

IESL - Master Studio Summer Term 2025

# Chandigarh Reimagined

Urban Design Strategies between  
Heritage and Transformation








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Urban Design Strategies between  
Heritage and Transformation





*„Chandigarh is free. It is beautiful.  
It is an expression of the nation's faith in the future.“*

*(Jawaharlal Nehru, India's first Prime Minister, on the inauguration of Chandigarh)*



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# Introduction

Prof. Markus Neppl, Dr. Manuel Giralt, Nima Maghsoudi



Neelam Cinema, designed by Aditya Prakash

## BALANCING CULTURAL HERITAGE AND FUTURE URBAN DEVELOPMENT

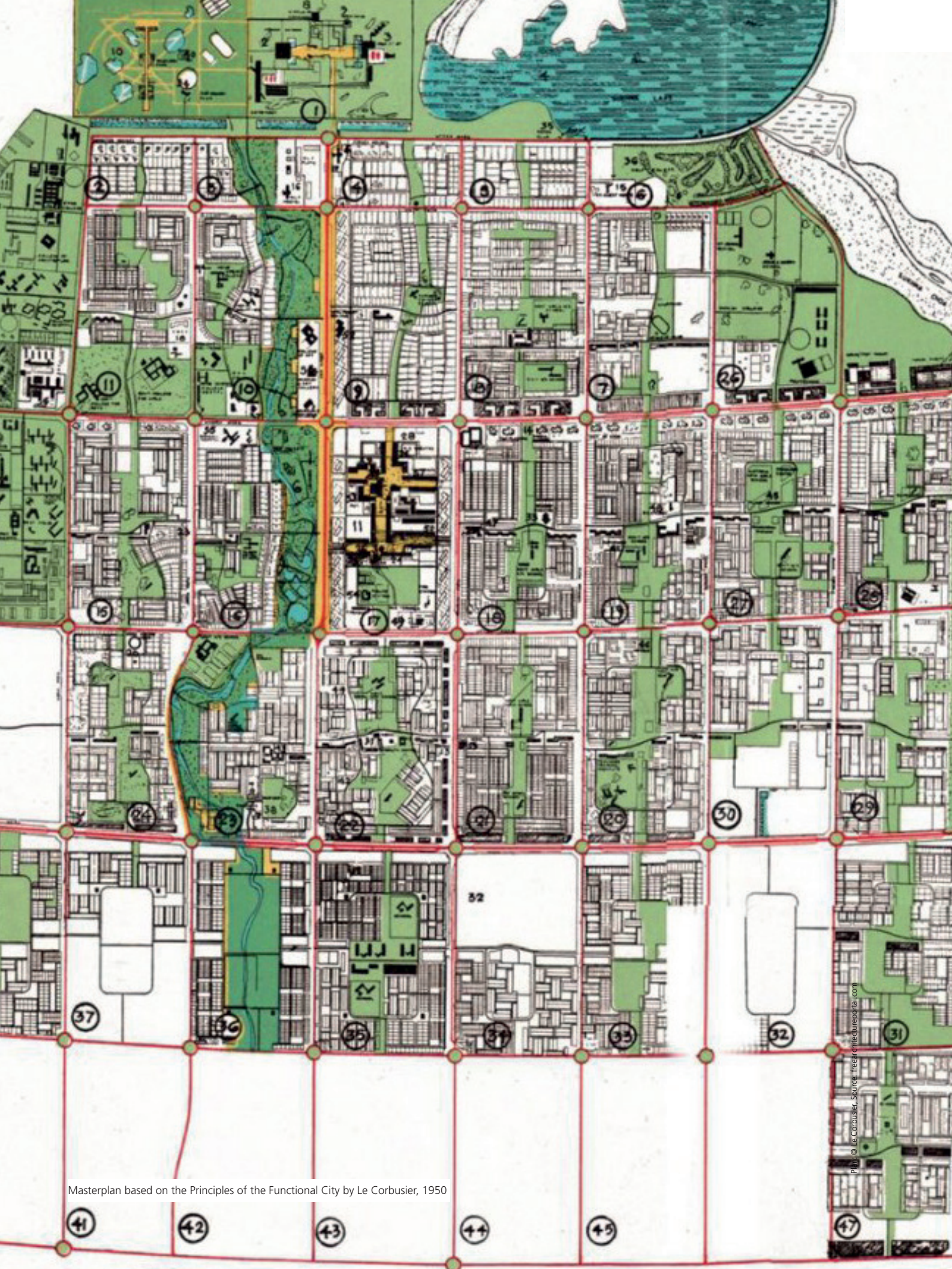
Following the partition of British India into Pakistan and India in 1947 the government of India decided to build Chandigarh as a new capital for Punjab. The aim was to build a modern planned city that would represent the aspirations of the newly independent nation. This commission was given to Le Corbusier, who developed the masterplan for Chandigarh together with his cousin Pierre Jeanneret and a team of Indian architects.

With a projected population increase of 35% by 2035, the Chandigarh metropolitan region also serves as an illustrative

case study of dynamic urbanization in India. This leads to a conflict of interests between the aim to preserve the central part of the city and the urgent needs of future urban development.

This studio created alternative scenarios for a balanced urban transformation, taking into account the pioneering character of Le Corbusier's masterplan, and providing alternative solutions for the city of the 21st century in terms of density, new housing and functional mix, sustainability and climate protection.





Masterplan based on the Principles of the Functional City by Le Corbusier, 1950



# Planning History of Chandigarh

Abridged excerpt based on the 'Chandigarh architectural travel guide' by Prakash Vikramaditya.

Chandigarh occupies a singular position in the history of twentieth-century architecture. It represents the largest concentration of Le Corbusier's work in a single location, while also serving as the arena where Pierre Jeanneret matured professionally and where Maxwell Fry and Jane Drew advanced their conception of "tropical architecture."

