 5 minute walk of Michelotti Park. This diversity reveals that the park is in a central location that can appeal to a large number of users. These functions, especially concentrated on the north and south axes, strengthen the accessibility and potential of the park within the urban fabric.

Legend

Commercial

Commercial + Residential

Residential

Health

Hotels

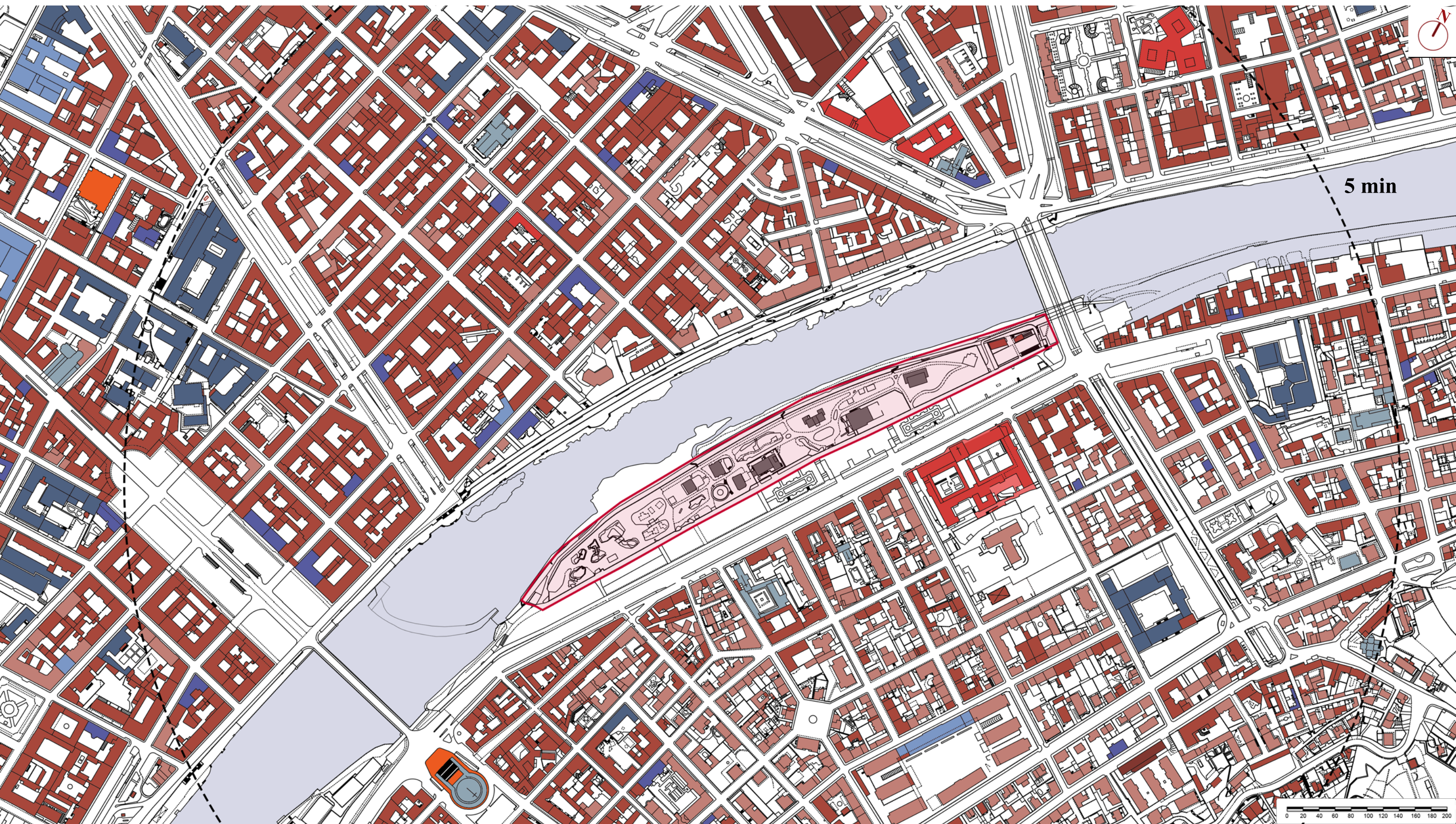
Border of Project Area

Church

Educational

Museum

Landmarks

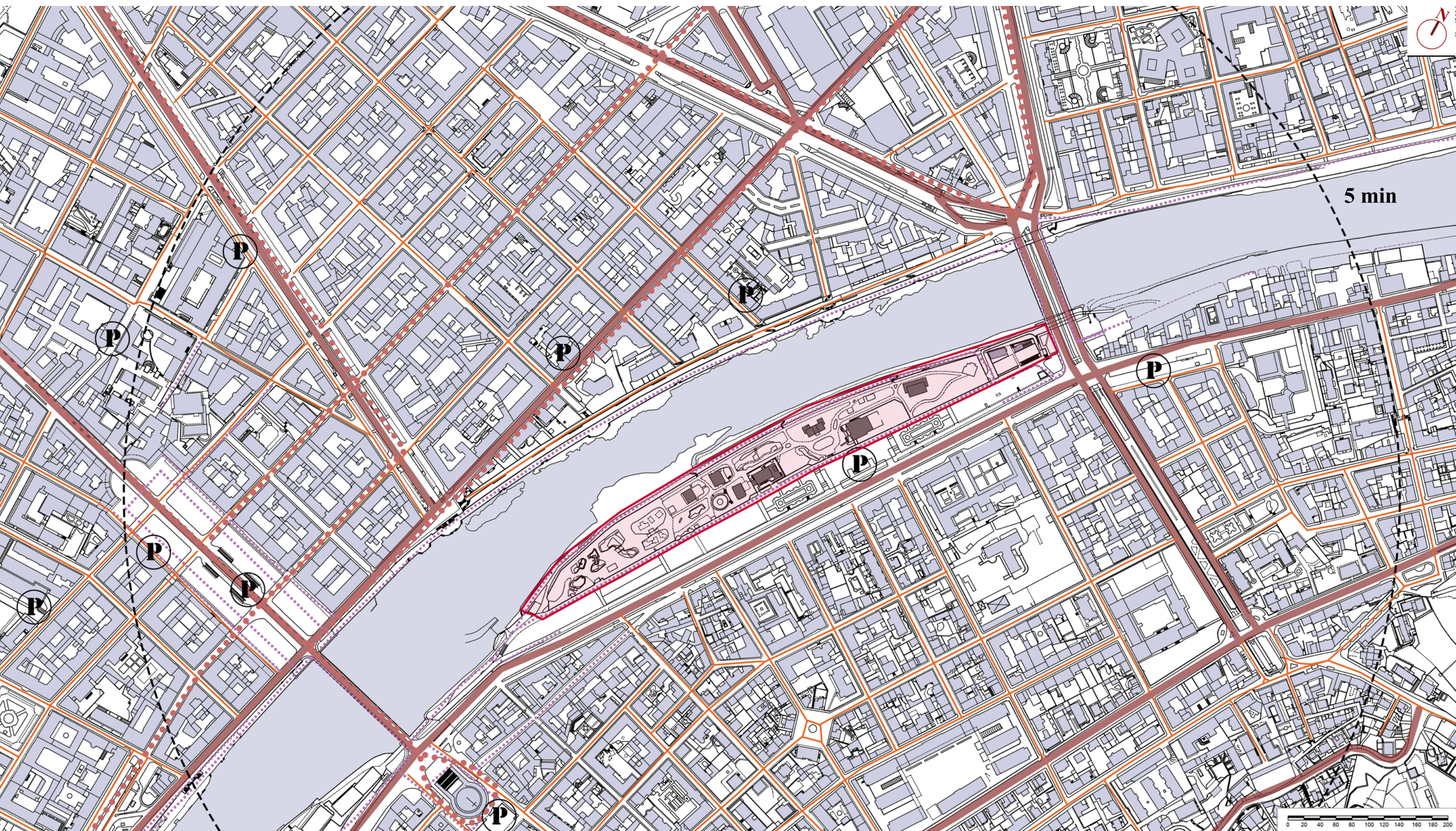




4.3 Transportation Analysis

This map shows the typology of transport routes around Michelotti Park. The park is surrounded by main roads, secondary roads and pedestrian routes, and has the potential to access different types of transport. The 5 minute walking rings reveal the park’s connection to the urban fabric and pedestrian access from the surrounding neighbourhoods.

- Legend**
- Main Roads
  - Secondy Roads
  - Tram Roads
  - Pedestrian Roads
  - Parking Area
  - Border of Project Area





4.4 Preservation and Functional Transformation of Structures

This analysis focused on the physical condition, historical value and spatial potential of the old zoo structures in Michelotti Park. These structures are largely abandoned, worn out and isolated from the rest of the park, which leads to both psychological isolation and a sense of dysfunction.

The classification made on the map revealed the following differences:

Some structures are well preserved and have historical/architectural value; these structures can be pre-served by re-functioning them with minor interventions.

Some structures are structurally sound but dysfunctional; therefore, it is suggested that they be repro-grammed for cultural or social purposes.

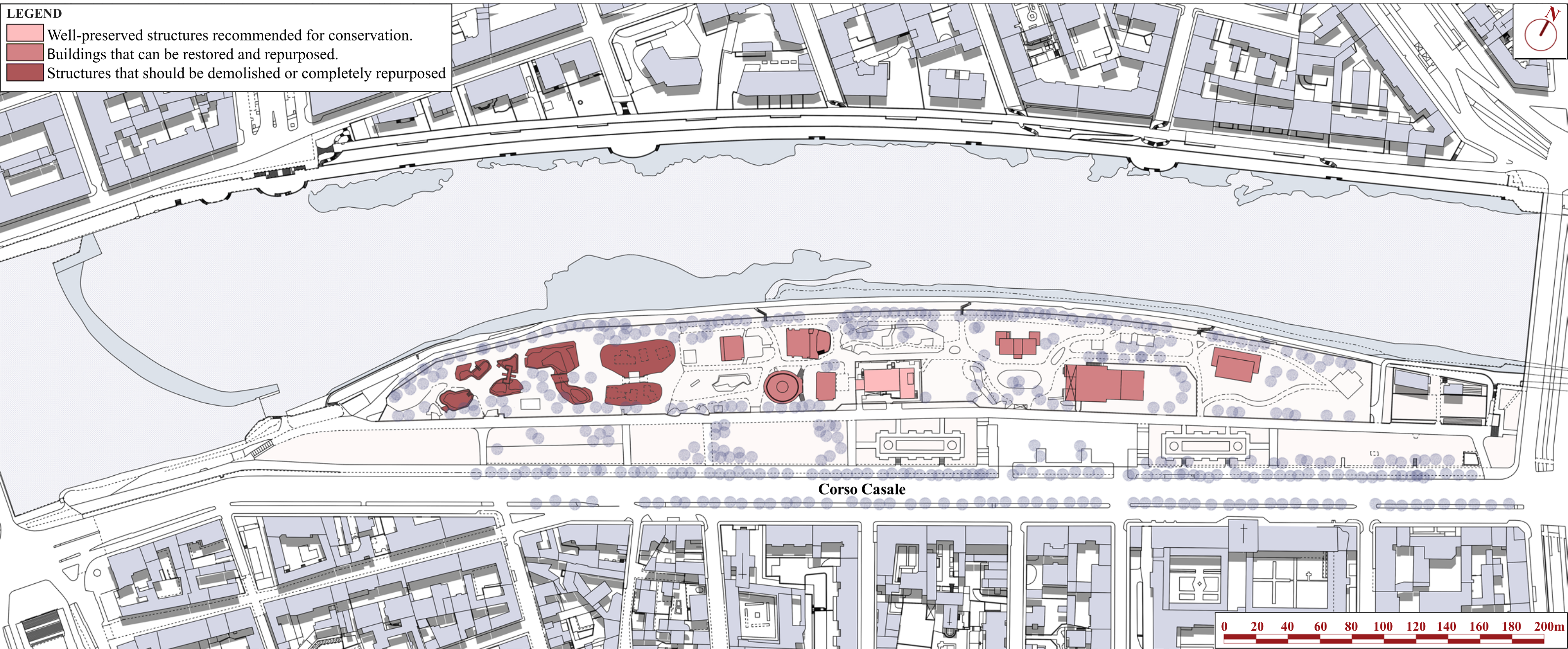
Some structures are seriously worn out and have a negative visual impact; these areas need to be either, radically renovated or demolished and transformed with new functions.

In addition, due to the lack of clear orientation, entrance definition and spatial organization in this area, users do not prefer this area or feel insecure. Even though the area is physically open, a sense of exclu-sion and spatial disconnection prevails at a perceptual level.

In line with this analysis, the project proposal aims to:

- Re-open solid and historically valuable structures for cultural/public functions,
- Reprogram dysfunctional structures,
- Renew heavily deteriorated structures with contextual sensitivity,
- Strengthen spatial perception with lighting, orientation and circulation axes.

This transformation aims not only for physical improvement, but also to rebuild trust, a sense of con-nection and accessibility between the user and the area. Thus, this once isolated area becomes an active and integrated part of the park.





4.5 Barriers and Isolation Analysis

When the current situation of Michelotti Park is examined, it is seen that various physical barriers located around the park cause significant problems both in the relationship between the area and the city and in its internal circulation. Although these barriers are generally placed for protection or boundary determination purposes, they have become elements that restrict access, make orientation difficult and disrupt spatial continuity in terms of user experience.

The Po River in the west creates a natural border and does not allow direct passage. Raised walls, fences and closed passages along the coast further reduce walkability.

The Corso Casale road in the east has become a dangerous and difficult-to-access border for users due to fast-flowing traffic and inadequate pedestrian crossings. The irregular barriers and parking areas along this road also make it difficult for users to direct themselves to the park.

These physical barriers reduce not only access but also the social interaction potential of the park within the city; they turn the park into an isolated and fragmented structure.

In the current situation of Michelotti Park, there are many scattered entrance points; However, most of these entrances are unclear, disorganized and unguided. Although physically accessible, these entrances do not provide a sense of direction for users, causing disorientation in the interior, regardless of which part of the park they enter from.

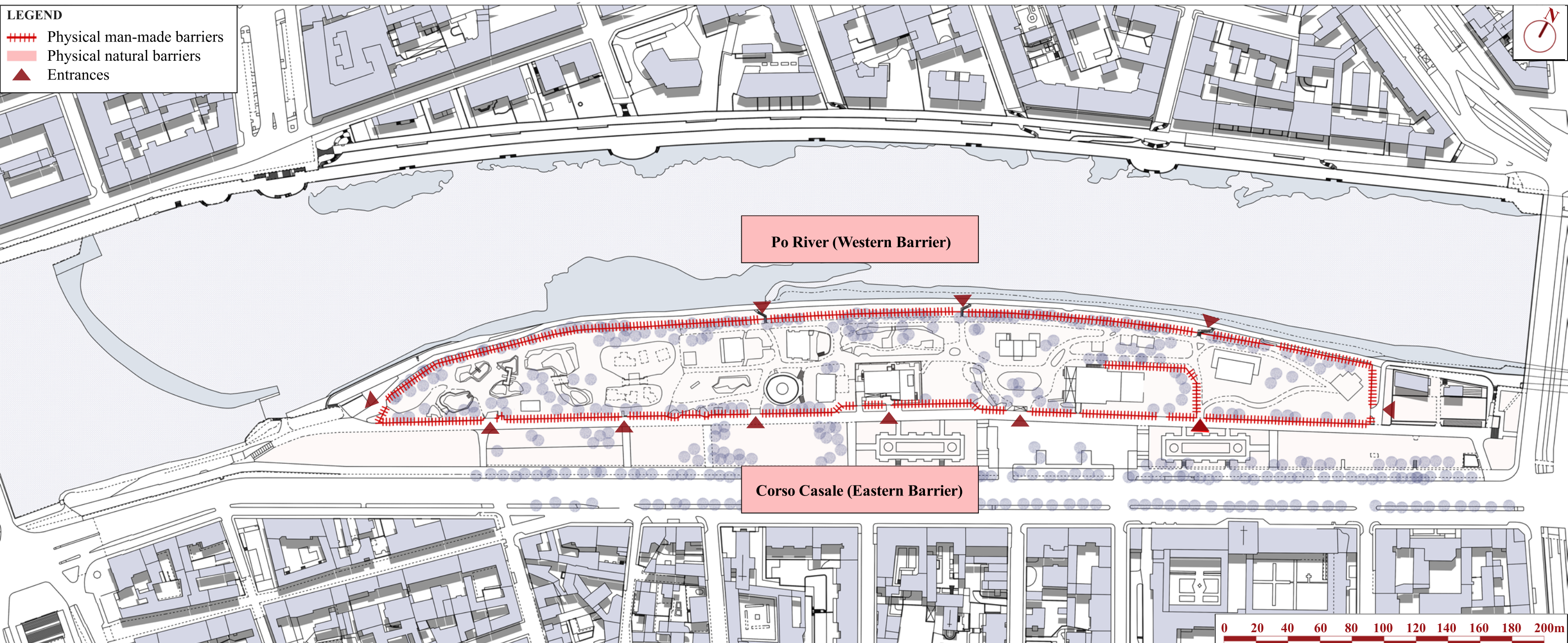
The main reasons for this situation are:

The entrances are equivalent and none of them are defined as the “main entrance”

The physical barriers in the surroundings (walls, fences, roadside) contain random openings

The absence of any guidance or welcoming elements

As a result, although the park seems very accessible, it actually offers a disorganized and fragmented experience for the user. It becomes difficult to find your way once you enter the park, and especially the central area, the old zoo area, remains almost entirely in the “background”.





4.6 Dynamic Movement Analysis

This analysis aims to understand pedestrian mobility patterns in Michelotti Park, identify heavily used routes, and reveal unused or isolated areas. As a result of the observations and graphic analysis, it was determined that there was an irregular circulation in the park, some areas were highly dense, and some areas were completely disabled.

Corso Casale and the roads along the Po River are the most heavily used pedestrian routes.

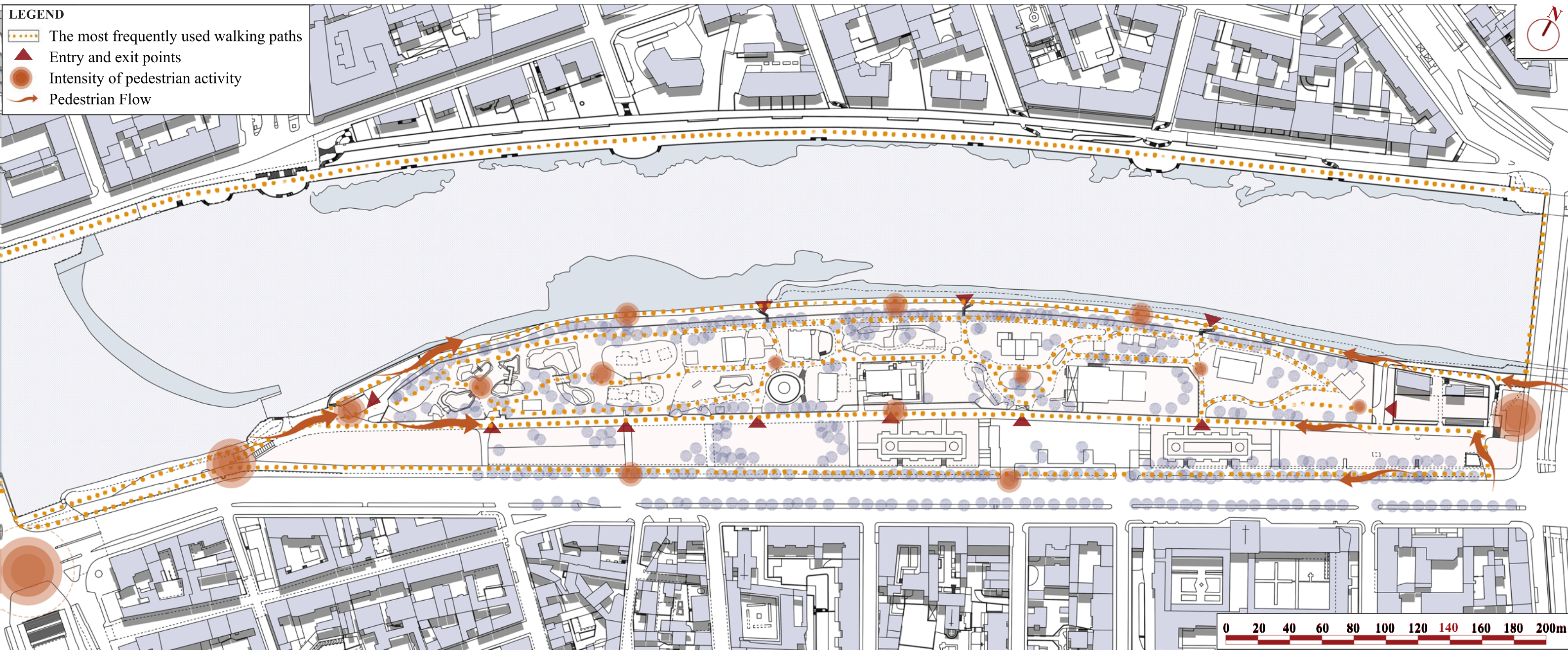
The old zoo area is an area with poor circulation and a feeling of abandonment.

There is an accumulation of users at busy entrance-exit points, and a lack of a proper guidance axis towards the interior.

Pedestrian flow determines not only access, but also how the user perceives and experiences the space. In Michelotti Park, the direction and intensity of movement directly influence which areas users see as active and which as dangerous or not important.

The dynamic movement analysis carried out in Michelotti Park revealed not only the frequency of use of pedestrian paths, but also how the user perceives and experiences the space and which areas are rendered “invisible”. While the high-density paths identified in this analysis are concentrated around the park, the old zoo area in the interior remains an isolated and low-flow area. The presence of movement is directly related to the place of a space in public life: unused areas become invisible, creating a feeling of abandonment over time.

This situation reveals the cycle between psychological isolation and physical inaccessibility: since the user does not want to go somewhere, it becomes unusable, and the longer it is used, the more excluded they feel. To break this cycle, it is not enough to simply draw new paths; where the paths lead, what they direct the user to and what spatial experience they offer are the main issues.





## Conclusion:

The multi-layered spatial analyses conducted on Michelotti Park have made visible not only the physical but also the social, environmental and cultural dimensions of the area; and have provided a concrete basis for the development of project decisions in a more consistent, context-sensitive and sustainable manner. The findings have simultaneously revealed the contradictory structures in the current state of the area and the potential transformation opportunities.