Equally significant, the city provided a platform for India's first generation of modernist architects, including Aditya Prakash, Anant Prabhawalkar, and Bhanu Prakash Mathur, who developed a lasting body of work across the city.<sup>1</sup>

The creation of such a remarkable ensemble must be understood within the context of India's early postcolonial years. After two centuries of colonial rule, independence led to a national drive for accelerated modernization. Tensions within society between the desire for emancipation from and dependence on the former colonial power shaped the architectural debate. Instead of simply copying Western models, the new republic sought to convey self-confidence and progress by adapting modern urban planning concepts to the Indian context.<sup>2</sup>

The partition of India and Pakistan in 1947 intensified this need. The Indian state of Punjab, left without a capital, required a new administrative center. Existing cities such as Amritsar were deemed unsuitable, and the creation of an entirely new city was initiated. This aligned with Prime Minister Jawaharlal Nehru's vision of a modern India, who described Chandigarh as "a symbol of the nation's faith in the future."<sup>3</sup>

The first scheme came from A.L. Fletcher, a civil servant who drew inspiration from the British "New Towns" and the writings of Ebenezer Howard. Fletcher envisioned a modest administrative town surrounded by green space. In 1949, P.N. Thapar was appointed as the Chief Administrator and P.L. Verma as the Chief Engineer, tasked with bringing this vision to life. Internal conflicts soon forced Fletcher to withdraw, but Thapar and Verma remained devoted to

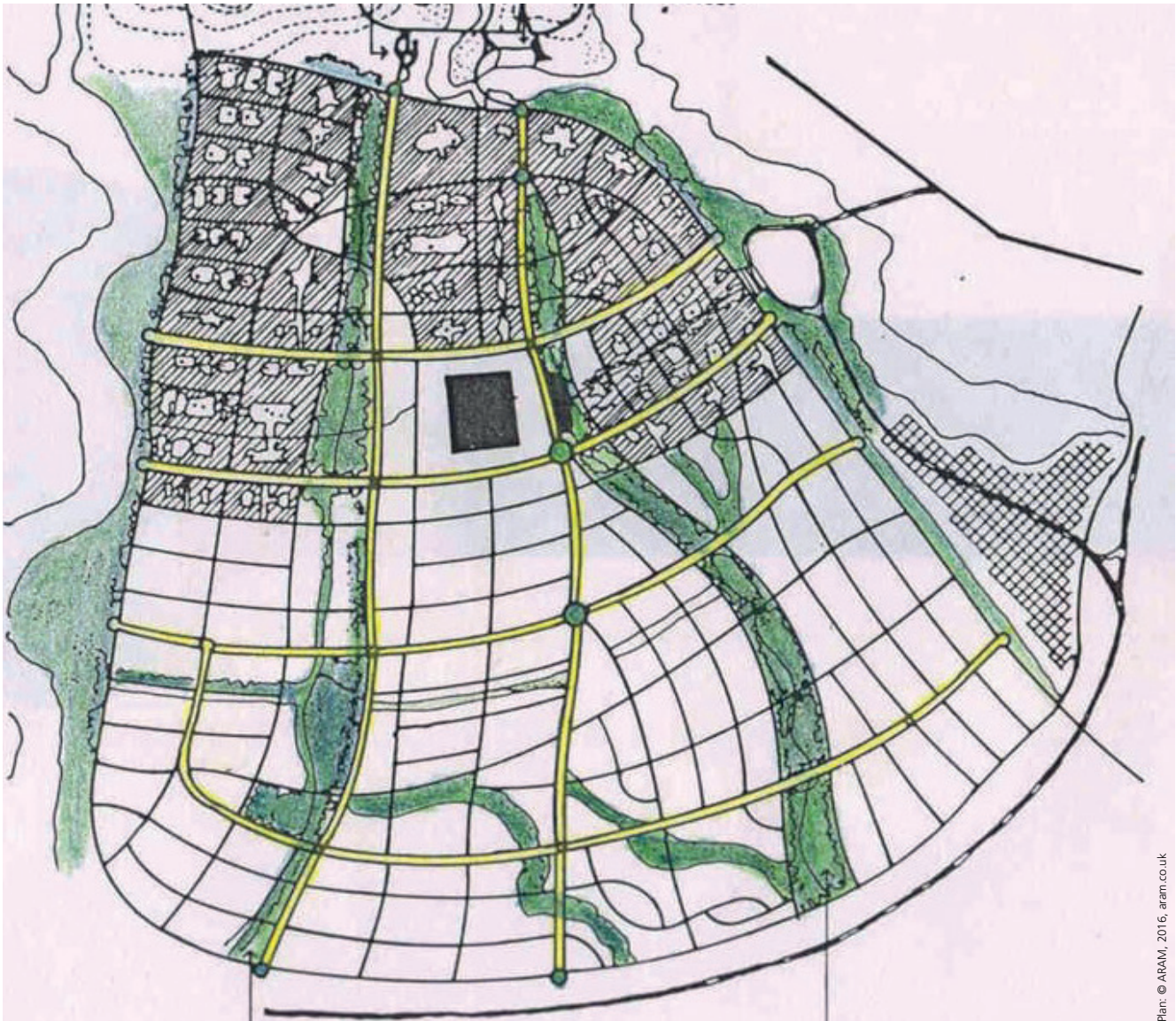


Le Corbusier and Pierre Jeanneret on Sukhna Lake, 1950



Chief Engineer P.L. Verma with Le Corbusier and Pierre Jeanneret

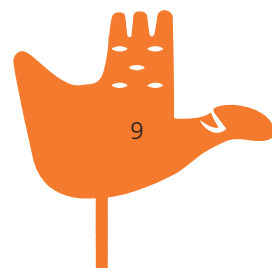




First Master Plan Draft Based on Garden City Concepts and Superblocks by Albert Mayer and Mathew Nowicki

the project throughout their careers. In the late 1940s, American planner Albert Mayer, working for Nehru in Uttar Pradesh on creating 'model villages,' was asked to draft the new master plan for Chandigarh, given his background as a town planner influenced by Garden City principles. Recognizing the symbolic importance of the project, Mayer accepted and collaborated with the Polish architect Matthew Nowicki, to design the city's signature government buildings and contribute to housing and public buildings. Tragically, Nowicki died in a plane crash in August 1950. To keep the project moving forward, Thapar and Verma sought replacements in Europe and found Maxwell Fry and Jane Drew, a London-based couple specializing in 'Tropical Architecture' after working in Africa.<sup>4</sup>