The structural analyses have shown that most of the existing structures are in serious physical deterioration and therefore require extensive restoration or reconstruction. However, demolition is not foreseen for all of these structures; some original structures have been deemed suitable for transformation with new functions by being protected in order to both maintain historical memory and ensure cultural continuity. This situation necessitates considering the principles of “preservation and re-functioning” together in the design process.

Transportation and mobility analyses have revealed that despite Michelotti Park’s close relationship with the city center, access problems in some areas restrict the holistic use of the area. In particular, the linear structure along the Po River creates physical and perceptual barriers; This reduces the permeability of the area in the north-south and east-west axes. In this context, the design will be shaped by an approach that strengthens the orientation elements, increases permeability and develops pedestrian-first mobility scenarios.

At the same time, the perceptual analyses conducted have shown that some areas of the area are perceived by users as exclusionary, inaccessible or unsafe. This situation indicates the existence of not only spatial but also psychological barriers. For this reason, an open and transparent public space structure that will increase the perception of security, the principle of day and night usability and lighting strategies will be integrated into the project.

Ecological assessments have revealed that the park is one of the rare natural areas in Turin and hosts an important microecosystem in terms of biodiversity. However, problems such as water pollution in the Po River and risks related to climate change (floods, heat waves) have also emphasized the need for careful ecological planning in the area. Sustainable infrastructure solutions that take these risks into account in the design process (rainwater management, green roofs, natural shade areas, etc.) will be proposed.

In terms of social and administrative aspects, the current status of the area and its usage scenarios have revealed the need for a flexible and multifunctional public space where different stakeholders can be involved in the process. In particular, it is aimed to create open activity areas that can be used regularly, cultural programs, education-focused sections and socio-cultural production spaces, thus transforming the area into a dynamic urban focal point. This approach is not only a physical transformation; it is also a transformation vision that strengthens social inclusiveness, intergenerational interaction and community bonds.

As a result, the analyses conducted in this section have ensured that the proposed design strategy is not

only a visual or aesthetic arrangement; but also a multifaceted goal such as spatial continuity, socio-cultural integration, sustainability and re-establishing collective memory. All the necessary databases have been created with these analyses for Michelotti Park to become an area that reconnects with the city, is accessible, compatible with the environment and at peace with its memory.



# 05

## Material and Decay Analysis, SWOT, and Case Studies

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In this chapter we present material and decay analysis of the existing buildings to find their vulnerabilities and conservation issues. The results of this study are used to create a SWOT analysis that sets out the site's strengths, weaknesses, opportunities, and risks within urban and cultural context. In the final part, several case studies are presented to show successful examples of reusing and transforming old zoos or similar heritage sites.

These examples help shape the design ideas developed in the next chapters.



## 5.1 Material Analysis

### 5.1.1. Structure Examinations

This section focuses on a specific section of the existing condition of the structures and analyzes in detail the specific deteriorations observed in the load-bearing and non-load-bearing elements. By examining these deteriorations, it is aimed to determine appropriate conservation and intervention strategies specific to the structures. The final goal is to consider a possible reuse scenario that will preserve the integrity of these structures, provide new functions suitable for their current partial use, enrich their program and revitalize them. In this way, it is aimed to re-function the Ex Zoo and transform it into a heritage asset that will maintain its meaning and sustainability in the future.

The Acquario-Rettillario, Tiger House and Pachyderm House structures located within the boundaries of the former Michelotti Zoo reflect a modernist design approach dating back to the mid Twentieth century, prioritizing functionality and material efficiency. While each structure uses different material combinations according to its functional needs, all of them exhibit a rationalist structure based on the principles of prefabrication, repetition and a clear separation between the base and façade elements.

### Structural System

The structures within the boundaries of Michelotti Park – Acquario-Rettillario, Tiger House and Pachyderm House – were built with a reinforced concrete-based load-bearing system. The main load-bearing elements of the structures are plastered reinforced concrete walls, beams and, in some cases, columns. While longitudinally arranged reinforced concrete walls provide rigidity to the structure, especially in Acquario-Rettillario, Tiger House has been designed in a more compact manner, optimizing load transfer with its sloping roof. In some sections, wooden or metal support elements have been observed, especially on the roof or in openings that were intervened later. These elements may have been added for reinforcement purposes to preserve the original system. In the current situation, there are moisture-related deteriorations, surface losses and traces of corrosion in the load-bearing system of the structures. The general character of the load-bearing system reflects the rationalist and function-oriented architectural approach of the period, and the preservation of this original structural order should be a priority in every intervention to be made.

As can be seen in the photos (Figures 87-88), the front of the Acquario Rettillario building was restored between 2024-2025. The first photograph is from 2024, when the building suffered serious physical deterioration; concrete spalling and structural damage are clearly visible on the roof slab. The second photograph was taken in 2025 and shows that the building was restored during this period. The roof was repaired, the façade surfaces were cleaned and the overall architectural integrity was restored.

There is no change in the other buildings in the park compared to previous years.



Figure 87: Acquario Rettillario Front Facade (Photo by the authors, 2024.)



Figure 88: Acquario Rettillario Front Facade (Photo by the authors, 2025.)



Acquario Rettilario

Designed by Ezio Venturelli in 1959, Acquario-Rettulario is a striking structure shaped specifically for its function and reflecting the technical optimism of the modernist period. The two-story reinforced concrete structure is defined by cantilever projections, plastered concrete surfaces and large flat panels. The main load-bearing system is supported by a solid reinforced concrete lower block that anchors the mass to the ground, while the lightened surfaces on the upper floors are covered with metal plates. The horizontal form and structural organization of the structure emphasize spatial continuity and its past exhibition function. Although the principle of transparency is at the forefront in establishing the interior-exterior relationship, today glass panels have been replaced by opaque surfaces, which weakens the original architectural narrative. The structure is a rare example of the neo-expressionist approach and has a documentary value with its special architectural language shaped according to its functional purpose. In the current situation, deteriorations due to vegetation, corrosion and lack of maintenance are observed in the load-bearing system and coating surfaces, which affects both structural strength and perceptual integrity.



Figure 89: Acquario Rettilario North Facade (Photo by the authors).

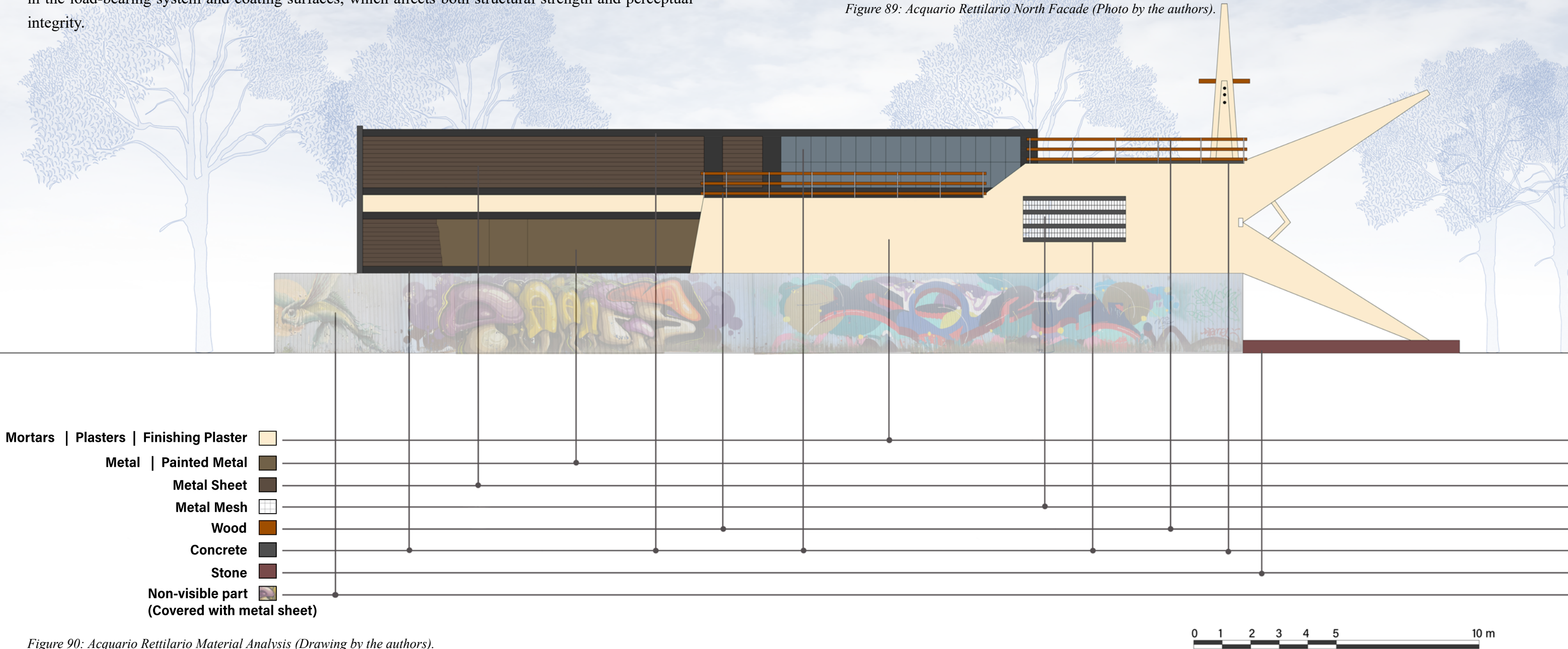


Figure 90: Acquario Rettilario Material Analysis (Drawing by the authors).



Tiger House

Tiger House stands out among the structures in Michelotti Park with its compact and functional architecture. A strong and robust structural language has been adopted in direct relation to the animal species it hosts. The load-bearing system of the structure consists of plastered reinforced concrete walls and painted metal elements that provide structural support. This simple material palette reveals an architectural character that is protective but also related to the open air, in harmony with the sheltering function of the structure.

The most striking feature of the structure is its sloping roof. This roof profile not only contributes to the spatial organization of the structure, but also distinguishes Tiger House from other structures. Lighter plaster layers resting on a solid cement foundation can be observed in the wall sections. This layered structure combines structural durability with visual simplicity. Although the openings with a certain rhythm horizontally were designed to meet the needs for light and ventilation in the original design, some of these openings have become dysfunctional or have been closed today.



Figure 91: Tiger House South Facade (Photo by the authors, 2024).

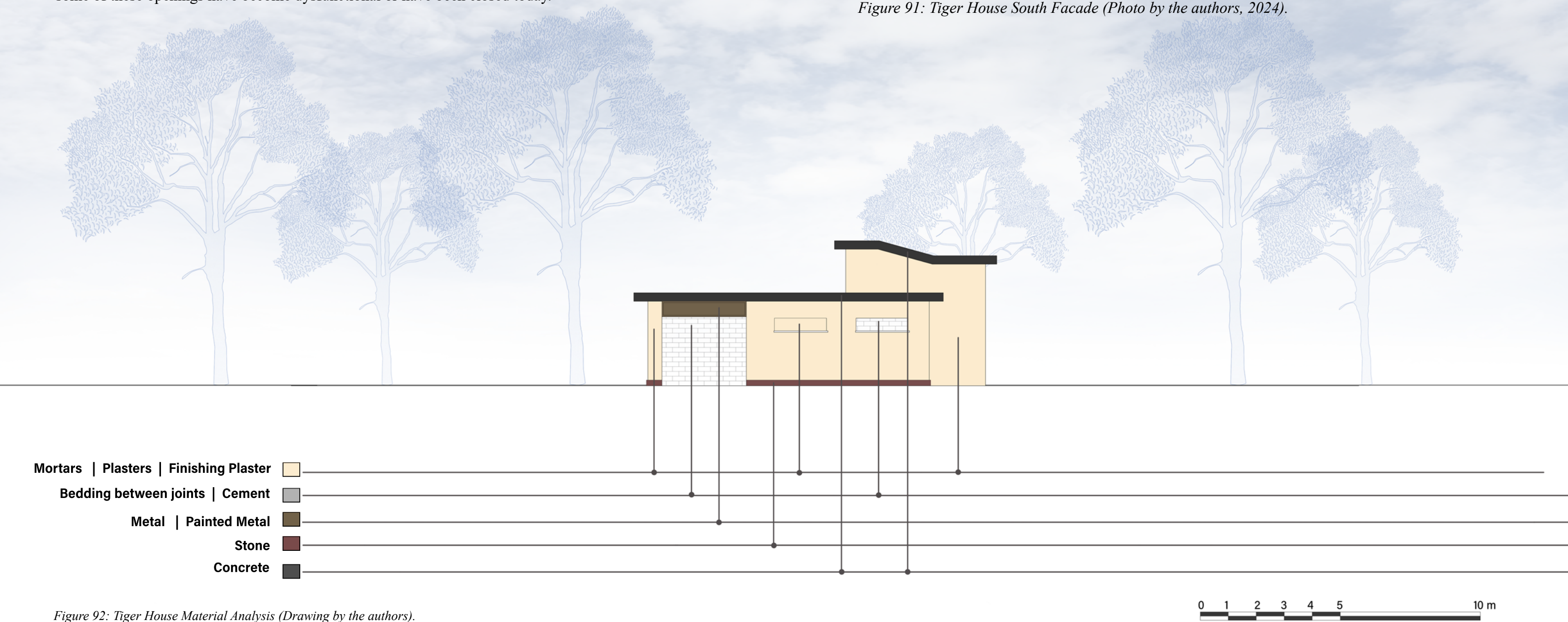


Figure 92: Tiger House Material Analysis (Drawing by the authors).



Pachyderm House

Pachyderm House is one of the most prominent examples of façade rhythm among the structures located in Michelotti Park. The structure draws attention with its linear plan, modular grid system and facade composition equipped with ventilation blocks. The load-bearing system of the structure consists of re-inforced concrete columns placed at certain intervals and plastered infill walls located between these columns. This system offers a modularity suitable for the spatial needs of the animals it hosted, while at the same time creating a rhythmic architectural expression with regular repetitions along the facade.

The hexagonal ventilation blocks, metal grids and shutter systems on the façades are passive air conditioning solutions designed to meet the natural ventilation and light requirements of the structure. These elements, which are repeated along both short facades and the long façade of the structure, still bear the traces of original architectural solutions today. However, as can be seen in the photographs, these elements are largely covered with graffiti, and some have deformed or lost their original functions.



Figure 93: Pachyderm House in Michelotti Park (Photo by the authors, 2024).

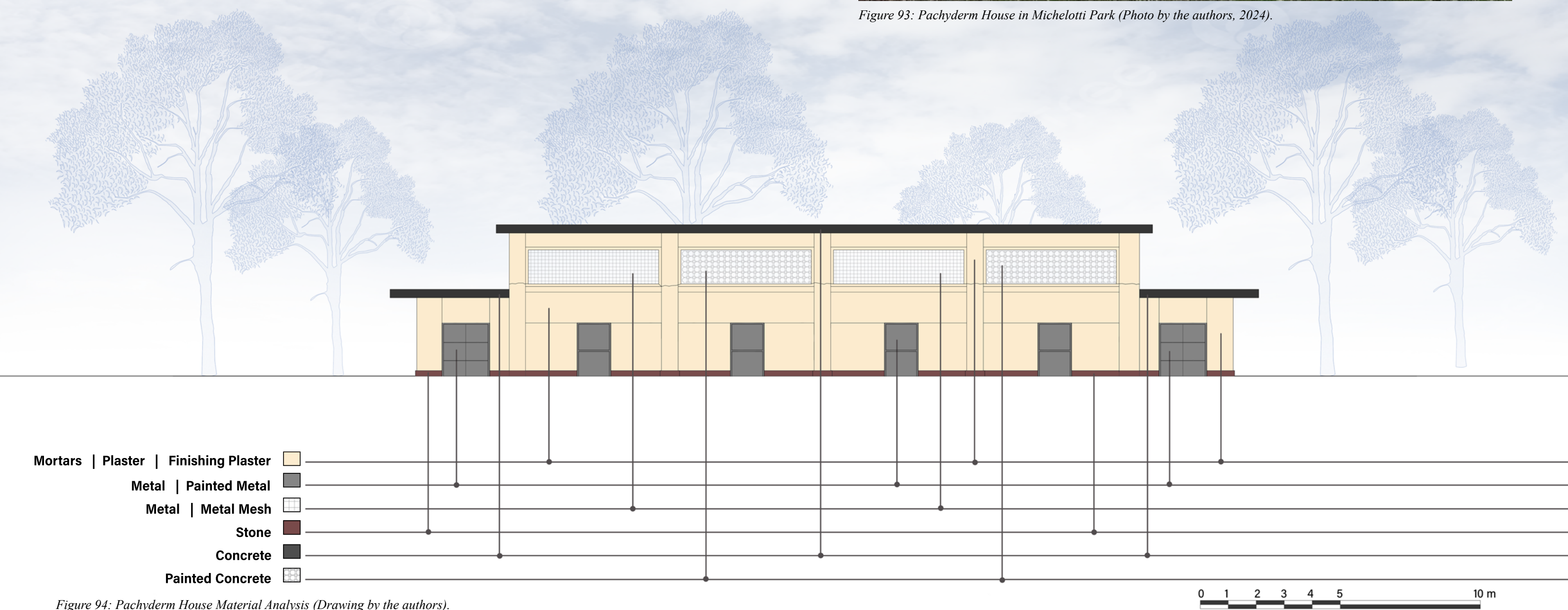


Figure 94: Pachyderm House Material Analysis (Drawing by the authors).



5.2. Decay Analysis

Acquario Rettilario

The metal panel system located at the ground level completely hides the original façade surface of the structure. Although these panels were placed for temporary security or access control purposes, their surfaces are heavily covered with graffiti, thus creating a dominant visual pollution that aesthetically damages the perception of the structure. On the concrete surfaces located immediately above the metal panels, surface deposit, rising damp, and biological growth are clearly observed. Cracking, delamination and discoloration are noticeable on the plaster surfaces on the upper level extending along the façade. Crack marks can be observed here and there on the reinforced concrete structure surface, and material loss and abrasion can be observed on the front. In general, this façade shows a high level of deterioration in both physical and perceptual terms due to long-term exposure to environmental effects, lack of maintenance and human intervention.

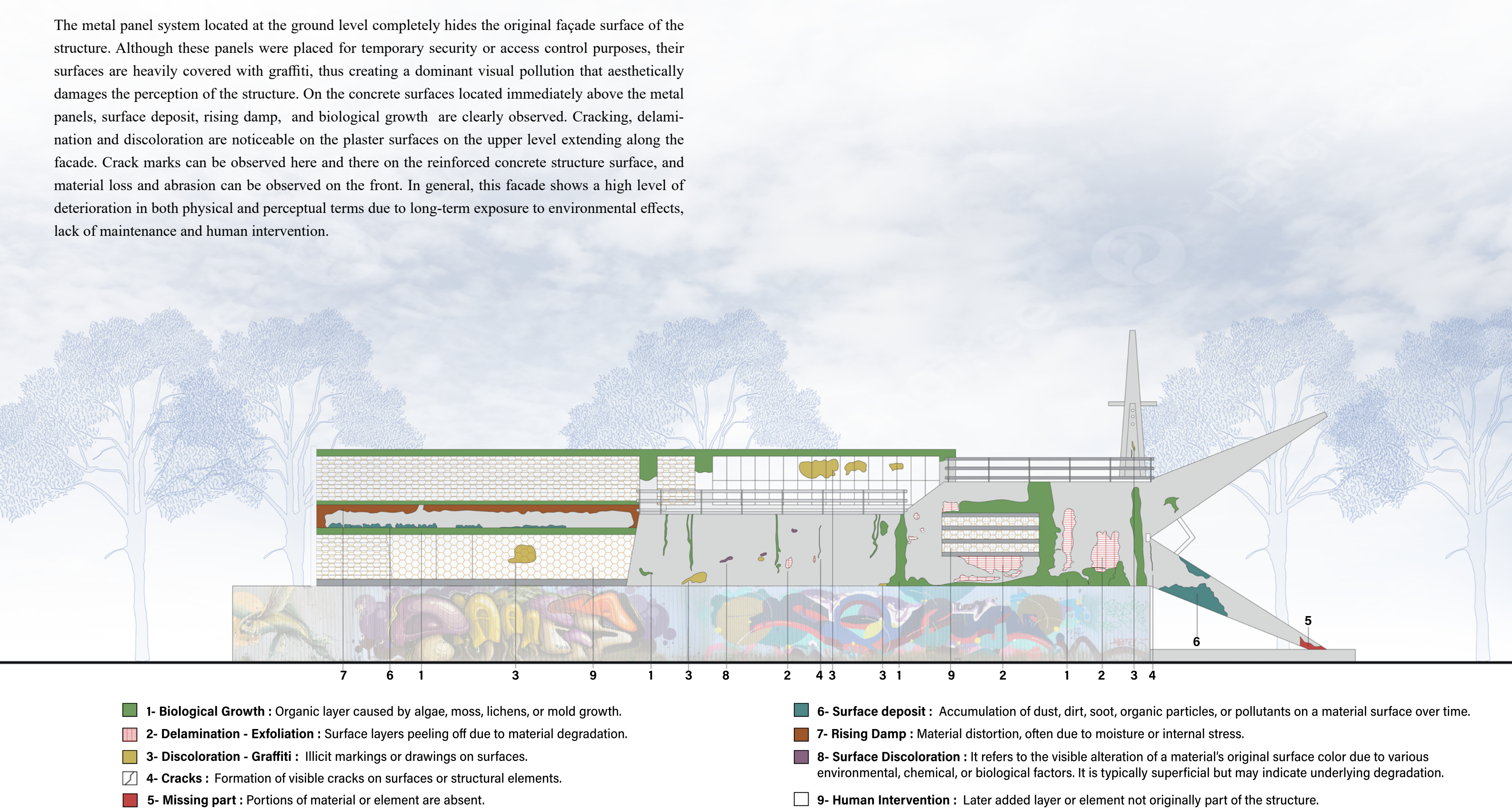


Figure 95: Acquario Rettilario Decay Analysis (Drawing by the author.)



Decay Analysis : Tiger House

According to the facade analysis of Tiger House, widespread and multi-layered deteriorations are observed on the building surfaces. Especially the surfaces on the lower facade have been subjected to graffiti and paint interventions; these interventions completely suppress the architectural character of the building and disrupt its aesthetic integrity. Biological growth shows itself in the form of moss and mold formations, especially on damp surfaces facing north, which increases both visual and physical surface deteriorations. Detachment of paint/plaster, delamination, and crack formation are noticeable on the wall surfaces. In some areas, the material surfaces under the plaster are completely exposed, indicating that the building is vulnerable to external effects. In addition, human interventions made later and incompatible with the original material and missing structural parts have been observed at certain points. All these types of deterioration reveal that the building has been neglected for a long time and is vulnerable to external effects; it requires urgent protection and intervention in terms of structural health.