Fry and Drew were excited about designing housing and civic buildings for Chandigarh but were hesitant to take on the monumental state buildings. They suggested bringing in Le Corbusier, who was eager to design significant, world-class buildings, but could not imagine relocating to Chandigarh as a salaried employee of the Punjab government. Instead, he proposed that his cousin and former partner, Pierre Jeanneret, take on the role, with Le Corbusier overseeing the project from Paris. Thus, in 1951, Jeanneret, Fry, and Drew moved to Chandigarh as employees of the Punjab Government, while Le Corbusier was appointed as the "Architectural Advisor" with a small annual honorarium, under the condition that he spend at least one month per year on-site.







Chandigarh Sector 1, High Court of Punjab and Haryana, 2025

Thapar and Verma's insistence that foreign architects serve as government employees was decisive, ensuring close collaboration with Indian professionals and the training of a new generation. Around sixty architects, planners, and draftsmen formed the newly established "Architects Office," the city's first completed building and the nucleus of its design culture.

While Le Corbusier's contract required him to implement Mayer's plan, he quickly modified it, making the city more compact and rectilinear, and altering the layout of the sectors. He retained the central green belts and adopted the 7Vs system for the road network, inspired by CIAM principles. His responsibility apart from the master plan was

limited to the Capitol Complex, the Museum Complex in Sector 10, and overseeing building designs in Sector 17 and along Jan Marg and Madhya Marg.

The larger development of the master plan was carried out by Jeanneret, Fry, and Drew in collaboration with Indian architects such as Dethe, Lamba, and Prabhawalkar. The city's core program included government buildings, housing for government staff, a university, a library, museums, technical training institutes, and essential infrastructure like markets, bus and train stations, clinics, and schools.

In 1954, Fry and Drew left the project as their contracts were not renewed, but Jeanneret remained as the city's Chief Architect, becoming a mentor for Indian architects

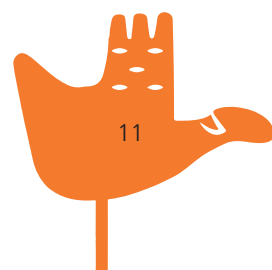


and planners. The Indian architects on the team had largely colonial training, and Chandigarh's radical modernist design made the "Architect's Office" a professional workshop where teaching and mentoring became integral to the culture. Teaching and mentoring came naturally to Jean-neret, unlike Le Corbusier, and he quickly grew into that role. Under him and then with him, the Indian architects

built out most of the city and in turn trained a new cadre of architects who then went on to continue that work in Chandigarh and beyond. This culture of teaching and collaboration as a planning team shaped the city's development and its distinctive and strong architectural character, with Chandigarh becoming the vibrant, modern city it is today.<sup>5</sup>

*"The city of Chandigarh is planned to human scale. It puts us in touch with the infinite cosmos and nature. It provides us with places and buildings for all human activities by which the citizens can live a full and harmonious life. Here the radiance of nature and heart are within our reach."*

*(Le Corbusier, Edict of Chandigarh, 1959)*





# The Charta of Athens

In the Context of Chandigarh



Congrès Internationaux d'Architecture Moderne (CIAM), First Meeting in La Sarraz, CH 1928

In 1928, the first of the international congresses of modern architecture, CIAM (Congrès Internationaux d'Architecture Moderne), took place in La Sarraz (Switzerland). CIAM was primarily the initiative of Parisian architects Le Corbusier and Gabriel Guévrékian, as well as Swiss art historian Siegfried Giedion. Their stated goal was to establish an avant-garde of the international modern architecture movement in order to supplant the influence of the then-dominant academic neoclassicism.<sup>6</sup>

Le Corbusier subsequently summarised the results of the CIAM Congress of 1933 and published them in 1943. The core of the demands was the spatial separation of the four functions of living, leisure, work and transport in urban

planning, i.e. a systematic division of the city into clearly separated functional areas. This was intended to avoid the abuses and conflicts of the industrial cities of the 19th century.

This concept of the so-called functional city, which had already been envisaged in Ebenezer Howard's garden city model, often led to a rigid allocation of function and space in the post-war period.<sup>7</sup>

Le Corbusier consistently adhered to this model, but despite high recognition from other modern architects as a pioneer of CIAM, he remained unsuccessful for a long time – until he was finally offered the opportunity to implement his



ideas in Chandigarh, India.<sup>8</sup> From today's scientific perspective, however, this approach has serious limitations. The functional separation ignores essential social and cultural dynamics of Indian urban life, in which the informal economy, family structures and social exchange are closely intertwined spatially.<sup>9</sup>

The planned city of Chandigarh hardly responds to the social and cultural reality of the Indian population, leading to the marginalisation of informal settlements and the social exclusion of large sections of the population.<sup>10</sup>

The planning concept took little account of the poorest population groups; informal settlements sprang up on poorly serviced open spaces. Thilo Hilpert sums this up succinctly: "Chandigarh is the ideal city for a privileged minority – modern, clean, empty."<sup>11</sup>

The resulting monotony and lack of urban vitality illustrate the partial failure of the functionalist model in this context. Furthermore, the focus on private transport led to an infrastructure that disadvantaged broader sections of the population and reinforced social inequalities.<sup>12</sup> Important cultural and social aspects of urban space were not taken into account, resulting in urban planning that is strongly technocratic in nature.<sup>13</sup>

The case of Chandigarh provides a fundamental insight for contemporary urban planning: planning must be multidimensional and context-sensitive, taking into account the cultural, social and economic interrelationships of urban society in order to create liveable and resilient urban spaces.<sup>14</sup>

The critical analysis of the Charter of Athens based on Chandigarh contributes significantly to the further development of urban theory by highlighting the limitations of the modernist paradigm and paving the way for integrative, participatory planning approaches.<sup>15</sup>

Chandigarh is thus exemplary of the ambivalence of modern urban planning: conceived as a technocratic utopia, it proves to be a social and cultural challenge in practice. This insight is highly relevant for architects and urban planners in order to design future urban developments in a sustainable manner that takes local realities into account.