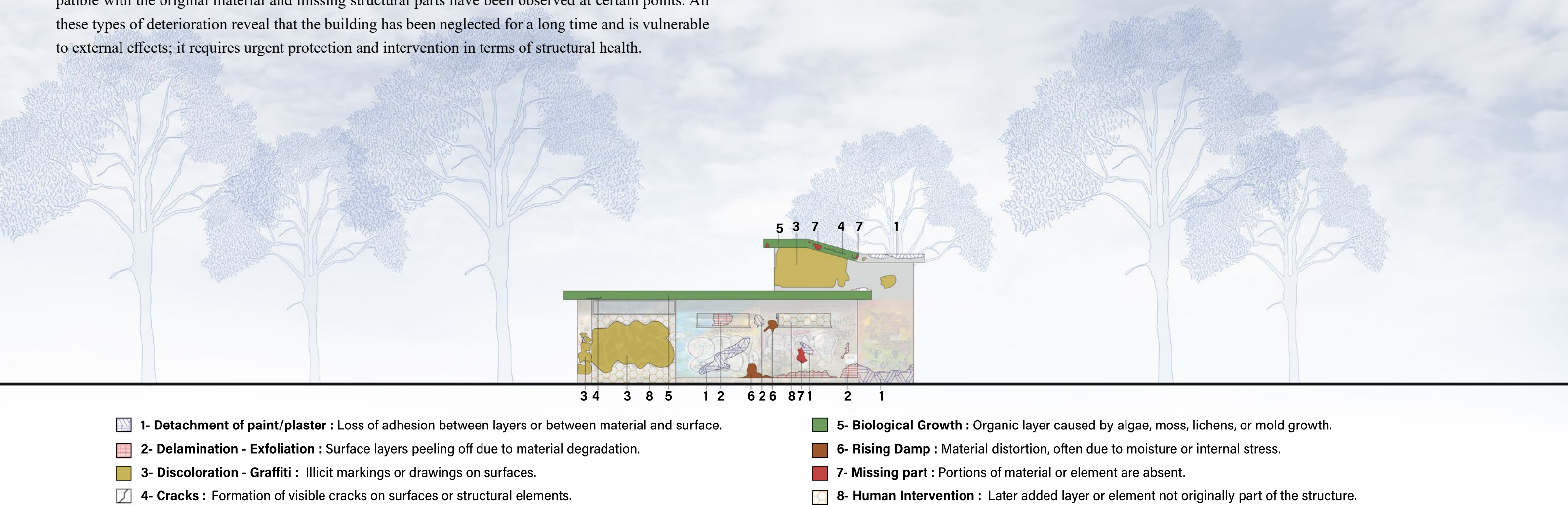


Figure 96: Tiger House Decay Analysis (Drawing by the authors).



Decay Analysis : Pachyderm House

According to the facade analysis of Pachyderm House, the building shows multi-layered and widespread deteriorations, especially on the lower levels. Graffiti applications on surfaces close to ground level covered the facade, visually suppressing the architectural character and facade composition of the building. It was also observed that the paint and plaster layers were detached from the surface in these areas, and delamination - exfoliation effects were widespread. While crack formation and surface discoloration were noticeable on the middle level, especially around the openings, traces of biological growth (moss, fungus, etc.) were concentrated in areas where the building came into contact with moisture near the openings on the upper level. These deteriorations reveal that the building materials were worn out both by environmental effects and long-term lack of maintenance. In addition, it was observed that the plaster was completely peeled off in some facade sections, exposing the brick or concrete surface on the lower layer; this both reduces physical durability and makes it difficult to detect the original material texture during the restoration process.



Figure 97: Pachyderm House Decay Analysis (Drawing by the authors).





5.2.1. Decay Typologies and Intervention Approaches

Decay	Presence of Decay	Description	Effect	Solution
Detachment of plaster	Exterior wall surfaces	Loss of adhesion between plaster layers and the substrate, causing peeling or falling sections.	Exposure of underlying masonry, aesthetic loss, potential for water ingress.	Clean the surfaces, assess substrate condition, reapply breathable plaster with compatible materials.
Delamination - Exfoliation	Stone or plaster surfaces with layered material structure	Surface layers are separating along natural or formed planes due to moisture, salts or freeze-thaw cycles.	Material loss, fragility of remaining surface, increased risk of erosion.	Consolidate delaminated areas using injection grouts or consolidants; apply a protective layer to prevent recurrence.
Graffiti	External wall surfaces, often plastered or painted	Unwanted paint or ink applied to the surface, altering its appearance and potentially damaging porous materials.	Aesthetic degradation, material staining, difficulty in removal without abrasion.	Use appropriate chemical or mechanical cleaning methods; apply sacrificial protective layer to prevent recurrence.
Cracks	Walls, ceilings	Fine to medium-width cracks due to structural stress, material shrinkage or environmental changes.	Material weakening, risk of moisture ingress, and potential structural instability.	Monitor crack progression; fill with compatible materials or inject with lime-based or resin grout depending on substrate.
Biological Growth	Shaded or moist areas of the wall surfaces	Growth of algae, lichens, moss or mold on damp surfaces, especially in areas with poor drainage or ventilation.	Loss of aesthetic quality, indication of deeper material issues like damp.	Gently clean biological growth using biocide, followed by brushing and rinsing. Improve drainage and ventilation to prevent recurrence. Repeat biocidal treatment if appropriate.
Surface Discoloration	Plastered or painted wall surfaces	General staining or discoloration due to pollution, water infiltration or surface degradation.	General staining or discoloration due to pollution, water infiltration, sunlight or surface degradation.	Identify source of staining; clean surface with dry/chemical methods suitable for the substrate and apply a protective layer suitable for the surface material.
Surface Deposit	External surfaces, often horizontal or low-ventilation zones	Accumulated dirt, dust, soot or atmospheric particles adhering to surfaces.	Aesthetic degradation, substrate masking, potential chemical interaction with materials.	Clean with appropriate dry or wet methods; control surrounding environment and airflow if possible.
Rising Damp	Lower parts of walls, ground level	Capillary rise of moisture through porous materials from the soil, often carrying dissolved salts.	Salt crystallization, plaster detachment, biological growth, and staining.	Improve drainage; inject damp-proof barriers; replace salt-damaged materials with breathable alternatives.
Missing Part	Openings, edges of architectural elements, decorative components	Original components such as bricks, stones, decorative features or structural fragments are absent, likely due to previous damage, neglect or removal.	Structural or visual imbalance, weakened support areas, reduced historical integrity.	Assess historical documentation; replace missing elements using compatible materials and reversible techniques, or mark loss without full reconstruction if appropriate.
Human Intervention		Later elements (e.g. concrete layers, pipes, signage) incompatible with the original structure's materials or aesthetics.	Visual and material disharmony, physical stress on original components, moisture traps.	Assess necessity of additions; remove or replace with reversible, compatible alternatives respecting heritage values.



### 5.2.2. Biological Growth

Biological growth is a common type of deterioration that affects building surfaces, especially in shaded and humid areas. Moss, lichen and algae growth has been observed in the old Michelotti Zoo buildings, especially in the lower parts of the Pachyderm House (Figure 98). These organisms easily adhere to porous plaster and mortar surfaces exposed to rainwater and inadequate air circulation.

Such biological formations trap moisture and over time lead to both chemical and physical deterioration of the surface (ICOMOS, 2021). In the long term, this growth can cause separation of surface layers, color changes and the accumulation of salt crystals. If left untreated, it can also progress to deeper parts of the structure through existing cracks or areas of rising humidity.

In order to combat this problem, it is recommended to clean the surfaces with soft brushes and biocide solutions (Feilden, B.M., 2003). Although it is often recommended to increase air circulation, in this case the deterioration is located on the façade where natural air flow is already present and further ventilation may not be possible. Therefore, priority should be given to surface cleaning and water diversion.



Figure 98: Pachyderm House - Biological Growth (Photo by the authors, 2025).

### 5.2.3. Delamination / Exfoliation

Delamination usually refers to the separation of surface coatings, such as plaster, from the substructure. This is particularly evident in Michelotti buildings, such as the Pachyderm House, where the plaster, concrete or stone surface is separated and flaked in thin layers (Figures 99).

This type of deterioration is often caused by wetting-drying cycles, internal pressure from salt crystals and thermal expansion (ICOMOS, 2021). Incompatible materials used in previous repairs and long-term lack of maintenance have accelerated the process.

When the protective outer coating is lost, the materials inside the structure are directly exposed to external influences. As an intervention, the detached layers must be carefully removed. Then, delaminated areas should be consolidated using injection grouts or compatible consolidants to restore adhesion between layers. After consolidation, an appropriate protective layer of plaster (stucco) can be applied without damaging the structure and without disrupting the original aesthetics. This application not only covers the existing deteriorated surface but also provides waterproofing, allows drying, and prevents the recurrence of delamination.



Figure 99: Pachyderm House - Delamination (Photo by the authors, 2025).



#### 5.2.4. Surface Discoloration

Surface discoloration is a common but often overlooked type of deterioration. Fading, run-off marks, and discoloration are common on the plastered facade of Pachyderm House (Figures 100). This condition is usually caused by air pollution, water leaks, and natural aging of materials (Setherton, G., 2024).

Discoloration not only reduces visual quality, but can also be an indication of deeper problems in the structure. Dark lines may indicate rainwater runoff or biological growth, while light spots may indicate salt accumulation.

For treatment, the source of staining should first be identified and resolved to prevent recurrence. Then, dry or chemical cleaning methods suitable for the substrate should be applied to remove the discoloration without damaging the original material. Finally, a protective layer compatible with the surface material should be applied to safeguard against future staining and environmental damage.



Figure 100: Pachyderm House - Surface Discoloration (Photo by the authors, 2025).

#### 5.2.5. Surface Deposit

Surface deposits are formed by dust, dirt, soot and organic residues accumulating on building surfaces. Such deposits are quite common in Michelotti buildings, especially in areas such as window frames, under eaves and horizontal projections of Acquario Rettilario (Figures 101). These layers both reduce the aesthetic value of the building and accelerate material deterioration by preparing the ground for chemical reactions (ICOMOS, 2021).

Such dirty surfaces usually trap moisture and also provide ground for microbial growth. Methods such as dry brushing or low-pressure water spraying should be preferred for cleaning, depending on the porosity of the surface (Feilden, B.M., 2003). Additionally, controlling the surrounding environment and improving airflow—such as adjusting water drainage, preventing water stagnation, and reducing pollutant exposure—can help minimize the recurrence of deposits and support the long-term preservation of the surface.



Figure 101: Acquario Rettilario - Surface Deposit (Photo by the authors, 2025).



### 5.2.6. Rising Damp

Rising damp is a common form of deterioration caused by groundwater moving upwards through porous building materials. This is particularly evident in the ground level walls of Tiger House (Figures 102). Salt efflorescence, plaster peeling and mortar deterioration are seen on the surface.

Rising damp is often caused by the absence of a waterproofing barrier or by the failure of existing insulation over time (British Damp Proofing, 2022). One of the most effective methods of solving this problem is to apply a damp-proof course to the walls. This is achieved by drilling holes in the walls at regular intervals and injecting a high concentration of water repellent cream (e.g. Dryzone DPC) into them (Rentokil, 2024). Alternatively, similar protection can be provided by installing a physical damp-proofing membrane (Setherton, G., 2024). In addition, to ensure the long-term effectiveness of the intervention, it is recommended to implement external drainage and landscaping measures adjacent to the building. These external interventions aim to facilitate the evaporation of moisture from the soil and to reduce the amount of groundwater that can rise to the building walls through capillary action.



Figure 102: Tiger House - Rising Damp (Photo by the authors, 2025).



# 5.3 SWOT Analysis

## 5.3.1 SWOT Analysis -Methodological Framework for Strategic Assessment

In architectural and urban transformation projects—especially in interventions targeting public or cultural heritage areas—the integration of strategic planning tools is of great importance. SWOT analysis (SWOT: Strengths, Weaknesses, Opportunities, Threats) is an effective tool for understanding the current situation and guiding the design process.

SWOT analysis contributes to the development of sustainable, context-sensitive strategies by systematically evaluating the internal situation (strengths and weaknesses) and external dynamics (opportunities and threats) of the area. Strengths refer to positive qualities such as architectural value, accessibility, and social belonging; weaknesses refer to internal problems such as physical deterioration or infrastructural deficiencies. Opportunities include positive external factors such as urban policies or financing resources, while threats include negative external factors such as legal restrictions or environmental risks.

**The acronym S.W.O.T. stands for the following headings:**

**Strengths:** Positive internal qualities, resources or values inherent in the current state of the site, such as architectural value, spatial quality, accessibility or social belonging.

**Weaknesses:** Internal deficiencies or difficulties that may limit the project; for example, physical deterioration, infrastructural deficiencies or low public awareness.

**Opportunities:** External factors that may increase the impact of the project; for example, funding sources, urban transformation policies or social demand for cultural spaces.

**Threats:** External risks that may negatively affect the success of the intervention; for example, urban exclusion, legal restrictions or continuing environmental degradation.

This analysis aims to minimize risks and maximize contextual values by bridging the analytical phase with design decisions. It helps develop more resilient, inclusive, and sustainable interventions, especially in cultural reuse projects.

## 5.3.2 SWOT Analysis – Thematic and Spatial Assessment for Parco Michelotti

The SWOT analysis conducted specifically for Parco Michelotti aims to strategically evaluate micro-scale elements such as the physical structure, usage status, environmental components and public potential of the park.

The historical background of the park (used as a zoo between 1955 and 1987), its location close to the city center and its 35,000 m² green area hold an important place in Turin’s natural and cultural memory. In this context, the SWOT analysis not only reveals the current physical situation; it also provides a the-

matic framework that will guide decisions on the re-functioning of the park.

The main purpose of the analysis is to reveal the transformation potential of Parco Michelotti, to concretely define its current weaknesses and future threats. In this way, it contributes to the development of sustainable strategies that are both sensitive to current conditions and for the future.

**Macro themes determined as a result of SWOT analysis:**

- Accessibility and Mobility
- Infrastructure and Physical Condition
- Historical and Cultural Heritage
- Ecological and Environmental Elements
- Social Participation and Social Use

## Strategic Results and Impact on Design

The SWOT analysis for Parco Michelotti has provided a comprehensive framework for the transformation of the area. The existing building stock, the quality of open spaces, urban location and ecological value allow the park to be transformed into a multi-faceted public space that will accommodate not only landscape design but also cultural, social and educational functions.

However, this potential is limited by inadequate infrastructure, low public awareness, environmental threats and legal uncertainties. Therefore, the design strategies to be developed should be addressed with a flexible, multifunctional and community-oriented approach that is sensitive to the current context of the area.

SWOT analysis was not only a tool to describe the current situation; it also served as a decision support system to determine strategic priorities for future interventions and shaped the direction of the project.



	SWOT				
	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	LEVEL
Accessibility / Mobility	<p>-Proximity to City Center : Located 2 km from the city center with bus and tram stops within 300 meters.</p> <p>-Walkability &amp; Public Transport: The area is easily accessible on foot for many residents.</p>	<p>Limited Parking &amp; Traffic: Congestion and insufficient parking hinder car access.</p> <p>Infrequent Public Transport: Low service frequency makes access unreliable outside peak hours.</p>	<p>Sustainable Access: Bike lanes and walkways along the Po can enhance connectivity.</p> <p>Smart City Potential: Urban mobility plans may prioritize the site.</p>	<p>-Rising Traffic Congestion: Without better traffic management, access could become increasingly difficult.</p> <p>-Dependence on Car Access: Without alternatives, reliance on private vehicles may discourage visitors.</p>	HIGH
Infrastructure and Physical Condition	<p>-Well-Preserved Green Spaces: 35,000 m² of green area, offering a natural retreat within the city.</p> <p>-Existing Pathways &amp; Open Areas: Large open spaces allow for flexible future planning.</p>	<p>Deteriorated Buildings: 40% of structures need urgent restoration.</p> <p>No Visitor Facilities: Absence of rest areas, toilets, or cafés limits usability.</p>	<p>Reuse Potential: Historic buildings can host cultural and community functions.</p> <p>Sustainable Design: New infrastructure can adopt green energy and water systems.</p>	<p>Outdated Infrastructure: Lacks basic systems, making reuse difficult and costly.</p> <p>Low Maintenance Funding: Insufficient upkeep may accelerate decay.</p>	HIGH
Historical and Cultural Heritage	<p>-Recognize as Torino’s Former Zoo (1955 -1987): A site with historical significance and nostalgia for older residents.</p> <p>-Existing Historic Structures: Some buildings can be restored to retain their architectural identity.</p>	<p>-Lack of Awareness Among Younger Generations: Many residents under 40 are unaware of the site’s history.</p> <p>-Some Buildings Are Beyond Repair: Neglected structures pose safety hazards and may require demolition.</p>	<p>- Cultural Revitalization: Could be transformed into an eco-museum, art space, or education center.</p> <p>-Use of Historic Branding for Tourism: Highlighting its zoo legacy could attract heritage tourism and educational visits.</p>	<p>-Risk of Losing Heritage Value: Without conservation, remaining structures may be demolished or permanently deteriorate.</p> <p>-Inadequate Legal Protections: No official heritage designation, meaning buildings are at risk.</p>	MEDIUM
Ecological and Environmental Factors	<p>-Rich Biodiversity: The area supports over 60 bird species and diverse plant life.</p> <p>-Existing Green Buffer Zone: Acts as a carbon sink and improves urban air quality.</p>	<p>-Rising Pollution Levels: 2022 studies show a 12% increase in water pollution in the Po River.</p> <p>-Lack of Waste Management Facilities: No recycling bins or sustainability initiatives in place.</p>	<p>-Conservation Potential: Could be integrated into Torino’s environmental sustainability programs.</p> <p>Green City Integration: Suitable for reforestation and eco-friendly landscaping.</p>	<p>-Climate Change Impacts: Rising temperatures and extreme weather events threaten local ecosystems.</p> <p>-River Contamination from Urban Runoff: Industrial waste and urban runoff pose long-term pollution risks.</p>	HIGH
Community Engagement and Social Usage	<p>Public Support: 68% of residents favor urban green projects.</p> <p>Multi-Use Potential: Suitable for recreational, cultural, and educational uses.</p>	<p>-Lack of Organized Community Events: No structured programming or cultural festivals in the area.</p> <p>-Security and Safety Issues: Unused spaces may attract vandalism or informal settlements.</p>	<p>- Increased Public Engagement: Local NGOs and universities could be involved in social initiatives.</p> <p>- Funding from Local Businesses: Partnerships with private companies could provide long-term funding.</p>	<p>- Potential Community Disinterest: If not properly managed, public enthusiasm could decline over time.</p> <p>-Conflicts Over Development Plans: Public opposition could delay implementation of new projects.</p>	MEDIUM
Real Estate Market	<p>-Strategic Location for Development: The site is near high-value properties, making it attractive for investors.</p> <p>-High Interest from Developers: Sustainable urban renewal projects are a growing trend in Italy.</p>	<p>-Neglected and Underutilized: Abandoned buildings and lack of maintenance lower its appeal.</p> <p>-Uncertain Regulatory Environment: Legal restrictions on development are not fully clarified.</p>	<p>Sustainable Reuse: Old structures can be adapted for green housing or co-working.</p> <p>Green Investment Appeal: LEED projects may attract major investors.</p>	<p>-Risk of Speculative Investment: If real estate prices spike, it may become inaccessible to the local community.</p> <p>-Market Volatility: Economic downturns could limit real estate investment interest.</p>	MEDIUM



	SWOT				
	STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS	LEVEL
Population	-Diverse Urban Demographics: The area serves a mix of students, professionals, and elderly residents. -Active Civil Society: Torino has strong community organizations and environmental groups.	Aging Population: 24% of residents are over 65. -Social Divide in Green Space Usage: Some demographics may feel excluded if the space is not designed inclusively.	Youth Engagement: Involving young people supports long-term community ties. Resident Attraction: Quality design can draw young families and professionals.	Gentrification Risk: Rising values may displace low-income residents. Demographic Shifts: Economic changes may affect future population trends.	MEDIUM
Built/Historical Environment	-Retains Some Architectural Heritage: Certain structures from the old zoo era are still intact and could be restored.	-Deterioration of Buildings: At least 60% of structures require major intervention.	-Integration of Historic Elements in Redevelopment: Restoration can add cultural and tourism value.	- Demolition Risks: Without intervention, buildings may be deemed unsalvageable.	HIGH
Pollution, CO2 Emissions, and Sustainability	-Acts as a Carbon Sink: The green area absorbs CO2 and improves air quality. -Green Space Offers Cooling Effect: Helps mitigate urban heat islands.	Air Pollution: Nearby industry causes PM10 levels to exceed EU limits. No Waste System: Lacks recycling and sustainability measures.	Renewable Energy: Solar and rain-water systems can be added. Reforestation Potential: Partnerships can support carbon offset projects.	Climate Risk: Heat and storms endanger local ecosystems. River Pollution: Runoff and waste harm aquatic biodiversity.	HIGH
Education	University Access: Close to Polito and Unito, making it ideal for research partnerships. Public Interest: Strong support for green education programs.	-No Facilities: Lacks classrooms, labs, and event spaces. No Programs: No collaboration with schools or universities.	Education Potential: Suitable for programs on ecology, sustainability, and heritage. EU Funding: Grants like Horizon Europe could support development.	Low Awareness: Education potential may be missed without engagement. Funding Competition: Other local projects may draw more support.	MEDIUM
Tourism	Tourism Potential: Near major parks and museums. Event Space: Ideal for festivals, exhibitions, and tours.	-Lack of Branding & Visibility: No major marketing efforts or tourist promotions exist. -Limited Visitor Amenities: No restaurants, gift shops, or guided tour services are currently available.	Eco-Tourism Potential: Could become a nature reserve or cultural park. Local Partnerships: Businesses can support and promote the site.	Seasonal Limits: Cold weather may reduce visitor flow. Economic Sensitivity: Crises can negatively impact tourism.	MEDIUM
Innovation	Smart City Growth: Torino invests in sustainability and tech. Tech Talent Nearby: Universities can support pilot projects.	No Smart Infrastructure: Lacks tech systems for smart applications. No Private Partners: Major tech firms not yet involved.	Innovation Hub: Ideal for smart tech and green infrastructure. Start-Up Potential: Could host sustainability-focused incubators.	High Costs: Advanced solutions need strong public funding. Regulatory Lag: Policies may fall behind tech progress.	MEDIUM
Governance and Legal Aspects	Public Support: Municipality backs site redevelopment. Zoning Protection: Green space status limits overbuilding.	-Bureaucratic Challenges: Lengthy permit and approval processes may delay restoration and investment. -Unclear Long-Term Development Plan: There is no official master plan outlining future developments.	-Potential for Legal Protection: The site could gain official heritage or environmental protection status, preventing commercial misuse. Policy Partnerships: NGOs and EU ties can strengthen legal frameworks.	Policy Shifts: Political changes may reduce green project support. Land Use Conflicts: Stakeholder disputes could delay progress.	MEDIUM



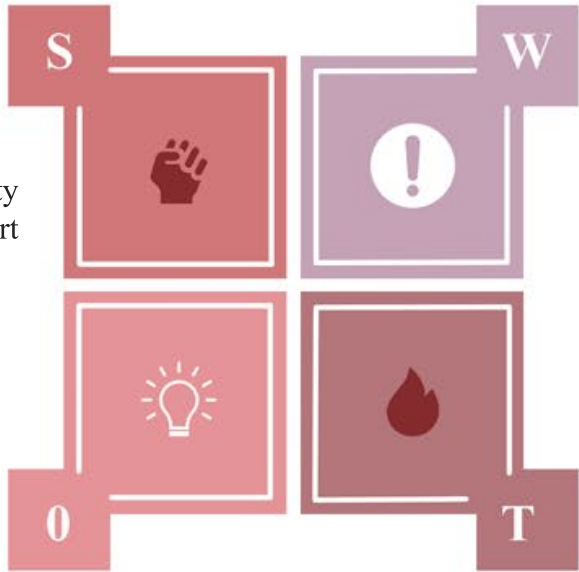
5.3.3 Macrothemes in the Analysis and Project Area-Specific Assessments

Strenghts

- Central Location
- Large Green Area - Biodiversity
- Cultural Memory - Identity
- Public - Municipal Support
- Multiple Access

Opportunities

- Adaptive Reuse Potential
- Ecotourism and Cultural Programming
- Potential of workshops, events



Weaknesses

- Deteriorated Building
- Public Transport
- Safety and Maintenance Issues

Threats

- Climate Change
- High Costs
- Legal and Protection Uncertainty

Accessibility and Mobility

Parco Michelotti is only 2 km from the city centre and has good pedestrian access. However, public transport is not very frequent and the linear structure of the park limits access to some areas.

Infrastructure and Physical Condition

Around 40% of the structures are in serious deterioration. Basic infrastructure is lacking, but open spaces are suitable for flexible and reusable public uses.

Historical and Cultural Heritage

Although the old zoo structures are present in the collective memory of the site, the connection with the younger generations is weak. The lack of a conservation status threatens the sustainability of this heritage.

Ecological and Environmental Aspects

Although the park has high ecological value, pollution, poor waste management and climate risks jeopardize its sustainability.

Public Participation and Social Use

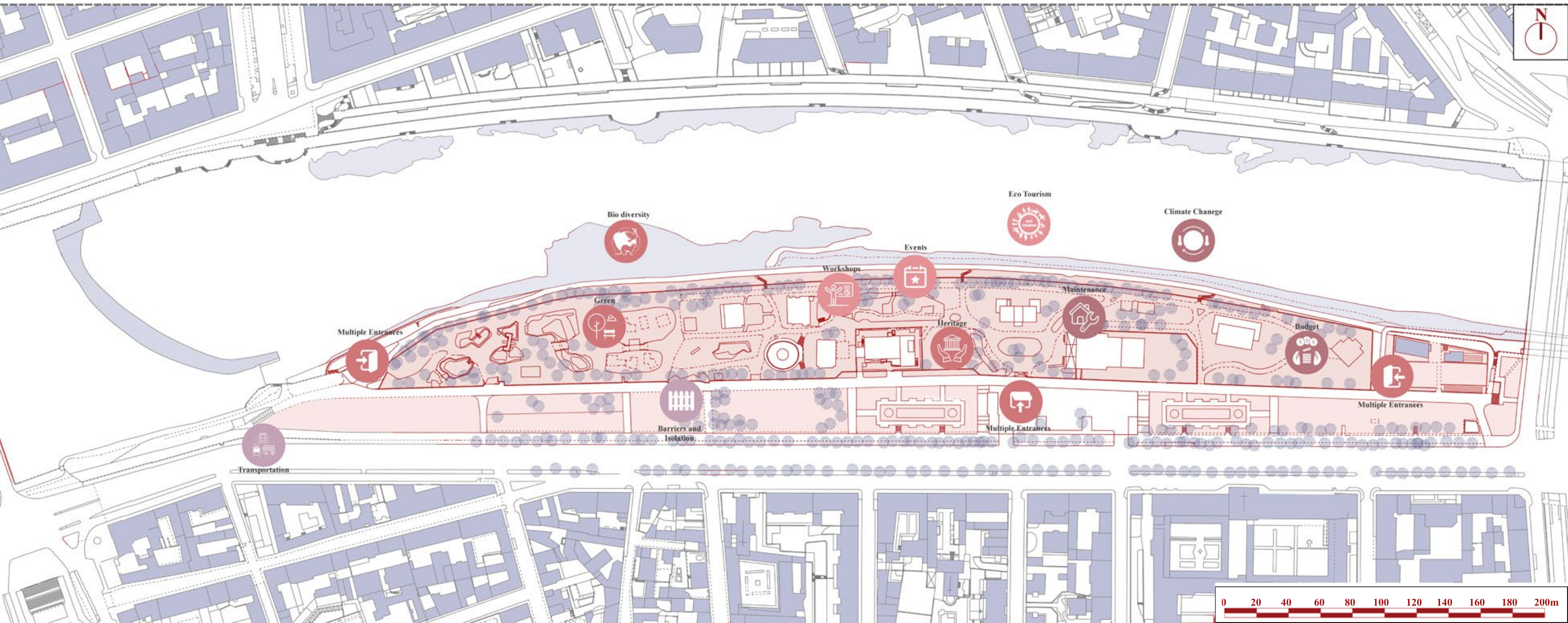
Public support is strong; however, the lack of activity and the weak perception of security limit the socio-cultural potential of the site.

Management and Legal Status

Although status of public green space provides a positive basis, lack of a clear development plan and legal uncertainties make interventions difficult.

Economic Suitability

Its location offers investment potential;however, due to high costs, the transformation process requires strong financial support.





The SWOT analysis of the Michelotti Park and the remains of the former zoo provided a critical foundation for understanding the multifaceted character of the site and informed the development of the ZOETOPIA project. Through a structured assessment of strengths, weaknesses, opportunities and threats, the analysis revealed the complex interplay between the park’s natural assets, cultural memory and urban challenges, and provided strategic insights that shaped both the conceptual and spatial framework of the intervention.

Key strengths identified include the park’s extensive green space, biodiversity and proximity to the city centre; qualities that make it theoretically highly accessible and rich in ecological and recreational value. The presence of architectural remains from the former zoo further contributes to its historical and symbolic significance, providing a tangible link to collective memory and past urban narratives. These elements provide a strong foundation for identity and place-making, which are crucial in framing future uses.

However, the analysis also revealed a number of pressing weaknesses. Accessibility remains limited in practice due to infrastructural barriers and poor connections to public transport. The park suffers from underused and decaying structures, a lack of consistent programming, and minimal activity throughout the year. Furthermore, the lack of a unified identity contributes to the site’s ambiguity, weakening its significance in the urban imagination. Seasonal patterns of use and poor maintenance exacerbate these problems, suggesting a need for both physical and conceptual renewal.

The analysis also highlighted significant opportunities for transformation. The potential to integrate eco-tourism, environmental education, and youth cultural programming emerged as central themes. Adaptive reuse of existing structures was identified as a powerful revitalization strategy that fosters sustainable innovation while maintaining historical continuity. The site offers fertile ground for participatory design, informal learning, and experiential engagement with nature; qualities that align closely with contemporary urban and ecological agendas.

Conversely, the park also faces significant challenges. Limited municipal funding, lack of consistent maintenance, and broader challenges such as the long-term impacts of climate change threaten the viability of traditional redevelopment models. Furthermore, without a clear, community-focused vision, the site is at risk of further neglect or misuse.

In response to these insights, ZOETOPIA proposes a strategic reinvention of the former zoo as a constellation of thematic zones (Art, Learning, and Joy), each assigned to repurposed heritage structures. These zones serve as platforms for immersive exhibitions, inclusive events, and creative workshops that encourage intergenerational participation and environmental awareness. Rather than imposing a rigid master plan, ZOETOPIA offers a flexible framework that prioritizes community ownership, ecological resilience, and low-impact intervention. Flooded areas are intentionally left undeveloped, allowing natural processes to continue unimpeded, while constructed interventions adopt adaptive strategies that emphasize reuse rather than reconstruction. As a result, ZOETOPIA transforms SWOT’s analytical findings into a visionary yet realistic design approach, reframing the park not as a mere recreational space, but as a living laboratory for sustainability, memory, and inclusive urban renewal.

## 5.4 Case studies



01 – Belle Isle Zoo, Detroit, USA



02 – Palermo Zoo → Eco-Parque Buenos Aires, Argenti-



03 – Blijdorp Zoo (Rotterdam, Netherlands)



# 01 Belle Isle Zoo, Detroit, USA

**Location:** Belle Isle Park, Detroit, Michigan, USA  
**Original Function:** Municipal Zoo (opened 1895, closed 2002)  
**Redevelopment Period:** 2004 – 2013 (partial transformation)  
**New Use:** Belle Isle Nature Center – environmental education and outreach centre  
**Architects/Planners:** Detroit Zoological Society + local partners  
**Site Area:** Approx. 20 hectares (partial reuse)  
**Funding:** State and city grants + Detroit Zoological Society support

## Historical and Urban Context

Belle Isle Zoo opened in 1895 on Belle Isle Park, a large public island in the Detroit River. The zoo ran for more than 10 years before its closure in 2002 due to low visitor numbers, financial problems and old facilities. After its closure, great part of the park was left to decay and became overgrown with plants.

Belle Isle Park, designed by Frederick Law Olmsted, is culturally and ecologically important. In 2013, the Detroit Zoological Society reopened part of the old zoo as the Belle Isle Nature Center, reflecting a shift from traditional zoo displays to a focus on nature and environmental learning.

## Adaptive Reuse Strategy

The project demonstrates a selective adaptive reuse approach, by redeveloping only part of the site while most of it remains abandoned and overgrown as of 2024. The Belle Isle Nature Center, finished in 2013, represents the first phase of a larger effort to revitalize the area. State of Michigan is publicly discussing the ideas on how to use the remaining of zoo buildings.

This limited redevelopment shows both the possibilities and the challenges of adaptive reuse, especially when budgets are tight and ecological planning is complex.

At the moment, the key strategy is to use old paths and infrastructure, building a new Nature Center focused on Michigan’s ecosystems, and creating both indoor and outdoor areas for learning and interaction. Former animal cages were turned into habitat gardens, and the paths were redesigned to improve access, encourage community use, and support low-impact education. The project reflects a change in values, from showing off animals to environmental stewardship and involving people in learning.



Figure 103.



Figure 104.



Spatial Transformation – Before and After

Original (Before)	Redeveloped (After)
Animal cages and viewing pits	Interactive exhibits simulating native ecosystems
Animal cages and viewing pits	Accessible trails and outdoor education zones
Ticket booths and food kiosks	Seminar rooms, rest areas, and interpretation centres
Enclosed animal habitats	Pollinator gardens, boardwalks, and wetland observation zones

Access and Circulation

The renovated part of the site is now completely open to the public. Visitors enter through a new glass-fronted education building that continues to both indoor and outdoor exhibition areas. The layout follows a continuous loop, combining engaging indoor rooms with green outdoor spaces. The outdoor areas are linked to the park’s existing paths by removing fences and barriers. This creative design encourages school groups and families to spontaneously explore the space.

Strengths and Insights

The Belle Isle Nature Center is a successful example of partial adaptive reuse. It immediately benefits while leaving space for future development. This project shifts its focus from traditional animal exhibition to ecological learning and community engagement, by turning part of the old zoo into an interactive learning center. The design prioritizes the access and inclusion, by offering indoor and outdoor spaces where visitors can explore Michigan’s ecosystems through direct experience. Furthermore, old animal enclosures have been turned into gardens and habitat zones that help local biodiversity. The project also connects the site’s past with its present, by keeping some parts of the original zoo layout.



Figure 105.



Figure 106.



Figure 107.



Figure 108.



## 02 Palermo Zoo → Eco-Parque Buenos Aires, Argentina

**Location:** Palermo neighborhood, Buenos Aires, Argentina

**Original Function:** Zoological Garden (opened 1875, closed in 2016)

**Redevelopment Period:** 2016 – ongoing

**New Use:** Eco-parque: public green space, wildlife rehabilitation, and environmental education

**Architects/Planners:** Government of Buenos Aires + public-private partnerships

**Site Area:** Approx. 18 hectares

**Funding:** Public funding (City of Buenos Aires) + educational/environmental grants

### Historical and Urban Context

The Buenos Aires Zoo was founded in 1875 in the central Palermo district. For many years, it was one of the most well-known zoos in Latin America. Its design was influenced by Nineteenth century European zoos, by having decorative buildings, exotic animal enclosures, and carefully planned walkways.

People’s view started to change over time about keeping animal in captivity. Soon, the zoo faced growing criticism for outdated cages, overcrowding, and many concerns about animal care. In 2016, after more than 100 years, the zoo was closed and turned into the Eco-Parque; a place focused on nature, learning, and public enjoyment, showing a shift in values toward conservation and open green space.

### Adaptive Reuse Strategy

The transformation of the zoo into the Eco-Parque was planned as a slow and practical reuse of the site. The transformation’s focus was to give new purposes rather than rebuilding it completely.

Although a design competition took place in 2017, only some of the proposed ideas were carried out. The current reuse focuses on making the space open to the public, restoring nature, and reusing the old buildings with following main actions:

- Removing cages, fences, and old animal exhibits, and replacing them with gardens, walking paths and local plants
- Restoring historic buildings like the Templo de Vesta and other pavilions for future cultural or public use
- Adding signs, maps, and self-guided paths that explain the site’s natural and historical features
- Offering free access to most of the park, turning it into an open green space with shaded areas, informal seating, and places to watch wildlife
- Keeping only a few animals, such as rescued local species like capybaras and flamingos



Figure 109.



Figure 110.



For rehabilitation purposes, a few animals still live in large, open enclosures. While some parts of the site are still closed or restored, the Eco-Parque now serves as a peaceful and educational green space in the heart of the city. It strikes a balance between protecting the past and creating something new.

**Spatial Transformation – Before and After**

Original (Before)	Redeveloped (After)
Gated cages and animal enclosures	Rewilded green space with native vegetation and open ponds
Enclosed zoo paths	Free-entry walking trails with interpretive signage
Visitor areas designed for animal display	Open-plan circulation integrated into urban park network
Maintenance and feeding infrastructure	Heritage pavilions reused or awaiting repurposing

**Access and Circulation**

One of the biggest changes was to turn the former zoo into an open and welcoming city park. With several new entrances now it makes it easy for people to walk through the area and linking it with nearby green spaces and the Palermo neighborhood.

Pathways are open and shaded and very inviting for quiet walks. While old zoo structures have been softened with landscape and local plants. Clear signs, trail markers, and maps help visitors discover the park’s natural and historical features. Most of the park is open to everyone all year round, while some parts are still closed for safety and restoration reasons.

**Strengths and Insights**

Eco-Parque Buenos Aires shows how adaptive reuse can protect the cultural past of a site while changing how they work. The project keeps historic buildings and landscapes but adds contemporary values like sustainability, inclusion, and learning.

Instead of following one fixed plan, the city took a step-by-step approach based on the existing resources and feedbacks from the public. The result is a hybrid space with ecological park, heritage campus and urban experiment in rewinding and ethical reuse.

As of 2024, the park is still developing. Even though some zoo buildings haven’t yet been restored or reused, the site already gives locals and visitors meaningful ways to connect with nature and culture.



Figure 111.



Figure 112.



### 03 Blijdorp Zoo (Rotterdam, Netherlands)

**Location:** Rotterdam, South Holland, Netherlands

**Original Function:** Full zoological park (established in current location, 1939)

**Redevelopment Period:** 1990s – present (ongoing)

**New Use:** Educational halls, museum exhibits, community event spaces

**Architects/Planners:** Sybold van Ravesteyn (original architect), Blijdorp Foundation

**Site Area:** Approx. 28 hectares

**Funding:** Public heritage funds + zoo and municipality budgets

#### Historical and Urban Context

Blijdorp Zoo (Diergaarde Blijdorp) moved to its current location in 1939 and was designed by modernist architect Sybold van Ravesteyn. He created a well-planned layout with themed pavilions, decorative fronts, and open viewing areas. The zoo was damaged during World War II but later was rebuilt and kept much of its original design.

In recent decades, the zoo has changed not only in terms of its animals but also its buildings. Since the standards for keeping animals improved, some structures no longer were suitable to be used in zoo. However, because of their historical and architectural importance, these buildings were not destroyed. Instead, the zoo chose to reuse them by giving new purposes to them, while preserving their unique character.

#### Adaptive Reuse Strategy

Blijdorp Zoo's approach to adaptive reuse is to gradually transforming the site while keeping it fully operational. Historic buildings have been preserved and reimagined to support the zoo's educational and cultural goals.

The key reuse strategies are as following:

- Turning modernist animal pavilions into exhibition spaces where visitors can explore topics like biodiversity, conservation, and the zoo's own history.
- Transforming indoor viewing halls into hands-on learning areas for children and school groups.
- Using heritage buildings for temporary community events, such as talks, art shows, and public programs.
- Restoring historic features like facades, mosaic signs, and structural details to keep the site's original character

The most iconic example is the Rivièrahal (Riviera Hall), which previous was the zoo's main animal house, and now serves as an indoor cultural space and year-round gathering area.



Figure 113.



Figure 114.



Spatial Transformation – Before and After

Original (Before)	Redeveloped (After)
1930s animal pavilions and walkways	Museum-style exhibition halls, art installations, and historical displays
Service or storage buildings	Community classrooms and staff offices
Indoor viewing halls for exotic species	Educational lecture spaces and temporary installations
Animal-themed signage and cage façades	Restored and retained as heritage storytelling tools

Access and Circulation

The reused buildings have been fully blended into the zoo’s existing path system and now serve as optional indoor stops along the main visitor route. This setup keeps the zoo’s infrastructure intact, whilst adding cultural and educational value.

The Rivièrahal, as a key example, now acts as a weatherproof space during rainy days and a flexible venue for events, conservation talks, and changing exhibitions.

The new interpretive signs highlight each building’s history and its updated purpose while respecting the original layout.

Strengths and Insights

Blijdorp Zoo offers a unique example of adaptive reuse in place, which shows how buildings can take on new roles even as their original functions disappears. This approach supports architectural continuity, environmental sustainability, and creative reinterpretation of space.

The key strengths are as following:

- Preserving heritage architecture within an active zoo.
- Reusing spaces for multiple functions without full shutdown or relocation.
- Expanding educational opportunities through indoor programming.
- Helping the public engage with both architectural heritage and zoological content.

Unlike full-scale transformations such as Belle Isle or Eco-Parque, Blijdorp’s approach is more subtle. Here, adaptive reuse works alongside the zoo’s daily operations, and proves that change doesn’t always require demolition or desertion. Instead, thoughtful and gradual reinvention can succeed within existing systems.



Figure 115.



Figure 116.



Looking across several examples of adaptive reuse, a common trend becomes clear, that former zoos are increasingly being transformed from places of animal display into centers for education and public involvement. These spaces often find new relevance (whether they are fully closed, partially reused or still active), by focusing on learning, through ecological education, storytelling, or interactive exhibits.

Another shared quality of these sites is their generous green space, originally shaped for animal care and visitor strolls. These landscapes offer strong potential for public use as ecological parks, cultural gardens, or leisure areas. Studying projects like Belle Isle, Eco-Parque, and Blijdorp, show that these places can regain social and environmental value while preserving their layered history by thoughtful designs and accessibilities.

The precedent examples show that the most effective adaptive reuse strategies, combine education, public green access, and respectful architectural adaptation.

These lessons directly inspire the vision for the Ex-Zoo Michelotti: a layered public space where heritage, learning, and nature come together for today’s urban community.



# 06

## **From Zoo to ZOETOPIA : Reframing Function and Space**

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This chapter presents the transformation of the former zoo into ZOETOPIA as a public space shaped by memory, creativity, and reuse. Instead of demolishing the existing buildings, the project gives them new life through an adaptive reuse strategy. By introducing three themed zones, Art, Learning, and Joy. The site is reimagined as a cultural and social landscape that honors its past while making room for new experiences.



## 6.1 The Role of Function in Adaptive Reuse

In adaptive reuse, function is not only about what we do in a place. It also gives meaning to space. At places with strong emotions, like the old zoo in Michelotti Park, choosing the right function is important. It helps people remember the past but also changes the area and brings people back to use space.

This thesis does not treat the function as a simple replacement of old with new, but as an opportunity to rewrite the site's identity. The zoo's original purpose based on ideas of enclosure and public exhibition—has lost its relevance. What remains is an architectural skeleton, rich with potential, waiting to be reimaged.

The new functions proposed are not imposed from outside but carefully drawn from the spatial qualities of each building and the emotional memory they carry. By combining cultural, sensory, and community-oriented activities, the project seeks to restore the site's value and reintroduce it to the city as a place of stories, experiences, and connection.

## 6.2 From Zoo to ZOETOPIA: Reframing Function Through Design Intent

During its operation from 1955 to 1987, the Ex-Zoo of Michelotti Park functioned as a traditional zoological garden based on the concepts of enclosure, classification, and exhibition for the public. Each structure within the zoo was designed to accommodate different groups of animals including mammals, reptiles, birds which were arranged by species, size and environmental needs.

The layout followed a loose radial logic: Visitors moved along defined paths from one animal enclosure to the next, experiencing the site as a sequence of visual encounters. The architecture was utilitarian, designed for function over form, with cages, tanks, and observation platforms dictating the spatial experience. Most of the buildings such as the Acquario-Rettillario, the Casa delle Scimmie (Monkey House), Casa delle Tigri (Tiger House), and the Giraffe and Elephant shelters, remain standing today in varying states of decay.

The zoo served educational and entertainment purposes during its time, but its design reflected the beliefs of a different time when animal welfare, spatial freedom and public interaction were handled differently. Those structures are still there, yet they are empty and still have a strong emotional and spatial presence. Knowing their original function allows us to reinterpret them with sensitivity and imagination.

The conversion of the former zoo into ZOETOPIA – A Park for Stories, Senses, and Culture is based on the idea of both spatial and emotional healing. The Ex-Zoo Michelotti, which has been neglected for decades, remains a scattered collection of memories, physically whole but cut off from the urban fabric of the city. The design intent of ZOETOPIA is to revive these dormant spaces by adding new functions that promote imagination, community and public engagement.