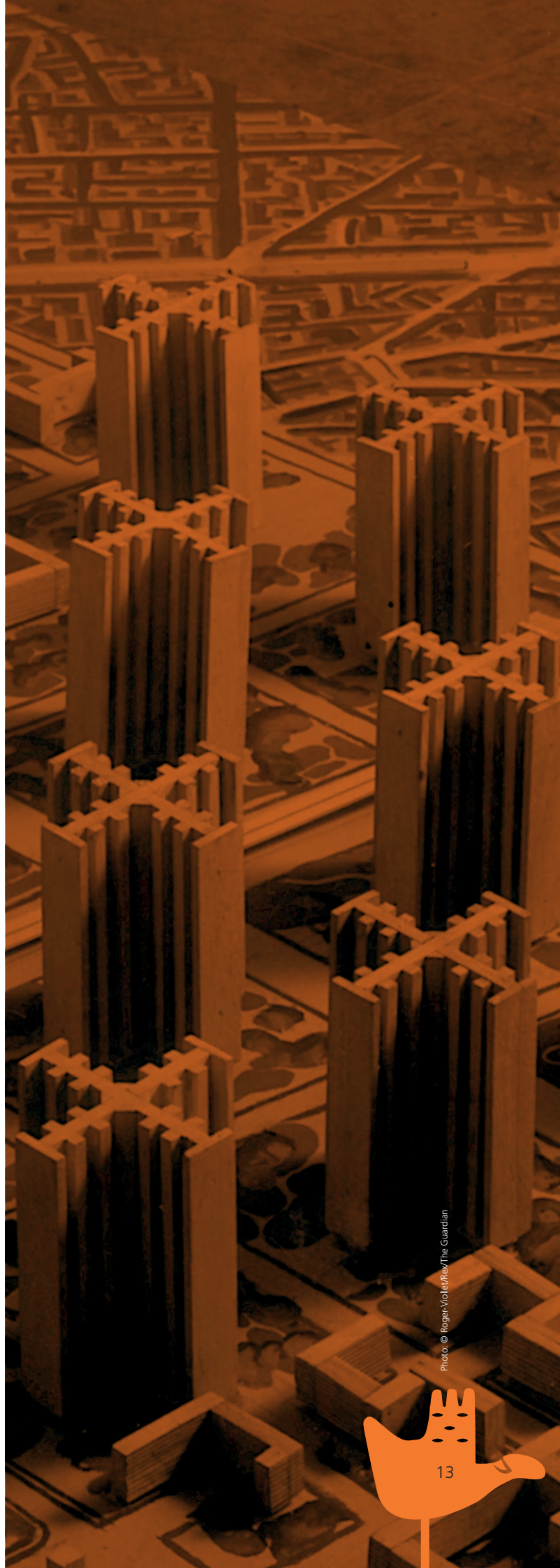


Photo: © Roger-Viollet/Rey/The Guardian





# Urban Challenges Today



Chandigarh Sector 17D, Bridge Market, 2025

The Functional City and the Charta of Athens were not received positively by all professionals and scholars in the fields of architecture and urbanism. Very early on projects like Chandigarh<sup>16</sup> and Brasilia<sup>17</sup> received criticism for their functional separation, car-oriented development and lack of human scale in open spaces. When visiting Chandigarh today – almost 75 years after its initial construction phase – we are able to observe where the functional city works well, and where to identify deficiencies.

“This city is ruled by architects. We have to act now.  
Chandigarh is dying!”

(anonymous local expert, Chandigarh, March 2025)

With a focus on Sector 17, the following urban challenges can be summarized: The commercial heart of Chandigarh is characterized by functional monotony. Except for retail, office and administration, there is relatively little mixed-use. Old building stock, inadequate maintenance, declining attractiveness of the commercial offering and increasing vacancy rates are creating a downward spiral. At the same time, large areas on the backside of the pedestrian areas can be identified that are completely undeveloped or are only used for ground-level parking.

Furthermore, in line with the theoretical concepts of the Athens Charter, the center of Chandigarh is suffering from car-oriented functional separation. Large-scale ground-level



parking spaces restrict alternative developments and create an unattractive environment. Oversized pedestrian areas, unused open spaces and large distances between buildings create a feeling of emptiness in the pedestrian zone.



Chandigarh Sector 17D, North-West Entrance, 2025

“Development was largely frozen within the legal boundary of the centrally administered Union Territory of Chandigarh, strictly regulated by the stringent modernist zoning laws dating back to the 1950s.”

(Prakash Vikramaditya: Le Corbusier's Chandigarh Revisited: Preservation as Future Modernism. Oxfordshire: Routledge, 2023, 2)



Chandigarh Sector 17F, Undeveloped Vacant Lot, 2025



Chandigarh Sector 17C, Southern Link Road with Elevated Highway, 2025



# Task of the Urban Design Studio



Chandigarh Sector 17D, Bridge Market, 2025

## ASSIGNMENT OVERVIEW

This Studio explores the future evolution of Chandigarh while honoring and preserving its original design principles. The focus lies on investigating how urban growth can be integrated with the city's distinctive architectural and cultural heritage, ensuring that new developments align with the original vision.

The project emphasizes strategies for sustainable densification, promoting compact, efficient, and environmentally responsible urban growth that minimizes ecological impact. Key challenges such as climate adaptation, energy efficiency, and social inclusivity are addressed. The ultimate aim

is to create resilient, adaptive, and inclusive urban spaces that are forward-thinking while remaining sensitive to the evolving needs of future generations.

„I am arguing [...] for a reinscription of Chandigarh not as a closed off utopian work of single-author mastership – as it is often described – but as an ‘oeuvre incomplete’ designed to be engaged, critiqued, and inhabited by others in a manner that could not have been fully pre-imagined, at the time of its original construction.” (Prakash Vikramaditya: *Le Corbusier's Chandigarh Revisited: Preservation as Future Modernism*. Oxfordshire: Routledge, 2023, 1)



## DESIGN TASK

The students of the Urban Design Master Studio at KIT had a total of 15 weeks to develop the results presented below, structured around two intermediate presentations and a final review. The project was organized into seven teams to explore alternative proposals, allowing discussions and evaluations of different options with local stakeholders and experts. The task required students to:

1. Create a new urban development vision for the city.
2. Focus on Sector 17 – the “Heart of Chandigarh.”
3. Balance heritage conservation with urban development.

In order to quickly gain an understanding of the theoretical background to Chandigarh's planning concepts, the participants examined the Charter of Athens, the concepts of the Functional City, the work of Le Corbusier, and the Modernist Movement in India.

This included the following urban planning topics specific to Chandigarh, which are summarised in section A:

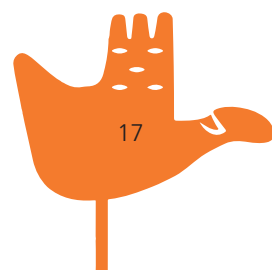
- Sector 1: Capitol Complex - Buildings and Monuments.
- Sector 22: Government Housing - Housing and Typologies.
- Sector 23: Government Housing - Housing and Typologies.
- Sector 14: Panjab University.
- Sector 34: Sub Center and the role of Elante Mall.
- Open Space: Green Belt, Leisure Valley and Sukhna Lake.
- The Seven V's of Chandigarh.

The urban design process, which is the main focus of this study, included the following steps and is presented in section B:

- Analysis of the current situation of the urban structure, buildings, functions, open spaces and transport in Sector 17.
- Mapping of urban potentials and challenges.
- Creating a conceptual framework plan.
- Developing an urban design structural concept in plan and model.
- Creation of a specific thematic focus, supported by atmospheric visualizations.



Chandigarh Sector 23B, Udyog Path - Chowk Bus Stop, 2025





## Section A

# Exploring Chandigarh: A Selection of Specific Planning Aspects

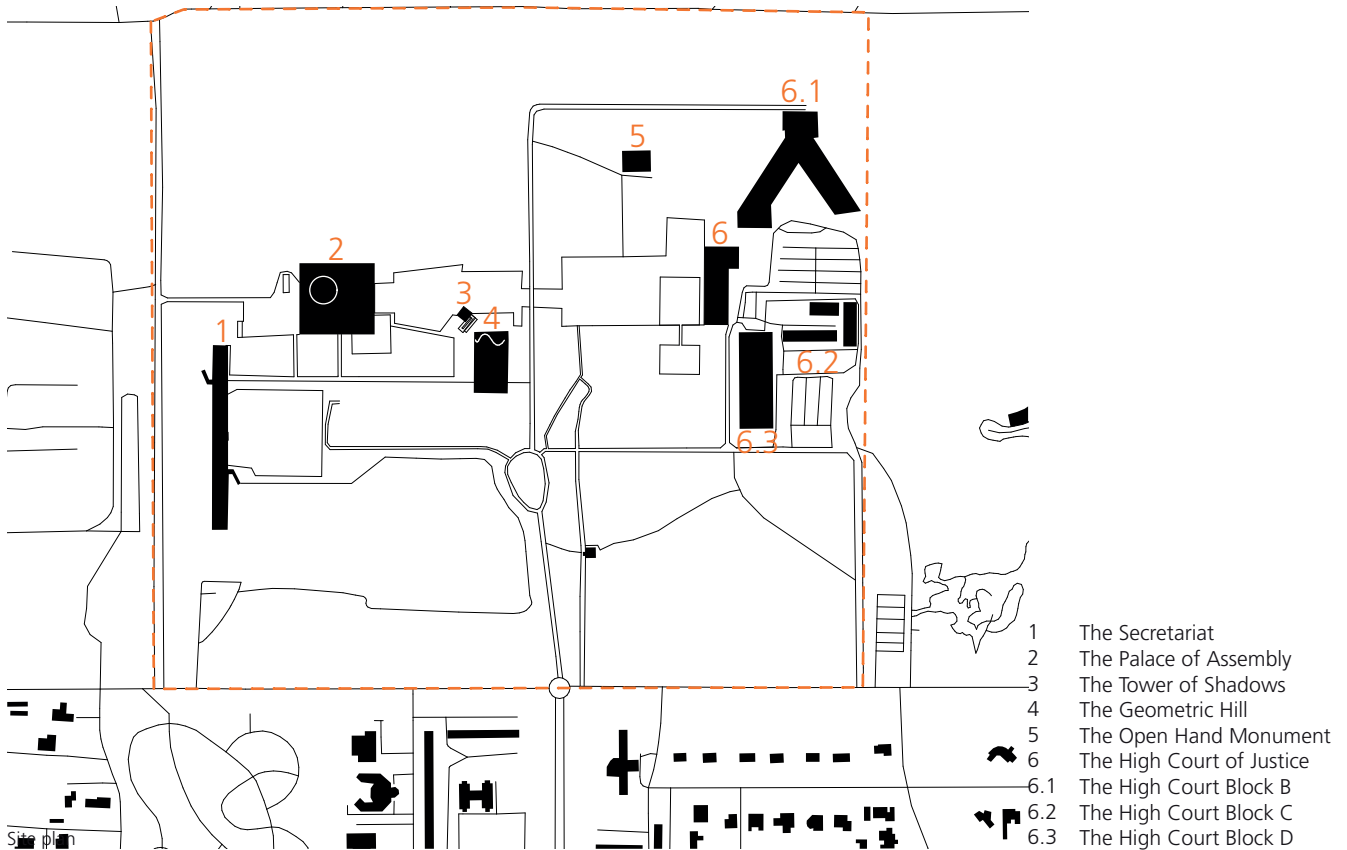






# Sector 1 - Capitol Complex

Government Buildings and Monuments



## SECTOR 1 - CAPITOL COMPLEX

Geographically and symbolically, the Capitol Complex occupies the compositional apex of the Chandigarh Plan. It embodies the dignity of the three fundamental powers - executive, legislative and judicial - of the two states Punjab and Haryana, and of the Chandigarh administration. It is the largest monumental complex designed and built by Le Corbusier. He designed the three main buildings that make it up - the Palace of the Assembly, the Secretariat and the High Court of Justice - but also the furniture, the luminaries, the bas-reliefs moulded in the concrete, as well as works of art like the enamelled door of the Palace of the Assembly and a series of monumental tapestries.