The project does not forget the complex history of the place. It uses the past to make something new. ZOETOPIA is not afraid of the zoo's story. It gives the story a new meaning. Before, the zoo was a place

to keep animals inside. Now, it has become a place to explore and share stories. The name “ZOETOPIA” comes from “zoo” and “utopia.” It shows that the place has changed—from showing animals in cages to a space for people to be creative and work together.

ZOETOPIA enables site interaction through exhibitions, performance zones, gardens and memory-driven installations while allowing visitors to experience the site physically, emotionally and culturally. It is not a single building or function, but a network of experiences designed to engage curiosity, stimulate the senses, and foster social interaction.

In the end, the project wants to make the park important for people again. It also wants to show how we can reuse special places with difficult history and old buildings. The memory of the place is not forgotten. It becomes a space of dialogue and possibility.

## 6.3 ZOETOPIA's Spatial and Functional Strategy

The layout of the former zoo is made up of several small buildings spread across Michelotti Park. Each one had a specific role, and together they formed a scattered but connected system. This cluster structure is still visible today, and instead of changing it, ZOETOPIA builds upon it. The design keeps the original layout and transforms each building into a space with a new purpose—turning a forgotten place into a park filled with stories, culture, and activity.

Each building is reused based on its shape, size, and past use. The goal is to give every structure a new life while respecting its history. The variety of buildings allows the project to offer different types of experiences: immersive, creative, reflective, educational, and playful.

The ZOETOPIA project implements thematic zoning as a method to lead visitors through an elaborate meaningful journey. The park consists of three distinct zones which include the Art Zone and the Learning Zone and the Joy Zone. The three zones within the park enable different types of visitor engagement which range from emotional to intellectual to expressive while fostering various connections between people and nature and memory. The Art Zone features both immersive installations together with performance-based spaces. The Learning Zone emphasizes active participation through craft activities and ecological education. The Joy Zone establishes a lighter mood that enables visitors to rest while they interact socially and engage in spontaneous creative activities. The park experience benefits from a refined spatial approach which creates a rhythmic flow while maintaining the adaptive reuse principles of each building.

Connecting all three zones is the Memory Path—a continuous circulation loop inspired by the original zoo trails and the former Michelotti canal. Rather than restoring the canal physically, the path uses form, rhythm, and materiality to honor its presence. This design element transforms lost geography into a symbolic, walkable experience that links buildings, landscape, and memory across the park.



The core principle of ZOETOPIA belief that spaces of the past can become platforms for learning, imagination, and shared experience. The site functions serve as educational instruments which combine architectural solutions to develop awareness and emotional connections while strengthening our understanding of nature and memory and human connections.

**Zoning Strategy and Proposed Functions:**

**Art Zone:**

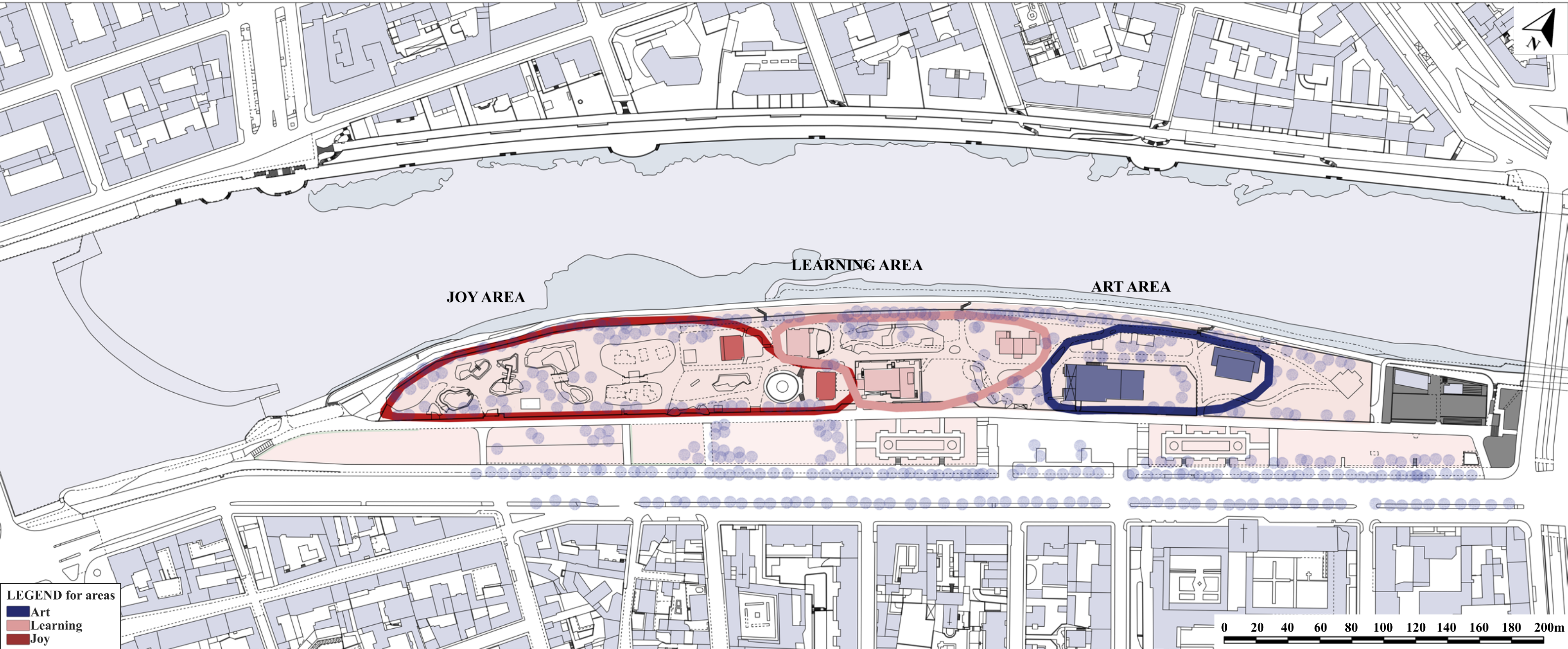
- Acquario Rettilario : Immersive Museum & Eco Story Pavilion
- Pachyderm House : Theater for Performances

**Learning zone:**

- Felidae House: Craft Material Lab
- Giraffe & Elephant House : Habitat Lab / Workshops

**Joy Zone :**

- Tiger House : Cultural Café
- Monkey House : Street Art Pavilion





# 07

## Architectural Design and Building Transformations

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The transformation of the former Michelotti Zoo into ZOETOPIA is built on rethinking its existing architecture. Each surviving building is approached not as an empty structure, but as a space full of memory, character, and untapped possibility. The project honors the original forms while giving them new public roles focused on art, learning and joy by using adaptive reuse.

This chapter is divided into two parts:

- At the first part, the master plan is presented, explaining the spatial organization, circulation logic, and landscape strategies that unify the site.

- The second part looks at each building individually, outlining:

1. Its original function and current condition

2. The proposed new function and its relationship to the ZOETOPIA zone

3. Supporting visuals such as plans, sections, renderings, and conceptual diagrams

The design interventions are light but full of meaning—protecting the architectural identity of each structure while creating emotional, educational, and social experiences. A once-abandoned zoo is now being reshaped into a unified public park where history, design, and imagination come together.



## 7.1 The Master Plan of ZOETOPIA

The master plan of ZOETOPIA is built on the idea of preserving and reactivating the original clustered layout of the former zoo. Instead of transforming the site into a typical open park, the design respects the historical layout — a collection of small buildings scattered across the landscape. These buildings remain in place and keep their external form. What changes is their interior function, their interrelation, and the emotional meaning they carry.

To bring coherence and new life to this scattered system, the project introduces the Memory Path — a continuous walkway that cuts across the site. This path follows the approximate trajectory of the former Michelotti canal, which once gave structure to the area. The canal is no longer visible, but its memory is brought back symbolically through the path's materials, rhythm, light and small architectural details. Instead of water, there is now a pedestrian route with different surface material, U-shaped wooden structures, and integrated benches that invite pause and reflection. In some areas, topographic changes and small crossings evoke the idea of the canal bed. These gestures turn the absence of the canal into a presence that can be seen, walked, and felt.

In select locations, especially near open areas or entrances, the Memory Path integrates small-scale interactive water elements, such as shallow splash zones or misting fountains. These moments are designed for children and families, turning remembrance into joy and making the park lively during warmer months.

The Memory Path also acts as the spine of the project, organizing how visitors experience the park. It connects all seven reprogrammed buildings while giving a sense of flow and sequence.

The site is organized into three zones, each with a different focus. The park's three experiential zones of Art, Learning and Joy, follow a free-flowing loop that uses the former zoo paths to guide visitors through space. The circulation path directs visitors to experience different activities, workshops and relaxation and play spaces. The space features areas for peaceful contemplation as well as social areas and interactive zones.

The Art Zone includes the Acquario-Rettillario and Pachyderm House. These buildings host immersive exhibitions and performance spaces.

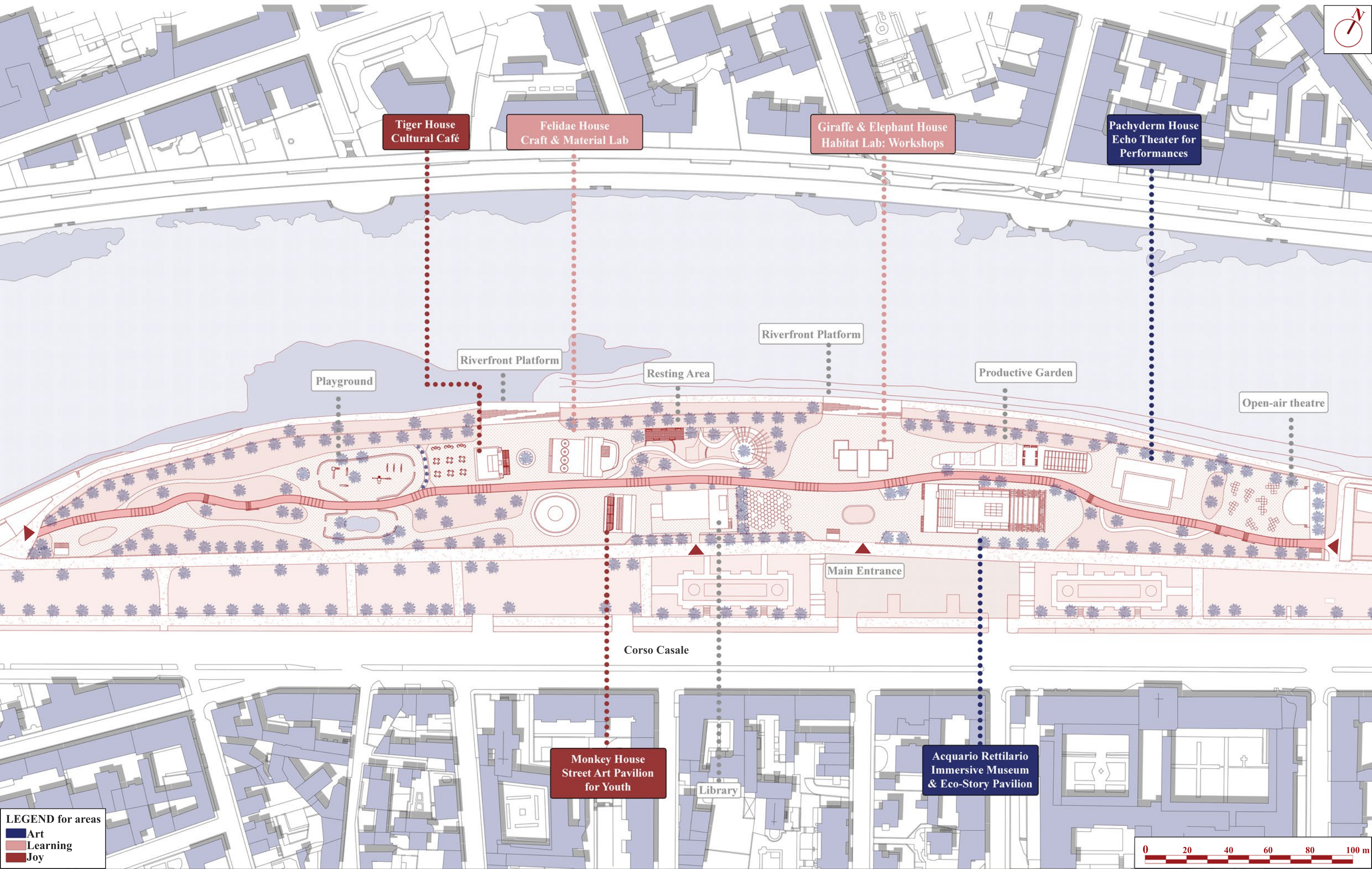
The Learning Zone includes the Library, Monkey House, Felidae House, and Giraffe & Elephant House. These spaces are dedicated to workshops, ecology, craft, and education.

The Joy Zone is centered around the Tiger House and surrounding open space, offering playful, informal, and social activities.

Each zone is defined by function and atmosphere, not by strict boundaries. The zoning system helps visitors navigate the park through emotion, curiosity, and activity — not through signage or gates. The result is a layered, walkable experience, where each structure contributes to a broader narrative.



ZOETOPIA - Masterplan of the Project





# ZOETOPIA

## Masterplan of the Project

The ex zoo was a system of small pavilions with different functions spread over a large area. ZOETOPIA builds on this existing structure and repurposes each building, preserving the spirit of the original plan. This way, the park becomes a vibrant place where stories, artistic experiences, learning and entertainment come together.

The park is divided into 3 different zones according to the functions of the buildings:

- Art
- Learning
- Joy

Tiger House : Cultural Café



Felidae House : Craft Material Lab



Giraffe & Elephant House : Habitat Lab / Workshops



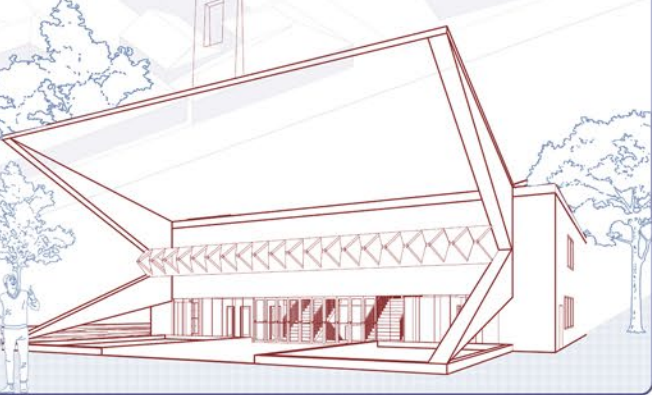
Main Entrance

Corso Casale

Monkey House : Street Art Pavilion



Acquario Rettillario : Immersive Museum & Eco Story Pavilion



Pachyderm House: Eco Theater for Performances



LEGEND for areas	
Art :	Acquario Rettillario : Immersive Museum & Eco Story Pavilion Pachyderm House : Theater for Performances
Learning :	Felidae House: Craft Material Lab Giraffe & Elephant House : Habitat Lab / Workshops
Joy :	Tiger House : Cultural Café   Monkey House : Street Art Pavilion



## 7.2 Architectural Transformation of the Buildings

The former zoo is made up of several small buildings spread across the site. Each building in ZOETOPIA was served for a specific purpose and now being reimagined with a new role. This section outlines the design approach for each building and showing how the original layout is preserved and new functions being added to support art, learning, and joy.

### 7.2.1 Acquario-Rettillario – Immersive Museum and Eco-Story Pavilion

Originally introduced in Chapter 3, the Acquario-Rettillario was built to house aquatic species and reptiles in tanks, offering a controlled environment for observation and display. Its enclosed, dark layout, organized by long corridors and viewing chambers, defined how visitors engaged with nature — through glass, and at a distance.

Acquario-Rettillario becomes an immersive museum and eco-story pavilion, acting as the emotional and experiential core of ZOETOPIA. The building’s transformation is designed to respect and reinterpret its original function—once a space for viewing aquatic life and reptiles, it now becomes a place to experience stories about nature, memory, and change. The layout, once defined by tanks and enclosures, is kept largely intact and reused as a sequence of walk-through installations that stimulate the senses.

The lower-level transforms into a series of ‘Story Worlds’ which present immersive digital environments that use projection and sound and light and tactile materials to transport visitors into natural ecosystems and emotional landscapes. The transformation draws inspiration from real-world installations at ARTECHOUSE and Hall des Lumières while using feasible technologies and spatial design strategies.

A full-height projection system combined with undulating blue lighting and low-frequency ocean sounds creates an underwater experience in the first room called The Deep Sea. The floor and walls and ceiling display moving light patterns which create an ocean deep experience without physical tanks.

High-resolution projections of trees and animals and misty canopies create a living rainforest environment in the second room. The multichannel sound system plays tropical ecosystem sounds including bird calls and insects and distant howls while the carefully designed lighting passes through leaves to create shifting sunlight effects.

The third space, The Animal Voices Archive, offers an interactive, smart experience. Visitors can choose from a selection of animal sounds including extinct species and endangered species and local species which triggers the display of the corresponding animal visuals next to them. The synchronized life-sized images and sounds generate moments that help visitors feel present and empathetic towards the animals. The digital archive functions expand through time by receiving new content additions.

The three rooms implement modular digital equipment which allows seasonal reprogramming and updates. The Jungle Room transforms into different environments such as the Desert or Arctic regions which converts the space into an interactive educational platform about the environment. The project creates genuine technologically backed experiences that adapt to different situations while maintaining

emotional strength through concrete implementation instead of abstract concepts.

The upper level is transformed into a flexible cultural forum—a space for talks, workshops, small exhibitions, or storytelling evenings. The content here connects directly to the building’s former use and it explores themes like natural habitats, species conservation, animal cognition, and environmental narratives. The space provides a human-centered complement to the immersive experience below, opening space for reflection and encouraging conversations around the ethical and ecological issues that were once raised by the zoo.



Figure 117: Artechhouse, New York (Source: [Artechhouse](#)).



Figure 118: Artechhouse, New York (Source: [Artechhouse](#)).



First Floor  
Scale 1:200



Legend	
1	Cloakroom
2	Management
3	Ticket counter
4	Security
5	Toilet woman
6	Toilet men
7	Exhibition
8	Tropical World
9	Deep sea
10	Sky Room

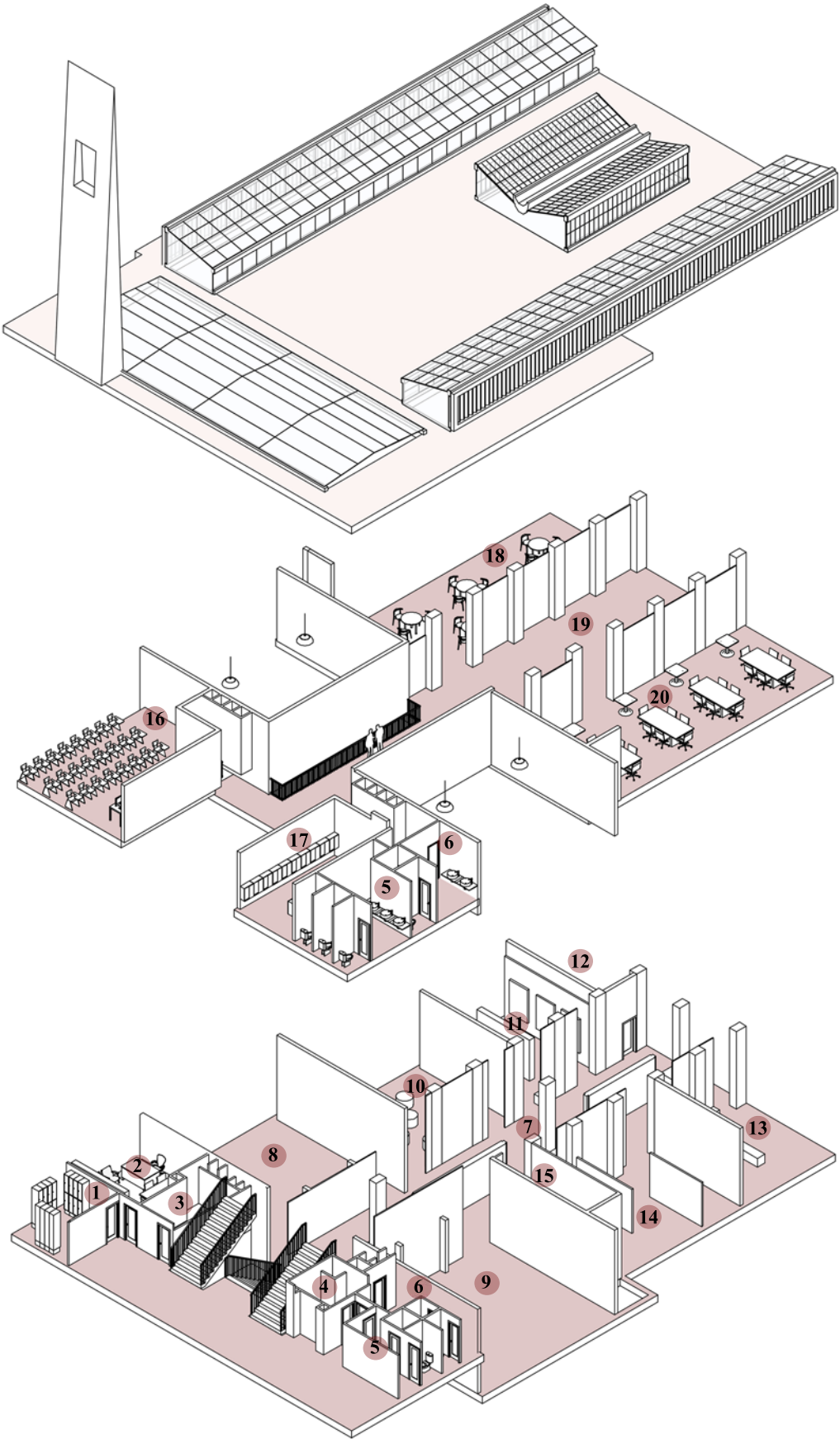
Legend	
11	Animal Echo
12	Control Room
13	Shadow Play
14	Time Journey
15	Elevator
16	Education Hub
17	Storage
18	Workshop Zone
19	Exhibition
20	Future Habitats Lab

Ground Floor  
Scale 1:200





ZOETOPIA - Exploded Axonometric



**Roof**

Shading Elements /  
Translucent panels  
Designed to provide  
light control and  
microclimate balance.