These three buildings are located on a pedestrian esplanade punctuated by other posthumous Corbusean creations: the Monument of the Open Hand, the Depth of Consideration,

the Martyrs' Memorial, the Tower of Shadows, the Geometrical Hill, as well as the reflecting pools of the High Court and the Assembly.

The Capitol mixes primary forms taken from Purist geometry with Brutalist expression punctuated by a polychromy of bold colours contrasting with the monochrome appearance of the raw concrete. The buildings combine European modernity - the expressive variations of reinforced concrete - with local techniques and materials. The composition of the site results from the desire to integrate the architecture into the landscape and the desire to reconcile man, nature and cosmos. The human scale is connected to the monumental scale of the architecture and the public space by creating artificial earth mounds or tree and shrub plantations, and the glimpses of distant landscapes have been preserved.



## THE MONUMENTS

The **Open Hand Monument** built in 1985 is the 85 feet high Open Hand soaring in the sky, silhouetted against the backdrop of the timeless Himalayas.

The idea was formed in 1948 and finalized in 1964. The metal wind vane erected over a concrete platform appears like a flying bird, designed to rotate in the wind. It denotes the message 'Open to give, Open to receive.'

The **Geometric Hill**, started in 1956, at whose base is an abstract mural masterfully depicting the 24 hour solar movement. It is charting out the rise and setting of the sun every day. The structure was never fully completed.

The **Tower of Shadows**, constructed 1957, is a very high, lofty, shadowy and partially open-sided pavillion. Designed to study the solar movement inside and outside the building, Le Corbusiers thesis is supported that it is impossible to control the sunlight in the corners of a buildings, but once you play with it, it is possible to obtain lower temperatures. The building is aligned on the north-south axis.

The **Martyrs' Monument** is still incomplete. The initial work began in 1973 and only the first phase was completed. It is designed as a square encloser formed by sloping concrete walls and a sculptural ensemble depicting the sacrifice and martyrdom of those who lost their lives during the partition.

There are two symbols on the walls of the ramp: a wheel and a Swastika. The wheel denotes 'dharmachakra' and the Swastika represents the revolving sun and the seasons of human life.

The **Depth of Consideration**, also referred to as the Pit of Contemplation was designed to serve as a venue for reflection and public discourse, embodying the democratic ethos of the newly independent India. It remains an unrealized aspect of Le Corbusiers vision.

The **Reflecting Pools** situated along the main axis of the building, create a mirror-like plane that emphasizes the building's geometric rhythm and symmetry. Enhancing the visual experience, the pools are part of the ceremonial path leading to the monumental entrance.



The Open Hand Monument



The Geometric Hill



The Tower of Shadows



Martyrs' Monument



# Sector 1 - Capitol Complex

Government Buildings and Monuments



The palace of Assembly



The Secretariat

## THE THREE MAIN BUILDINGS

The architectural heart of Chandigarh's Sector 1—also known as the Capitol Complex—comprises three monumental buildings: The Palace of Assembly, The Secretariat, and The High Court of Justice. Each was designed by the architect Le Corbusier between the early 1950s and mid-1960s, representing a unique fusion of modernist ideals, climateadaptive strategies, and symbolic expression. Together, they form the institutional backbone of the city, serving legislative, administrative, and judicial functions.

tion of democratic values, and the gathering of voices under one canopy. Notably, the building's asymmetrical dome tilts slightly, a subtle but deliberate symbol of democracy as a dynamic and evolving process—never static, always in motion. Beyond its symbolism, the design incorporates passive ventilation systems that respond to Chandigarh's climate, demonstrating Le Corbusier's belief that architecture must engage with both its environment and its socio-political context.

### THE PALACE OF ASSEMBLY, 1951–1962

Constructed entirely of *béton brut* (raw concrete), the Palace of Assembly is one of the most iconic examples of Brutalist architecture in India. The vast, imposing façade reads like a monumental wall, punctuated by precisely calculated geometric openings. This exterior gives way to an interior bathed in natural light, an intentional design choice to create an uplifting and open atmosphere for parliamentary proceedings. The roof is an engineering and symbolic statement: a sweeping, tent-like structure that conveys multiple meaning. It evokes openness to dialogue, protec-

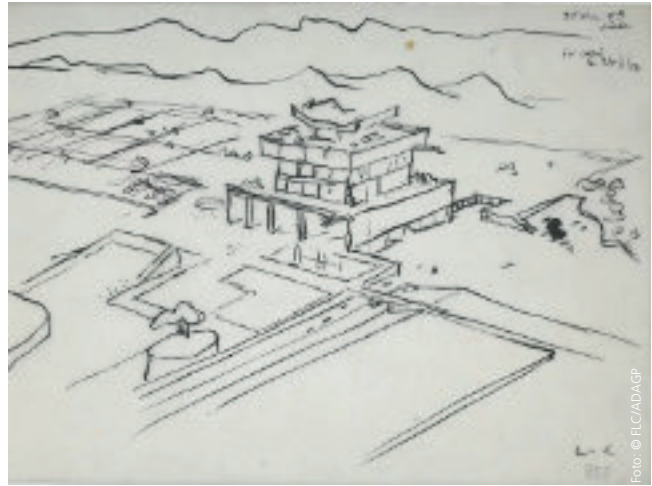
### THE SECRETARIAT, 1953–1959

The Secretariat is the largest structure in the Capitol Complex. 254 meters long, 42 meters high, and comprising eight stories—designed as the central administrative hub of the government. Its massive scale embodies authority and order, while its structural logic reflects Le Corbusier's modernist principles of modularity and functionality. The building's rectilinear form is organized along a strict structural grid. This grid allows flexibility in interior office arrangements, with large open spaces connected by elongated corridors that facilitate movement and communication bet-





The High Court of Justice



The Governor's Palace

ween departments. The façade follows a modular rhythm, alternating between solid wall panels and open voids. The pattern functions as a climate-responsive brise-soleil system, reducing heat gain while maximizing natural ventilation in Chandigarh's hot semiarid climate. Le Corbusier envisioned the Secretariat as a living administrative machine. Its monumental horizontality contrasts with the more vertical emphasis of the other Capitol Complex buildings, giving it a grounded, almost fortress-like presence.

### THE HIGH COURT OF JUSTICE, 1951–1955

Constructed primarily from *béton brut*, its façade is defined by deep recesses, sculptural concrete piers, and a bold interplay of solids and voids. The most striking feature is the vast parasol-like roof, which provides shade while emphasizing the building's horizontal lines. Beneath this canopy, the rhythmic brise-soleil protects the interiors from excessive heat while allowing diffused light to filter in. Le Corbusier drew from the color theory he developed with his cousin Pierre Jeanneret, incorporating vivid primary colors in selected elements. These colors red, blue, and yellow symbolize

power, vitality, and structural clarity, avoiding decorative excess while asserting the building's dignity. Over time, the High Court has been expanded with three extension blocks to meet the judiciary's growing needs:

Block B: Courtrooms

Block C: Lawyers' Chambers

Block D: Criminal Branch and Museum

### THE GOVERNOR'S PALACE, 1950–1965

The fourth major component originally planned for the Capitol Complex was the Governor's Palace. However, this building was never realized. It was criticized for being too large, too exclusive, and overly ceremonial for the new democratic capital. While the Palace of Assembly, Secretariat, and High Court fulfilled essential functional roles in governance, the Governor's Palace was deemed non-essential — an architectural luxury that conflicted with the ethos of a people-centered administration. The decision not to build it also underscored the pragmatic aspect of Chandigarh's planning: monumental architecture would be justified only when it directly served the functioning of the state.

# Sector 22 - Government Housing

Housing Structures and Typologies



Housing Sector 22

## PROFILE SECTOR 22

Le Corbusier's master plan envisioned each functional sector of Chandigarh as an independent neighborhood.

Sector 22 was one of the first residential sectors to be built and served as a transitional zone between the city's commercial center (Sector 17) and other residential areas. Measuring approximately 800 × 1200 meters, the sector is accessible at four points and was designed for pedestrians with an inward-facing layout. Its internal circulation follows Le Corbusier's 7V system, with V4 roads forming curved market streets and V5 roads enabling internal movement. A large public park is also included.

The planning of Sector 22 was significantly shaped by British architects Jane Drew and Maxwell Fry. They implemented the concept of the neighborhood unit, integrating schools, markets, religious sites, and social services within walkable distances.

Sector 22 was designed for low-income groups ("Peons") and features "Peons' Villages"—small housing clusters (150–220 units for about 700 people) inspired by traditional Punjabi villages to foster a rural sense of community. The sector is characterized by clear residential zones, small local markets, green communal spaces, and low-rise buildings (1–2 stories). A distinct visual contrast exists between the government housing and adjacent private housing, which transitions into neighboring sectors.