- Floor 1**  
+2.17
- 5 Toilet women
  - 6 Toilet men
  - 16 Education Hub
  - 17 Storage
  - 18 Workshop zone
  - 19 Exhibition
  - 20 Future Habitats Lab

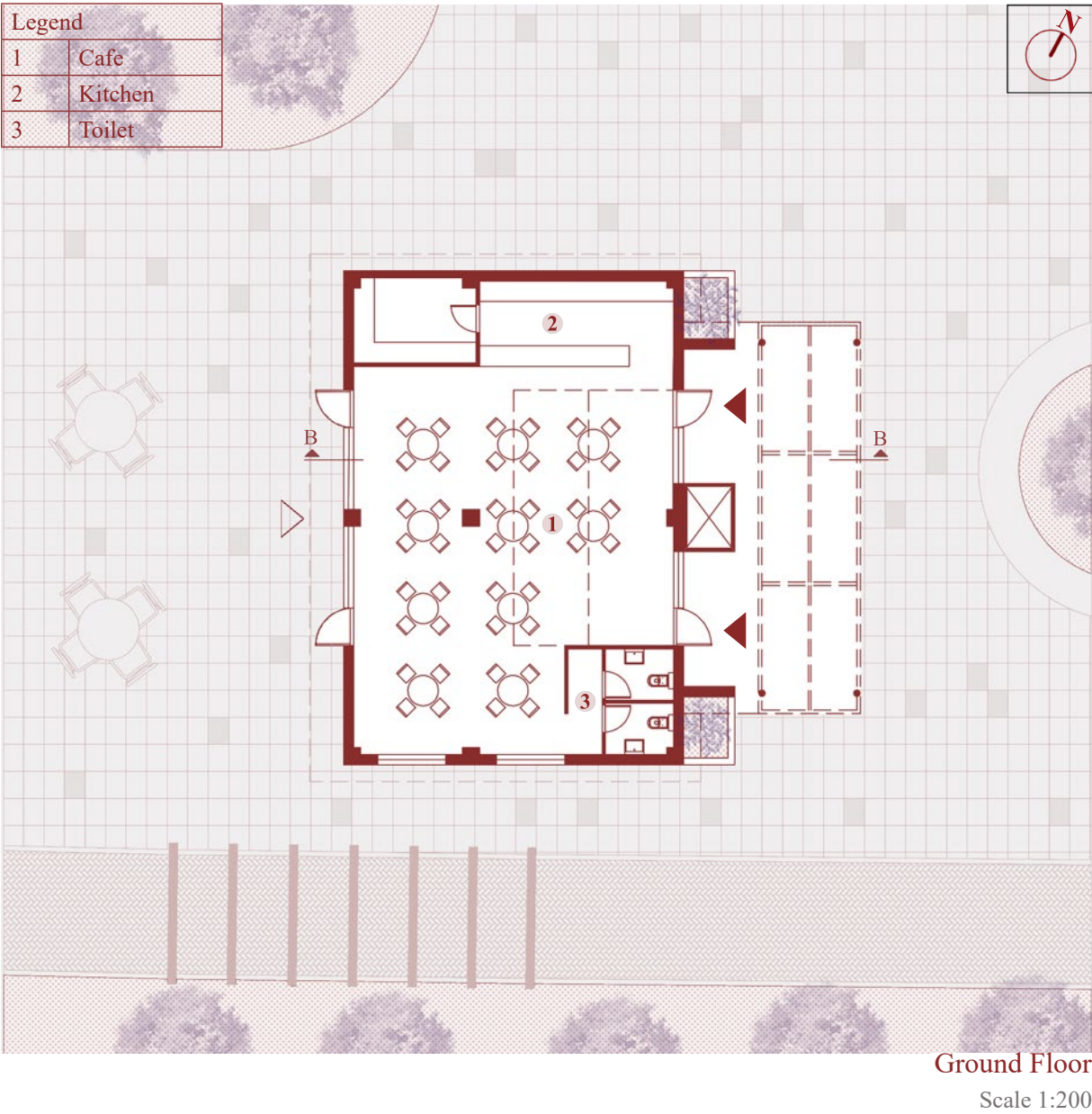
- Ground Floor**  
-2.13
- 1 Cloakroom
  - 2 Management
  - 3 Ticket Counter
  - 4 Security
  - 5 Toilet women
  - 6 Toilet men
  - 7 Exhibition
  - 8 Tropical world
  - 9 Deep sea
  - 10 Sky room
  - 11 Animal Echo
  - 12 Control Room
  - 13 Shadow Play
  - 14 Time Journey

7.2.2 Tiger House Creative Café and Social Stop

The Tiger House has been reimagined as a cozy, creative café that breaks up the ZOETOPIA narrative with a welcoming pause. The Tiger House, previous was a place where visitors used to observe tigers in isolation. But now, it invites people to gather, unwind, and exchange ideas. In other terms, it turns former space of spectacle into one of connection.

The compact size, clerestory windows, and clean rectangular layout of the building, create a warm, airy setting ideal for conversation and quiet moments. The building’s original graffiti-covered exterior has been preserved to blend its past identity with its new social purpose.

The Tiger House as a part of the Joy Zone, serves as a cultural stop along the ZOETOPIA route. It occasionally hosts small-scale events like poetry readings, zine launches, pop-up exhibitions, and acoustic sets and transforming it into an active social hub within the park.





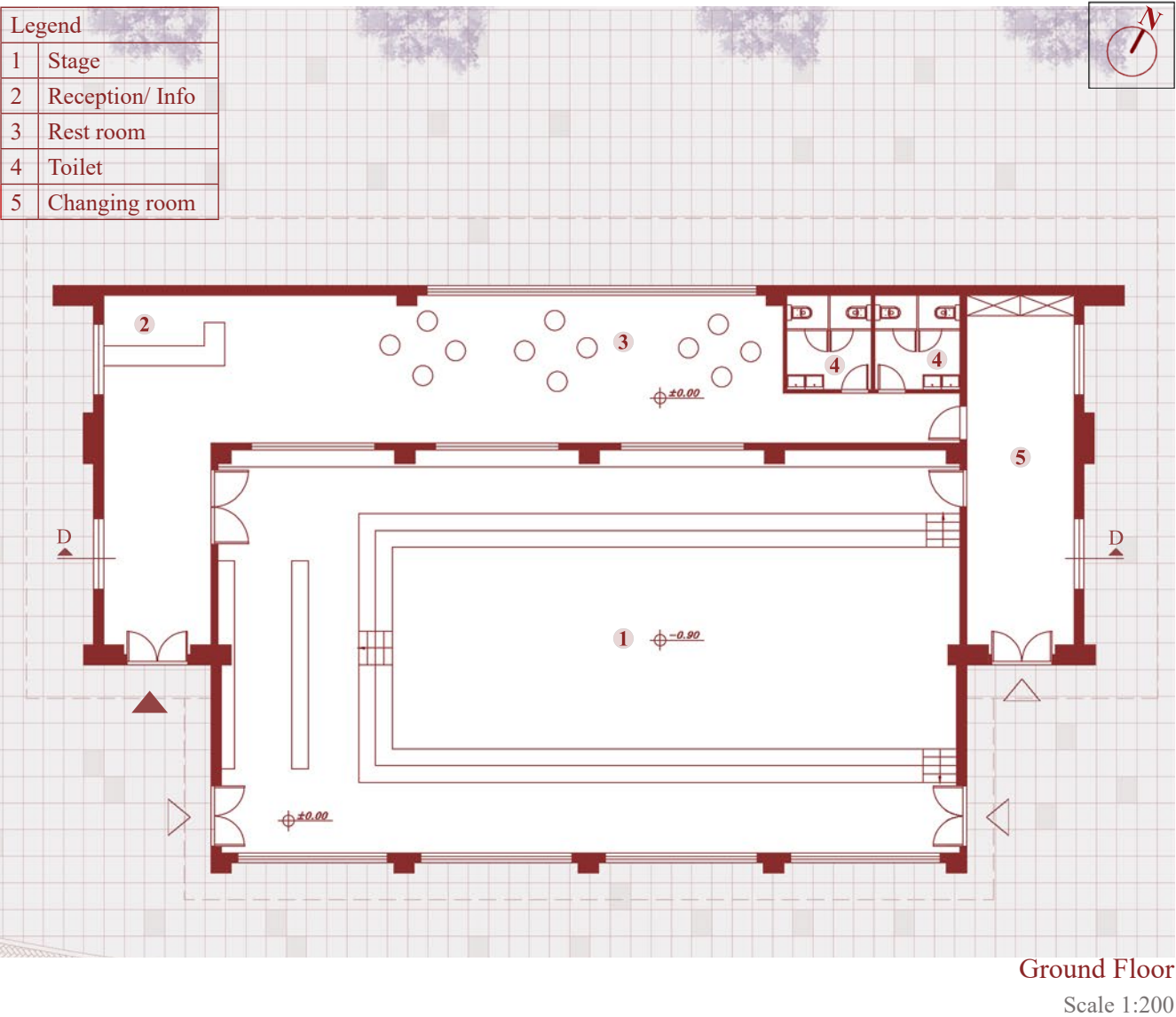
7.2.3 Pachyderm House (Echo Theater)

The Pachyderm House has been transformed into the Echo Theater which functions as an adaptable venue for performances and public storytelling. The building was previously sheltered zoo for animals and now it fosters creativity and shared memories. The former hippo pool has become a small amphitheater, hosting community theater, spoken word events, acoustic concerts, and seasonal performances.

The topics often relate to animal welfare, habitat preservation, and the changing relationship between humans and non-humans by transforming passive observation into meaningful engagement.

The building’s eastern wing includes backstage spaces like changing rooms and storage, while the western wing houses the main visitor entrance, security checkpoint, and restrooms. The original architectural layout is kept intact, which allows flexible programming and strong public access.

Through thoughtful landscape design, the Echo Theater retains its iconic form while becoming an open, inclusive cultural space within ZOETOPIA , where stories no longer center on animals behind glass, but on protecting the shared world they came from.



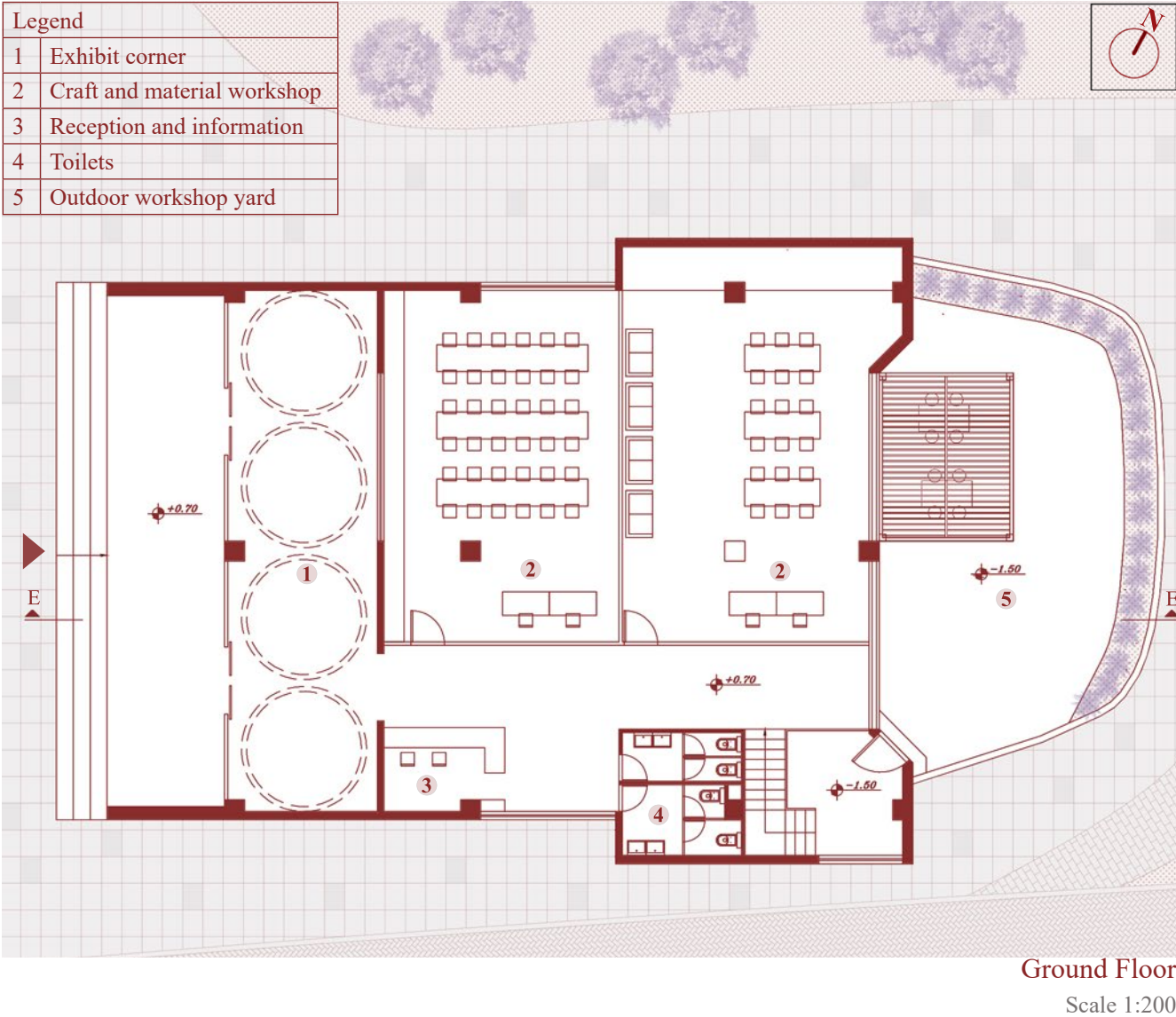
7.2.4 Felidae House (Craft and Material Lab)

The Felidae House now operates as the Craft and Material Lab, that is a space for natural making and creative discovery. The building was previously home to wild cats, but now invites visitors to explore hands-on processes that celebrate nature through craft.

Its modular design and conical skylights create natural spotlights and draws attention to textures and details in a small display near the entrance. Also in the entrance part, selected works by artisans and visitors are exhibited.

The building hosts workshops in clay, wood, recycled textiles, and botanical pigments, alongside an outdoor work yard for seasonal, nature-based activities like botanical dyeing, clay modeling, and weaving. These features allow creativity to extend beyond the building itself and fostering a deeper connection between people, materials, and place.

Now the Felidae House, a peaceful creative hub within ZOETOPIA, offers a space for making, reflecting, and remembering—not through animal display, but through care, memory, and transformation.

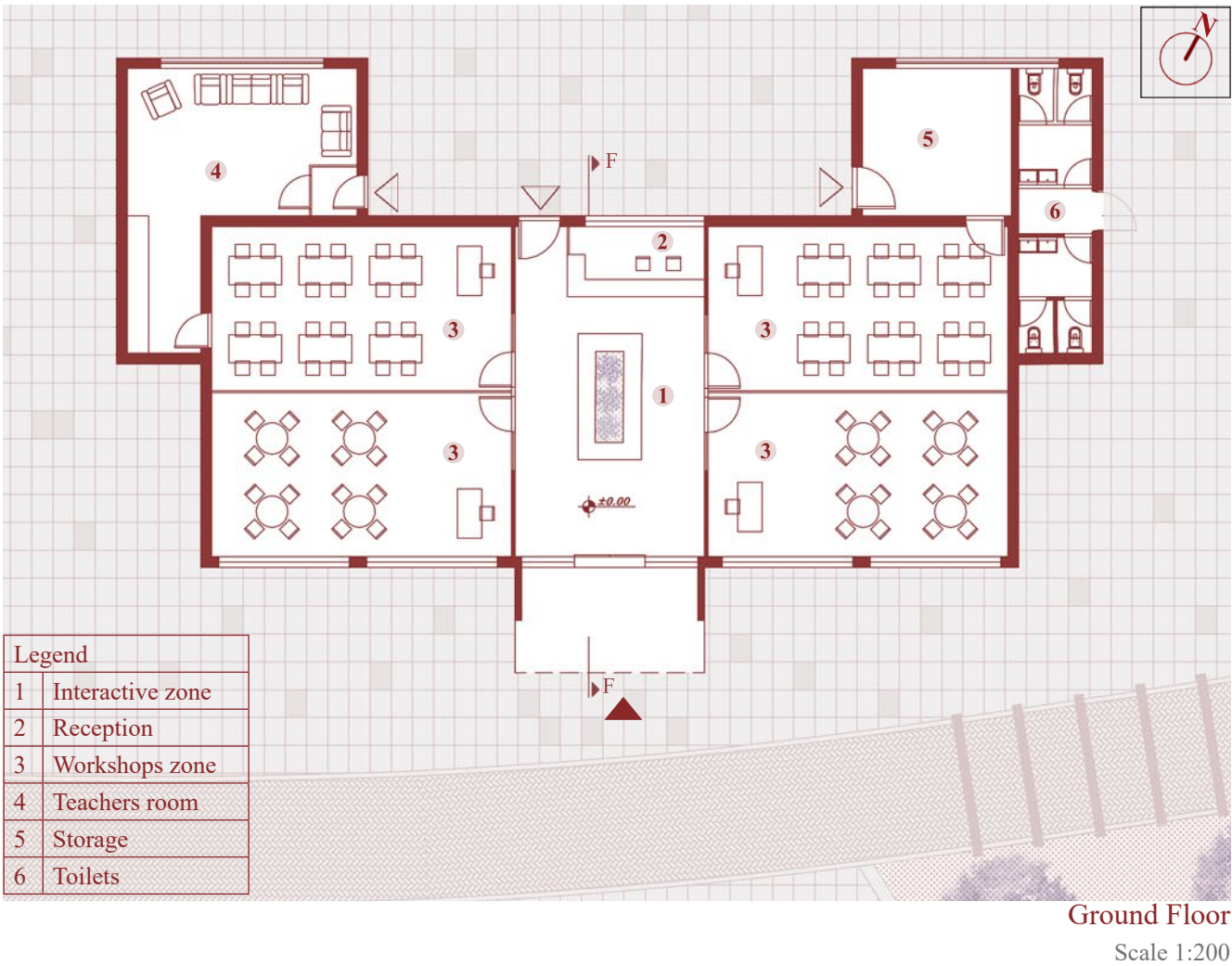




7.2.5 Giraffe and Elephant House (Habitat Lab)

Giraffe and Elephant House emerge as a Habitat Lab as a dynamic workshop pavilion which hosts seasonal and short-term programs focused on nature and creativity and coexistence. The building design featuring two wing structures and a connecting central hall provides ideal conditions for conducting various activities at once. The wings operate as dedicated spaces for children and adult students to participate in workshops which explore different themes throughout the year including urban gardening and animal inspired design and eco-crafting and sustainable practices. The central hall serves as an interactive area that hosts group discussions and community displays which change with each workshop cycle. The structure enables continuous public interaction while providing ongoing flexibility because visitors can discover fresh perspectives about environmental empathy during their repeated visits. The building has been transformed into an active educational, learning and social hub because of its historic layers and open design structure in ZOETOPIA’s central area.

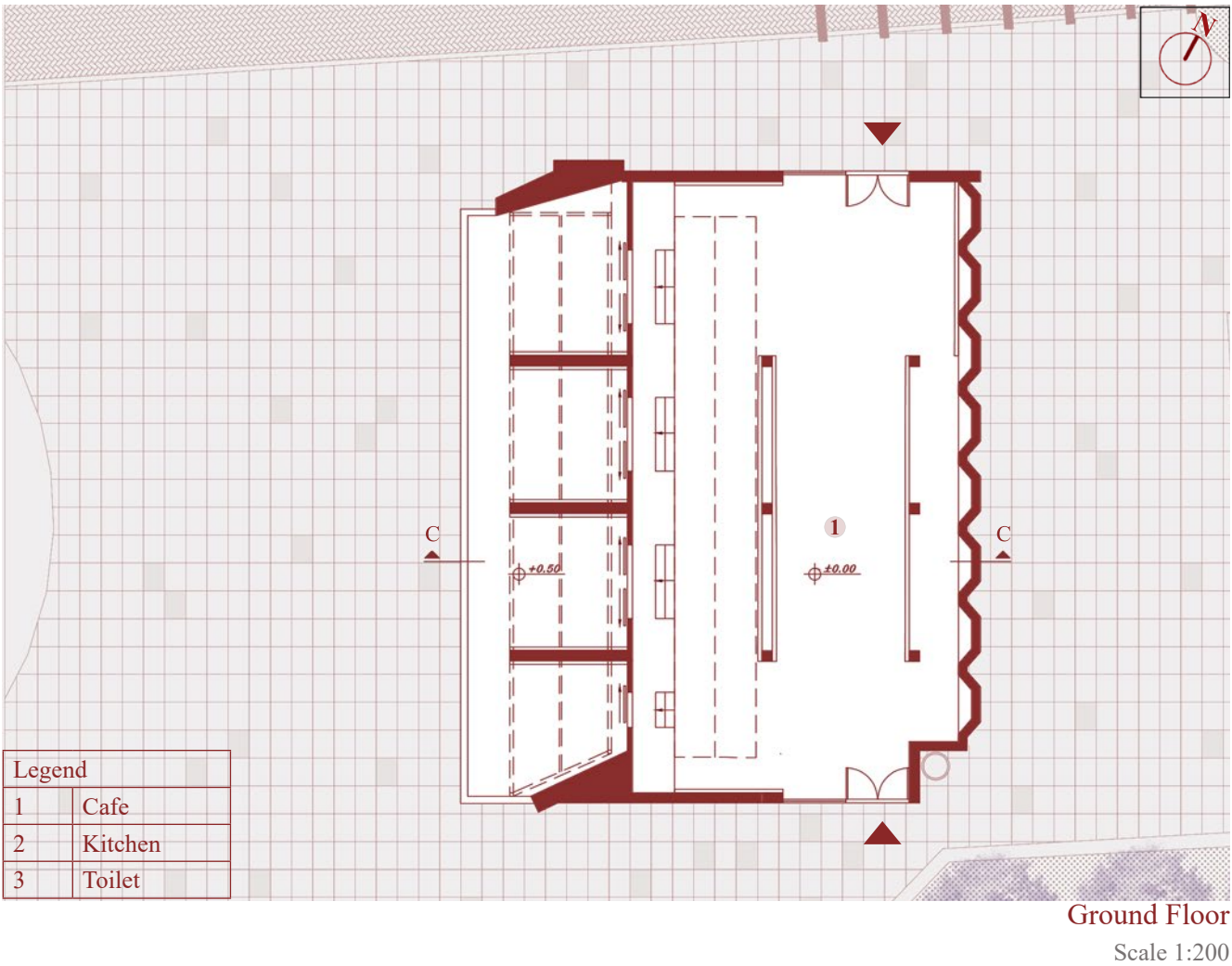
An additional lightweight structure is designed outside the main buildings part of the Habitat Lab, as part of the Habitat Lab. Its being spired by greenhouses and garden frameworks and invites visitors to interact with plants, soil, and seasonal growth. This open-air pavilion supports hands-on activities like composting, urban gardening, seed exchanges, and botanical experiments. It deepens the building’s connection to its surroundings and brings a living, interactive layer to ZOETOPIA’s environmental education.



7.2.6 Monkey House (Street Art Pavilion)

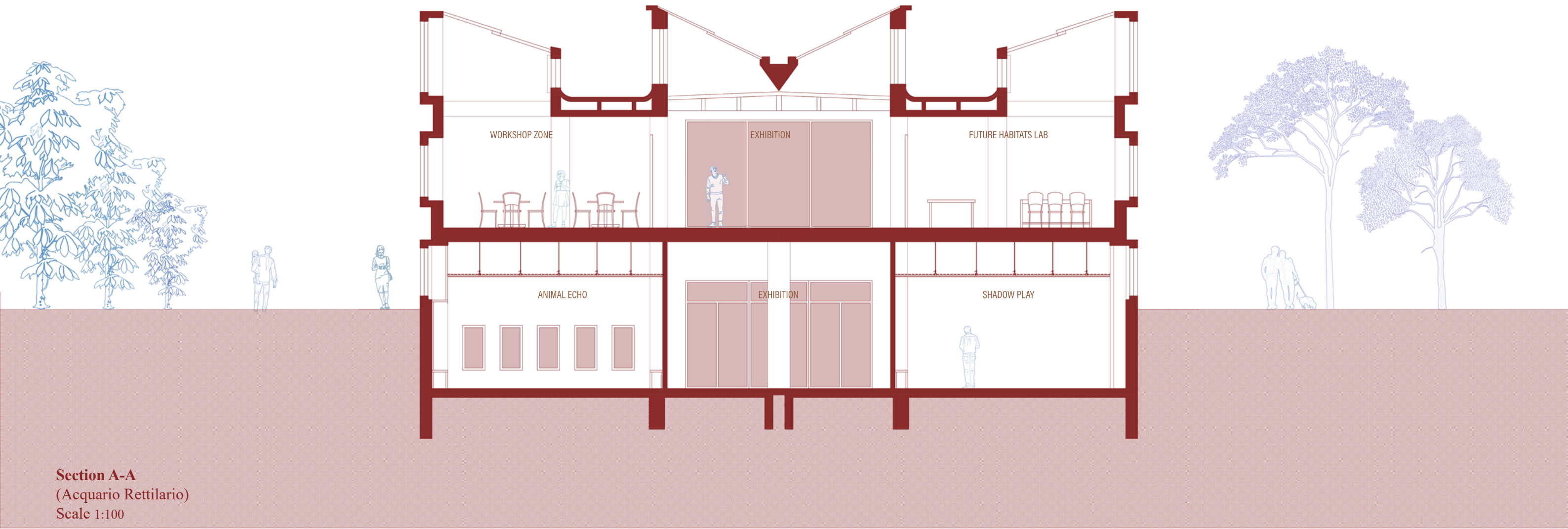
Monkey House is transformed into The Loop which operates as a raw expressive space within Monkey House that serves as a street art destination for youth creativity. It is an open studio space which welcomes teens and young adults to explore various forms of street art. This concept is rooted in the park’s own history. After the zoo closure, street artists began using the abandoned site as an open informal canvas. Their work, which is still visible on the walls of several buildings, brought color, voice, and presence back to a neglected space. The Loop picks up that narrative and shaping it into something more defined without losing the energy and spontaneity of its origins. The space features graffiti walls together with stencil zones and zine-making corners that allow visitors to create art freely. The space transforms into a happy combination of practice and play through guided workshops which teach mural painting and sticker design and urban illustration techniques.

Whether they come to learn or simply express themselves, visitors are welcome to leave their mark on the space. The Loop functions as a protected space where various cultural expressions and voices gather to meet. The circular sunken pit maintains its original form as a memorial to the zoo’s past existence although it no longer serves any practical purpose. The untouched historical site stands as a direct past reminder which contrasts with the new creative energy that surrounds it.



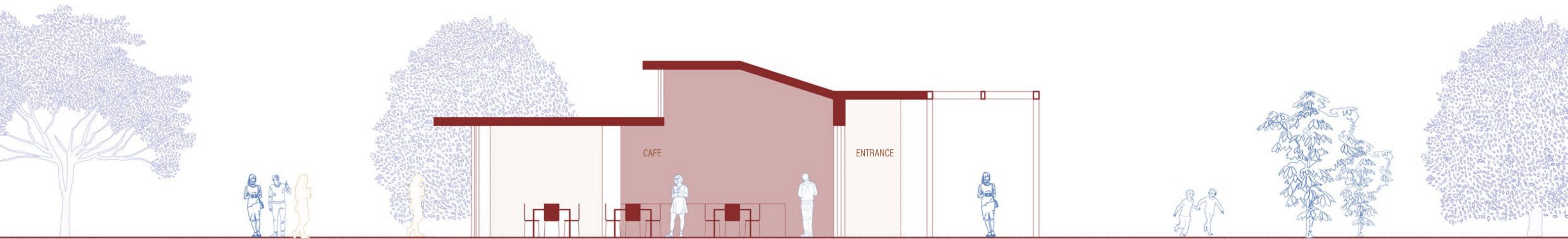


7.3 Sections



**Section A-A**  
(Acquario Rettilario)  
Scale 1:100

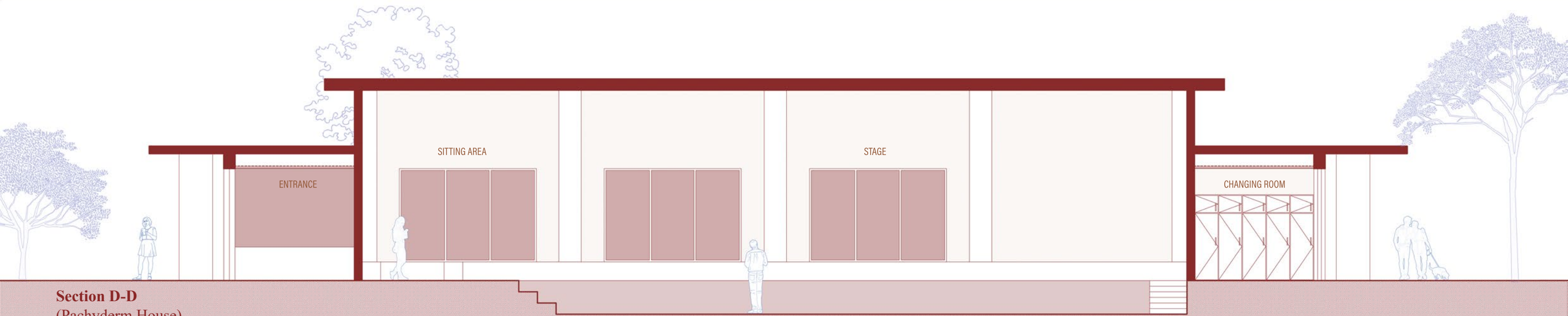




**Section B-B**  
(Tiger House)  
Scale 1:100

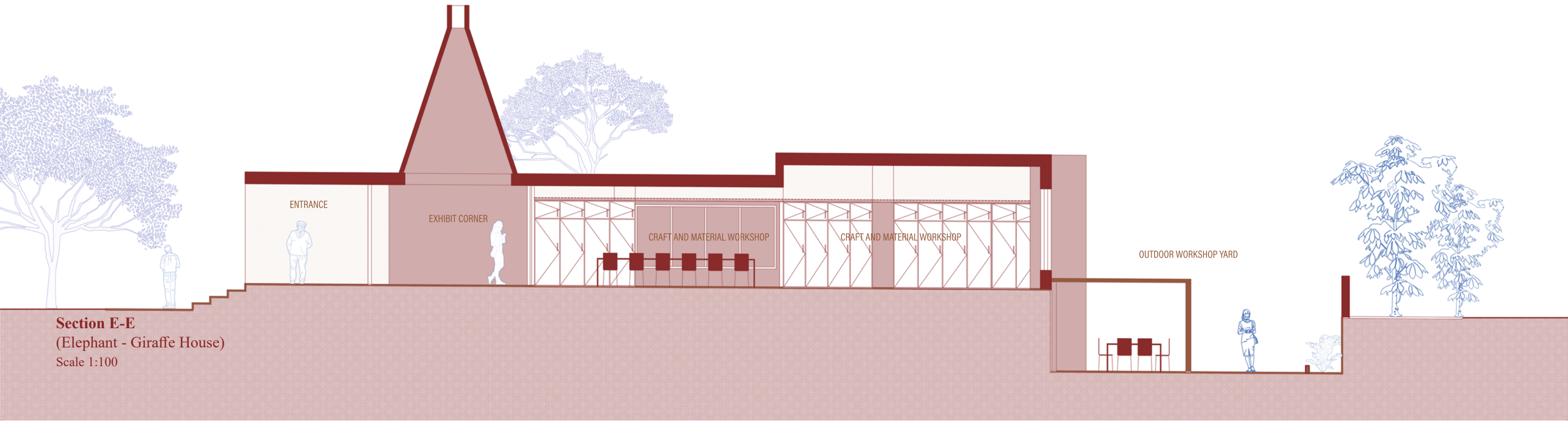


**Section C-C**  
(Monkey House)  
Scale 1:100



**Section D-D**  
(Pachyderm House)  
Scale 1:100

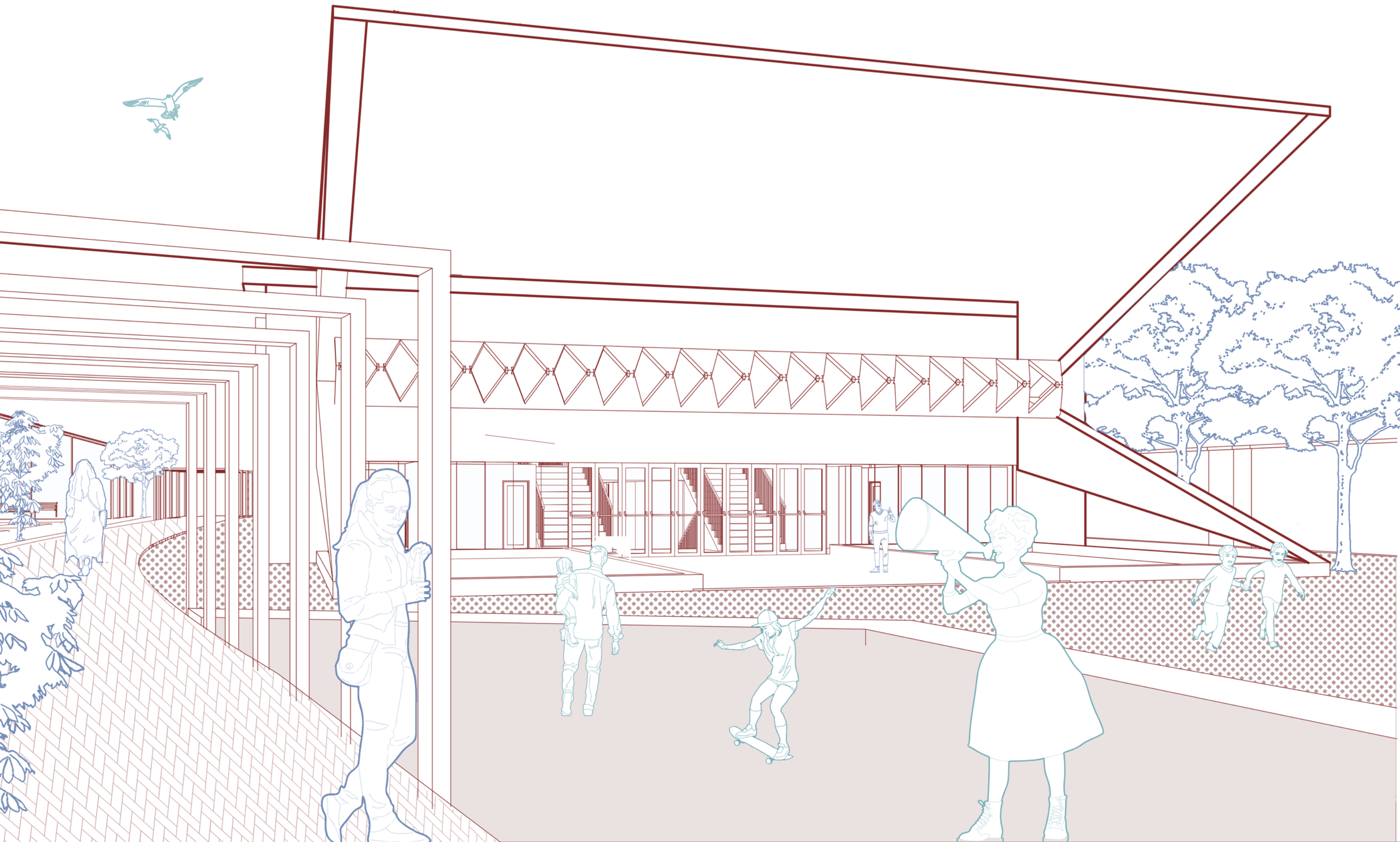






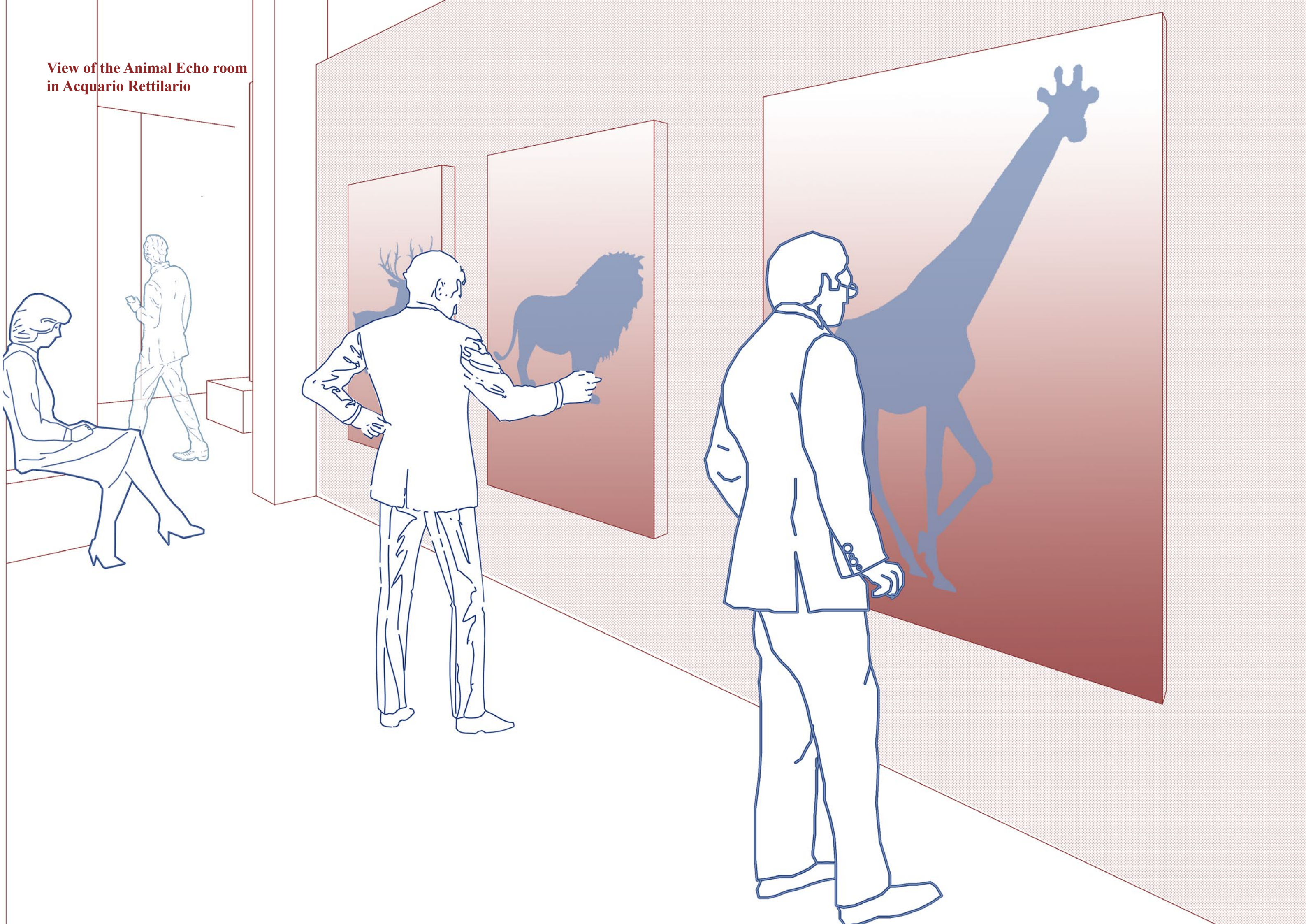
7.4 Views

View of the Acquario Rettilario



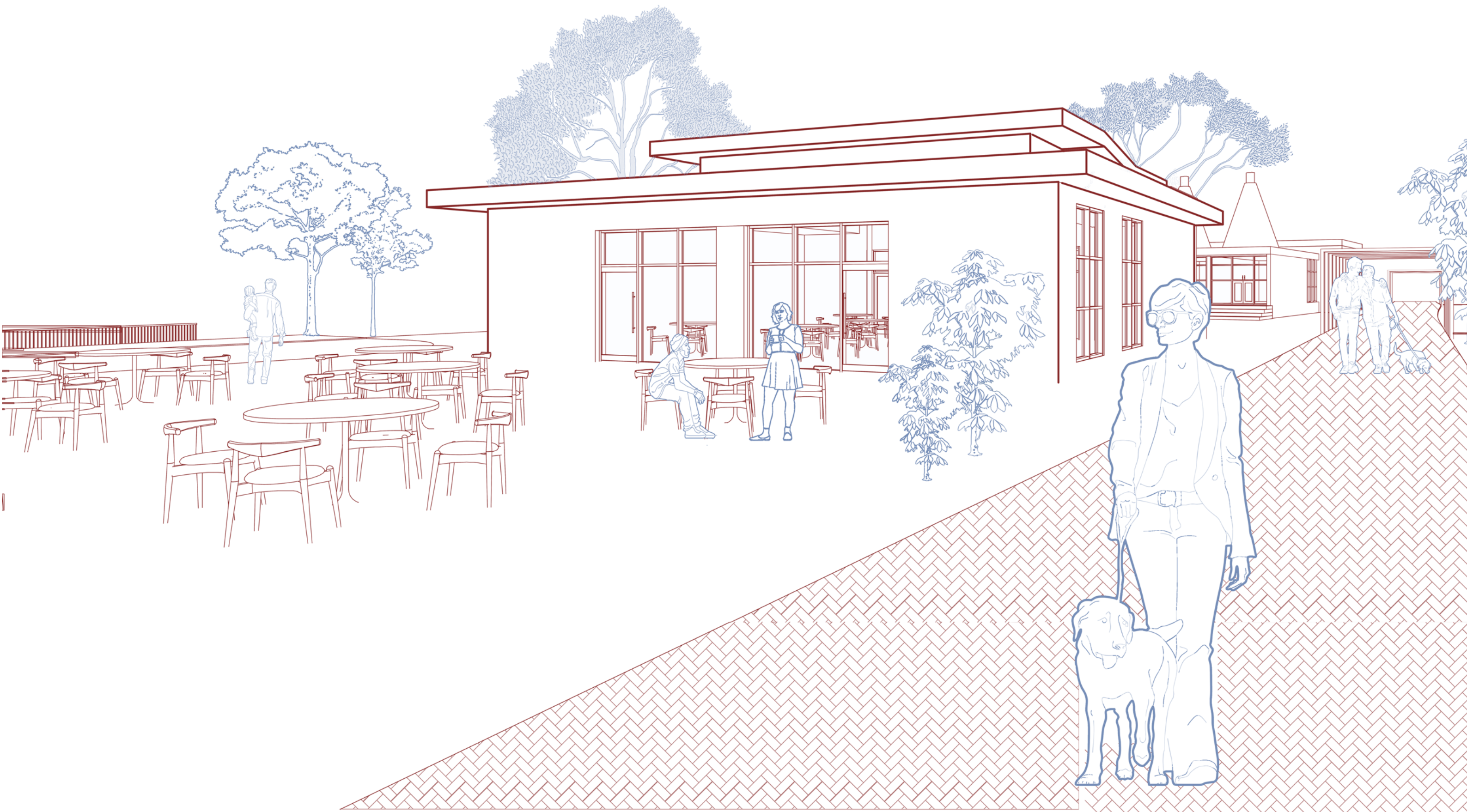


View of the Animal Echo room  
in Acquario Rettilario



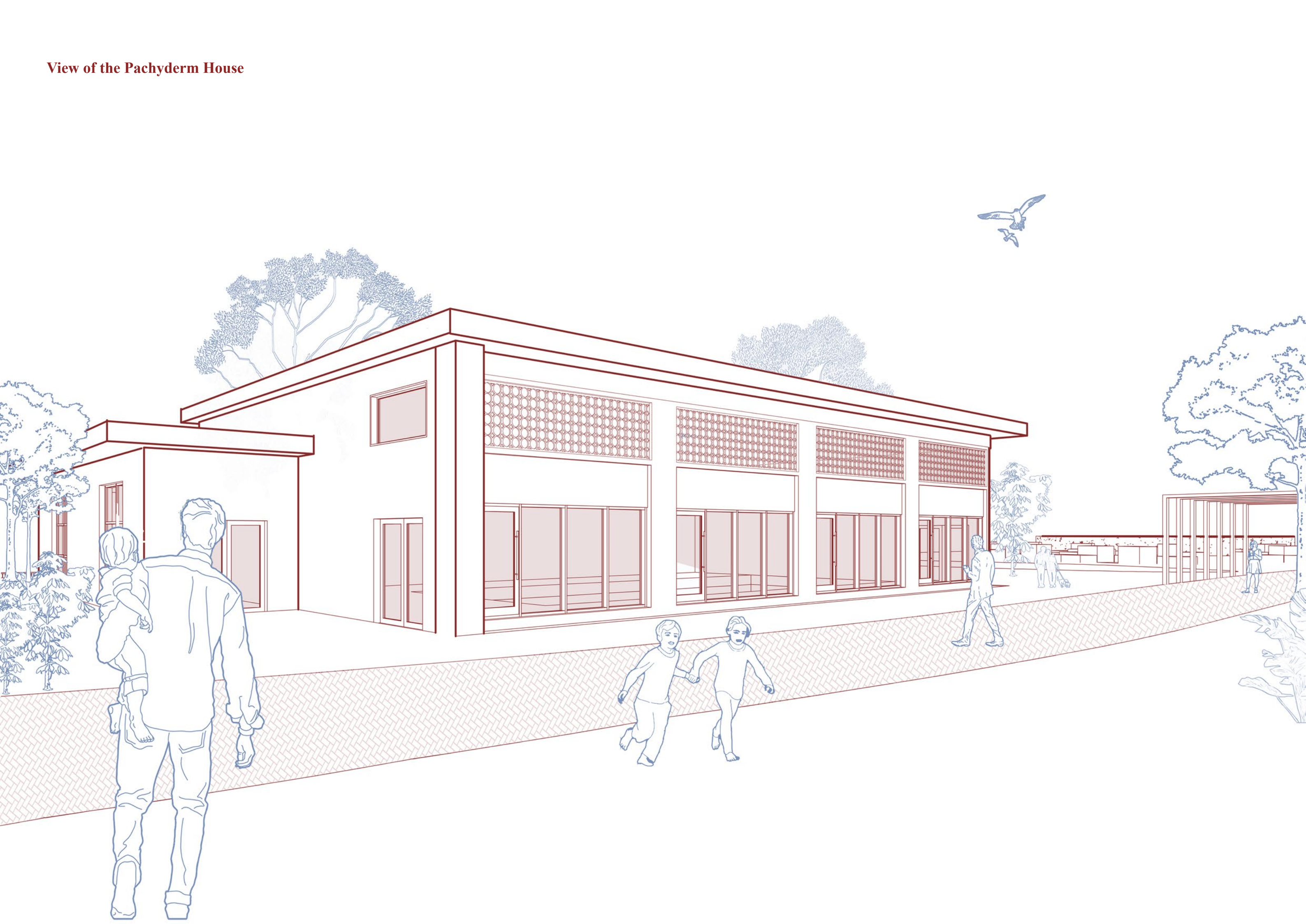


View of the Tiger House





View of the Pachyderm House





View of the Pachyderm House





View of the Felidae House



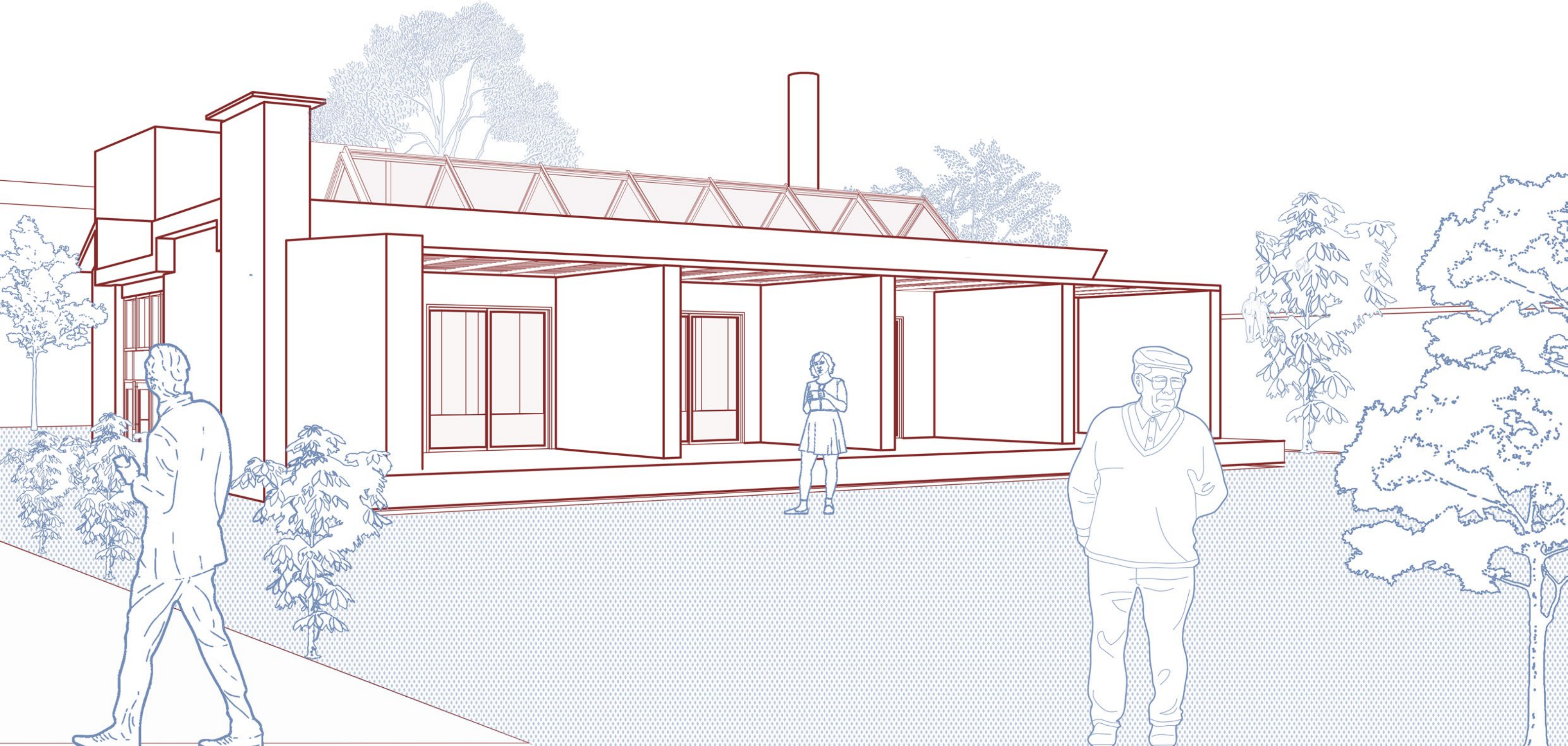


View of the Elephant House



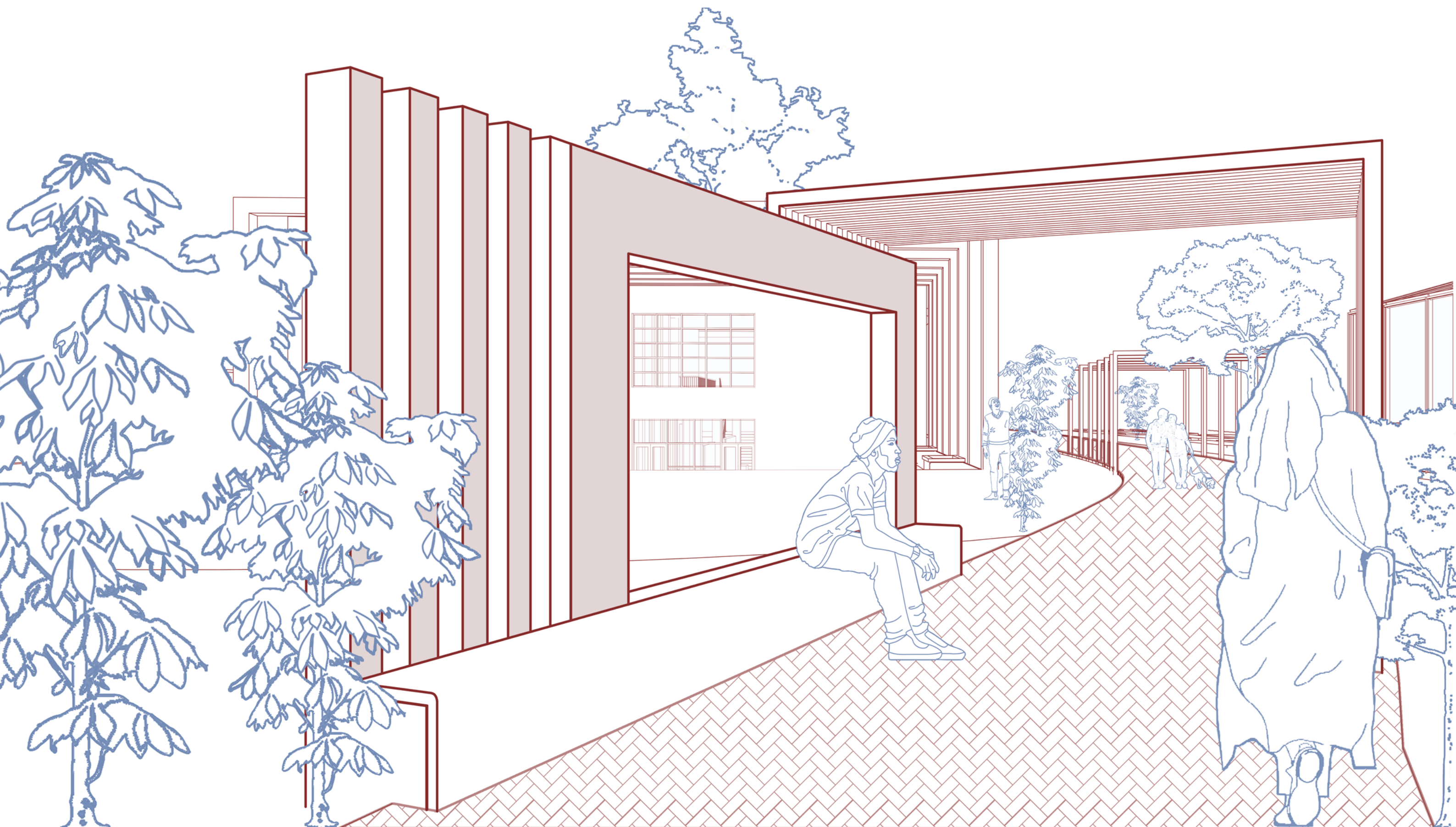


View of the Monkey House





View Along the Main road to the Acquario Rettilario





## Conclusion.

The transformation of the former zoo in Michelotti Park into ZOETOPIA is more than an architectural project—it represents an ethical shift, a cultural revival, and the reclamation of a forgotten urban space. This thesis began by critically exploring the evolution of zoos, showing how they moved from spaces of spectacle and captivity to institutions increasingly challenged for their ethical and societal role. Unable to keep pace with these changes, Michelotti Zoo was eventually abandoned—physically, socially, and symbolically—leaving the surrounding park cut off from the urban fabric of Turin.

This project propose a radical turn, from captivity to curiosity and from exhibition to education, rather than recreating the zoo or preserving its history without reflection. The core idea of the project is the belief that true understanding of nature comes not from confining animals, but from fostering public awareness of ecosystems, , habitats, and coexistence. ZOETOPIA doesn't exhibit animals, rather it nurtures empathy, imagination, and ecological understanding through immersive storytelling and participatory design. This redefinition is not only conceptual but also spatial.

Adaptive reuse was the key to realizing this vision. It allowed the existing buildings—once containers of life in confinement—to become platforms for learning and creativity. Through careful analysis, material preservation, and contextual design, each structure was given a new role that respects its history while serving present and future needs. This approach made the project both feasible and meaningful, offering environmental, economic, and cultural sustainability.

ZOETOPIA is not a nostalgic restoration, but it is a forward-looking reinvention. With adaptive reuse and reprogramming the site as a whole, the project not only transforms abandoned buildings—it reactivates the park, reconnecting it with the city and people. It turns a forgotten area into a dynamic, inclusive, and ethical public space, where memory, education, and imagination meet—and where architecture becomes a tool for healing both place and society.



08

BIBLIOGRAPHY

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## Books and Journals

- *Acquario-rettilario* dello Zoo di Torino. 1961. Supplement to *Vitrum*, 127.
- Inaugurato Sotto la Pioggia lo Zoo del Parco Michelotti. 1955. *La Nuova Stampa*, 21 October, 2.
- Groom A., Exotic Animals in the Art and Culture of the Medici Court in Florence. 2019.
- Devoti C., Gli Spazi Dei Militari e L'urbanistica Della Città L'italia Del Nord-Ovest (1815-1918). October 2018, pp. 181.
- Spartaco G., A contribution to the history of zoos in Italy up to the Second World War, January 1997, pp. 458 – 465.
- Magnani G., Riqualificazione dell'area dell'ex Giardino zoologico di Parco Michelotti a Torino, Università degli Studi di Genova, 2014.
- Baratay E., Hardouin-Fugier E., Zoo: a history of zoological gardens in the West, Reaktion Books, Londra, 2002.
- Astengo G., White Whale: The Aquarium and Reptile House at the Turin Zoo and the Architecture of Enzo Venturelli (1955-1965), 2019.
- Maschietti G., Muti M., Passerin d'Entrèves P., Giardini zoologici: vicende storico-politiche degli zoo torinesi: 1851-1989, Allemandi Stampa, Torino, 1990.
- Gippoliti, S. (Ed.). (2013). Giardini zoologici e acquari in Italia. Nuova Museologia. Gangemi Editore.
- Finotello P. L., Breve storia dei giardini zoologici italiani, June 2013.
- Giaccone E., Oltre la memoria dello zoo di Torino, Il museo diffuso di parco Michelotti, Politecnico di Milano, 2019.
- Bedini G., Farina S., A Giraffe in the Botanic Garden of Pisa (Tuscany, Northern Italy), Dipartimento di Biologia, Università di Pisa, April 2022.
- Guidoni E., Storia dell'urbanistica Piemonte/II, Il Real Giardino Zoologico: un museo naturalistico nella Torino postunitaria. July – December 1989.
- Politecnico di Torino, Dipartimento Casa-Citt, *Beni culturali ambientali nel iomune di Torino*, vol. I, Società degli Ingegneri e degli Architetti in Torino, Torino 1984., pp. 624 – 625
- Canepari A., Ceccopieri M., La virtualità nello spazio pubblico: il museo aumentato del parco Michelotti, Politecnico di Torino, 2021.
- Gippoliti, S. 1997. A Contribution to the History of Zoos in Italy up to the Second World War. International Zoo News, January, pp. 458–465.
- Brooker, G., & Stone, S. (2004). *Re-readings: Interior Architecture and the Design Principles of Remodelling Existing Buildings*. RIBA Publishing.
- Archivio di Stato di Torino. (1996). Documenti storici del Piemonte. Torino: Einaudi.
- Olmo, C. 1992. Un'Architettura Antiretorica. In: Olmo, C (ed.), *Cantieri e Disegni: Architetture e Piani per Torino 1945–1990*, 33–58. Torino: Allemandi.
- Parenti, M and Mistrangelo, A. 1999. *Enzo Venturelli Architetto*. Torino: Edizioni Dell'Orso.
- Tafuri, M. 1982. *Storia dell'Architettura Italiana, 1944–1985*. Torino: Einaudi.
- G. GIUDICI, Parco Michelotti: dallo zoo all' osservatorio naturalistico. Problemi di riqualificazione funzionale e fisica del patrimonio edilizio, Rel. L. Re, Tesi di laurea, Torino, 1991.
- M. PARENTI, A. MISTRANGELO, Enzo Venturelli architetto, Edizioni dell' Orso, Torini, 1999
- D. CARRONE, Mostrare reti: tra finzione e realtà nell'ex zoo di Torino, Rel. M. Vaudetti, Tesi di laurea, Torino 2002.
- A. VIGNA SUIRA, Analisi e riabilitazione strutturale del rettilario dello zoo di Torino, Rel. G. Del Col, Tesi di laurea, Torino, 2002.
- E. OPPICI, La comunicazione museale : caso studio di un museo dell'acqua nel parco ex-zoo a Torino, Rel. V Minucciani, Tesi di laurea, Torino, 2003.
- A. BALDI, S. BERTERO, Recupero funzionale di Parco Michelotti: un'architettura ipogea per la didattica e lo svago, Rel. O. Lori Gentile, Tesi di laurea, Torino, 2005.
- M. GERBINO, Architettura e sostenibilità: progetto di biblioteca presso il parco Michelotti in Torino, confronto tra soluzioni tecnologiche tradizionali ed ecosostenibili, Rel. C. Ostorero, Tesi di laurea, Torino, 2007.
- Torre Navone C., 1986 - Curiosità torinesi. Il piccolo editore, Torino.
- Cojannot A., 2009 - Un sérail pour le cardinal Mazarin...Annali di architettura, 21, pp. 151-166.
- British Damp Proofing. (2022). Understanding and treating rising damp in heritage buildings. Retrieved from <https://www.britishdampproofing.co.uk>
- Feilden, B. M. (2003). Conservation of historic buildings (3rd ed.). Oxford: Architectural Press.
- ICOMOS. (2021). Catalogue of Damage – Architectural Heritage (Version 2). Syrian Heritage Archive. Retrieved from <https://syrian-heritage.org/about-us/built-heritage-documentation/catalogue-of-damage/>
- Rentokil. (2024). Dryzone Damp-Proofing Cream: Technical Guide. Retrieved from <https://www.rentokil.com>
- Setherton, G. (2024). Moisture and decay in porous construction materials. Journal of Building Conservation, 30(1), 55–67.
- Syrian Heritage - Catalogue of Damage: Syrian Heritage Archive. (2021). Catalogue of damage – architectural heritage (Version 2).Retrieved June 9, 2025, from <https://syrian-heritage.org/about-us/built-heritage-documentation>
- FITZNER, B.& HEINRICHS, K. (2002): Damage diagnosis on stone monuments - weathering forms, damage categories and damage indices.
- Sablatnig, R., & Schmid, W. (Eds.). (2015). EwaGlos – European Illustrated Glossary of Conservation Terms for Wall Paintings and Architectural Surfaces. Hildesheim: Hornemann Institute. Retrieved from <https://hornemann-institut.de/doi/2016ewa2a.pdf>
- Piccinato G., Le esposizioni universali come strumenti di trasformazione urbana. 2014. Storia dell'Urbanistica, Serie III, n. 6, pp. 75.



## Websites

- Comune di Torino. (n.d.). *Parco Michelotti – Verde Pubblico*. Retrieved from <http://www.comune.torino.it/verdepubblico/parco-michelotti/>
- Museo Torino. (n.d.). *Parco Michelotti*. Retrieved from <https://www.museotorino.it/site>
- I Canali di Torino. (n.d.). *I Mulini di Torino*. Retrieved from <https://www.icanaliditorino.it/i-mulini-di-torino>
- IN/ARCH Piemonte. (n.d.). *Ritratti e Venturelli – Acquario Rettilario*. Retrieved from <https://www.inarchpiemonte.it/ritratti-e-venturelli-aquario-rettilario/>
- Atlas Landscape for. (n.d.). *Parco Ignazio Michelotti – Da Teatro a Rettilario*. Retrieved from <https://atlas.landscapefor.eu/category/parco-urbano/poi/11987-parco-ignazio-michelotti/11301-da-teatro-a-rettilario/>
- Torino Storia. (n.d.). Retrieved from <https://torinostoria.com/>
- Enzo Contini. (2013, January 17). *Lo zoo di Torino nel Parco Michelotti dal 20/10/1955 al 31/3/1987*. Retrieved from <https://enzocontini.blog/2013/01/17/lo-zoo-di-torino-nel-parco-michelotti-dal-20101955-al-3131987/>
- Archivio La Stampa. (n.d.). Retrieved from <http://www.archiviolaStampa.it/>
- La Stampa. (n.d.). Retrieved from <https://www.lastampa.it/>
- Torino Oggi. (n.d.). Retrieved from <http://www.torinoggi.it/>
- Mole24. (n.d.). Retrieved from <http://www.mole24.it/>
- British Damp Proofing. (2022). *Understanding and treating rising damp in heritage buildings*. Retrieved from <https://www.britishdampproofing.co.uk>
- Rentokil. (2024). *Dryzone Damp-Proofing Cream: Technical Guide*. Retrieved from <https://www.rentokil.com>
- Syrian Heritage Archive. (2021). *Catalogue of Damage – Architectural Heritage (Version 2)*. Retrieved from <https://syrian-heritage.org/about-us/built-heritage-documentation/catalogue-of-damage/>
- Hornemann Institute. (2015). *EwaGlos – European Illustrated Glossary of Conservation Terms*. Retrieved from <https://hornemann-institut.de/doi/2016ewa2a.pdf>
- Belle Isle Nature Center. (n.d.). *Welcome to Belle Isle Nature Center*. Retrieved from <https://belleislenaturecenter.org/>
- Diergaarde Blijdorp. (n.d.). *21 Monumental Treasures*. Retrieved from <https://diergaardeblijdorp.nl/en/21-monumental-treasures>
- Global Eur. (n.d.). *Buenos Aires Ecoparque*. Retrieved from [https://web.globaleur.com/places/Buenos\\_Aires/Buenos\\_Aires\\_Ecoparque](https://web.globaleur.com/places/Buenos_Aires/Buenos_Aires_Ecoparque)
- Gobierno de la Ciudad de Buenos Aires. (n.d.). *Ecoparque*. Retrieved from <https://turismo.buenosaires.gob.ar/es/otros-establecimientos/ecoparque>
- La Nación. (2023, June 29). *Pabellón de las fieras: el nuevo destino que en el Ecoparque le dieron a las jaulas donde estaban los animales*. Retrieved from <https://www.lanacion.com.ar/buenos-aires/pabellon-de-las-fieras-el-nuevo-destino-que-en-el-ecoparque-le-dieron-a-las-jaulas-donde-estaban-los-nid29062023>
- Gobierno de la Ciudad de Buenos Aires. (n.d.). *Actividades en el Ecoparque*. Retrieved from <https://buenosaires.gob.ar/vicejefatura/ambiente/ecoparque/actividades>
- Info Viajera. (2022, December). *Conocimos el nuevo Ecoparque de la Ciudad de Buenos Aires, Argentina*. Retrieved from <https://www.infoviajera.com/2022/12/conocimos-el-nuevo-ecoparque-de-la-ciudad-de-buenos-aires-argentina/>
- Alma Singer. (2024, January). *El Ecoparque de Buenos Aires: donde la ciudad respira historia y naturaleza*. Retrieved from <http://www.almasinger.com/2024/01/el-ecoparque-de-buenos-aires-donde-la.html>
- Little Guide Detroit. (n.d.). *Newly Renovated Belle Isle Nature Center Opens to the Public*. Retrieved from <https://littleguidedetroit.com/newly-renovated-belle-isle-nature-center-opens-to-the-public>
- <https://journal.eahn.org/article/id/7591/>
- [https://it.wikipedia.org/wiki/Zoo\\_di\\_Torino](https://it.wikipedia.org/wiki/Zoo_di_Torino)
- <https://it.wikipedia.org/wiki/Experimenta>
- <https://webthesis.biblio.polito.it/17171/>
- <https://www.zoo-leipzig.de/en/about-us/species-conservation/stud-books/>
- <https://www.zoo-leipzig.de/en/about-us/species-conservation/endangered-primate-rescue-center/>



2024-2025

Serveh Heidari

Gozde Unal

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