Plan © Illustration by author

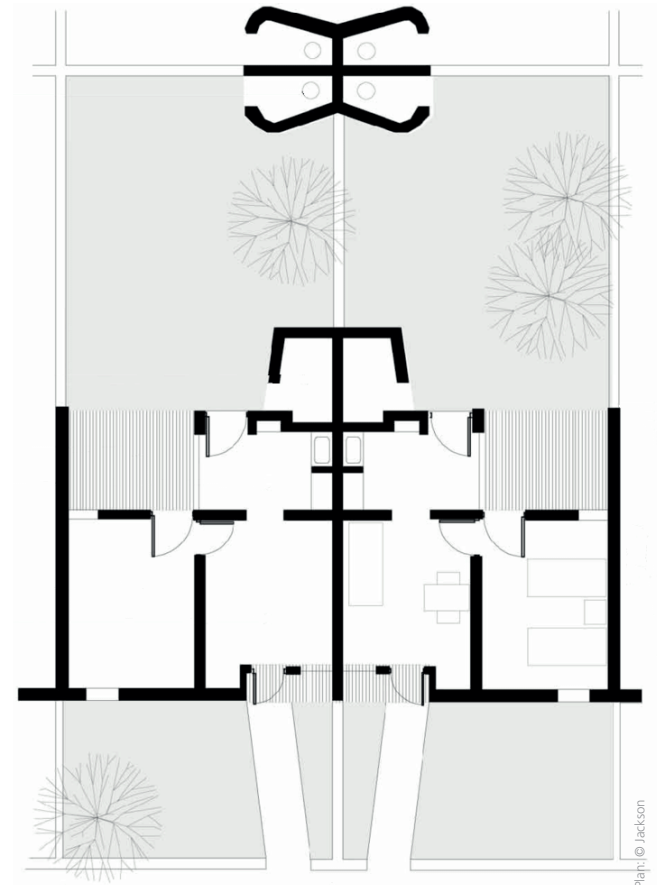
Overview Sector 22

# Sector 22 - Government Housing

Housing Structures and Typologies



Housing Type 13-D



Floorplan Type 13-D

## JAN DREW: TYPE 13 - D

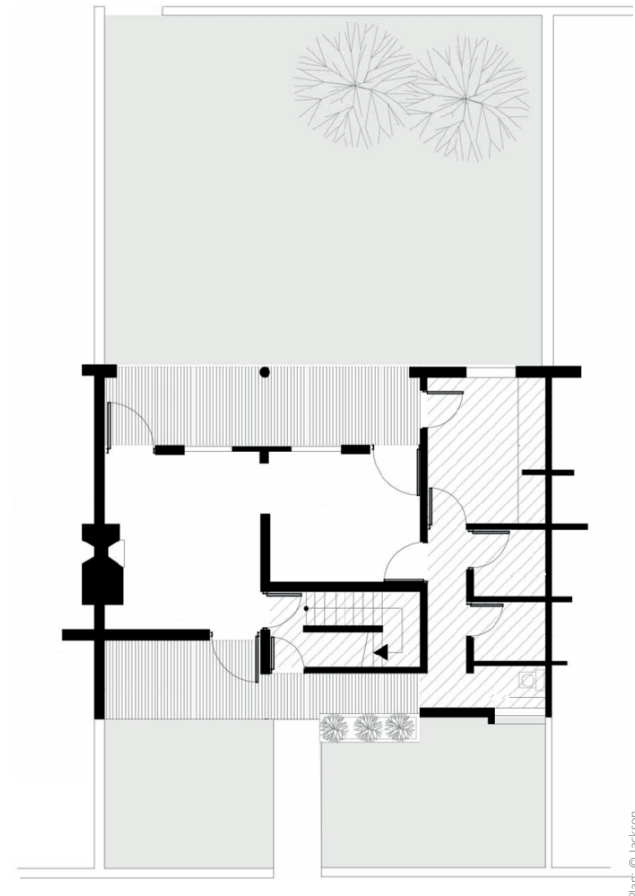
Government housing in Sector 22 is characterized by simple, functional low-rise buildings with minimal ornamentation, clean lines, and a focus on practicality. Building sizes varied according to the official rank, ranging from small units to larger service residences. Common features include exposed concrete, geometric forms, open spaces, and generous green areas around the buildings. Sector 22 served as a prototype settlement, incorporating multiple housing types and variations. The architecture reflects modern, climate-adapted design suitable for India's tropical conditions. Jane Drew designed two settlements (22A and 22D), each with around 200 Type 13D houses.

Despite tight budget constraints, she implemented a “two-room philosophy” to provide separate sleeping areas for parents and children. The single-storey 13D units included two rooms, a cooking veranda, bathroom, and external toilet. Cost reductions were achieved through row-house layouts and detached WCs. Large backyards offered additional space. With these designs, Drew shaped what became known as the “Chandigarh Style”: low-rise, low-density, cubic forms made from local brick. This style was not a deliberate aesthetic choice but rather the outcome of practical experiences in Sector 22.





Housing Type 9-F

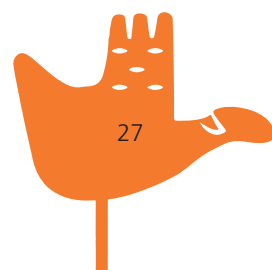


Floorplan Type 9-F

## MAXWELL FRY: TYPE 9 - F

Maxwell Fry designed several variants of the Type 9 houses for higher-ranking government officials. He had to address cultural expectations that often conflicted with his modern and efficient design ideals. Inside, separate circulation paths were created for domestic staff, allowing cleaners to access toilets without passing through the main living areas. Servants had dedicated zones with access to the kitchen, storage, and bathrooms, and a separate staircase to the upper floor. This spatial segregation aimed to prevent “contamination” of the house by lower-caste staff, highlighting tensions between tradition and modern architecture. Among the two-storey Type 9F houses, traditional elements

such as jalis (lattice screens) were used to shield women from outside view. A modern version, Type 9-FB, replaced the veranda and jalis with a white brise-soleil. The floor plan was redesigned for greater efficiency, allowing higher housing density and cost savings. The buildings in Sector 22 are in varying states of preservation – some remain well-maintained, while others show clear signs of aging. Although isolated efforts toward modernization have begun, the sector largely retains its historical character. Green spaces have somewhat diminished, but Sector 22 remains one of the most authentic and dynamic districts of old Chandigarh.



## Sector 23 - Government Housing

## Housing Structures and Typologies



Layout Plan of Sector 23

Sector 23 is one of the earliest areas developed in Chandigarh and functions primarily as a mixed-use residential neighborhood. It features government-owned housing alongside recreational and cultural amenities, educational institutions, and commercial facilities.

This sector includes a variety of housing projects that offer different modern living solutions designed by several architects. In addition to the residential work of Jane B. Drew, E. Maxwell Fry, and Pierre Jeanneret, it also contains cultural buildings by Aditya Prakash and extensive green areas forming part of the Leisure Valley.

The residential typologies range from small row houses to multi-story buildings, following the frameworks defined

by the architectural guidelines. These guidelines aimed to create clearly structured housing blocks connected to public green spaces, accessible through narrow streets. They were established to ensure solar access, cross-ventilation, privacy and protection, as well as a strong urban street façade, all while keeping costs low.

A prominent example is the two-story typology by Pierre Jeanneret. His design enables effective ventilation, incorporates verandahs, a flexible open-to-sky space, and provides both a backyard and a private roof terrace.





Housing type 12-D by Jane B. Drew



Housing type 12-D by Jane B. Drew



Janj Ghar (city banquet) by Aditya Prakash



Open-air theatre by Aditya Prakash



Swimming pool



Childrens traffic park



# Sector 23 - Government Housing

## Housing Structures and Typologies

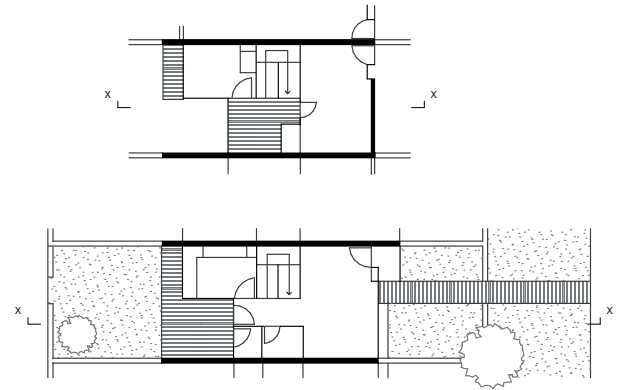


Housing type 11-F by E. Maxwell Fry

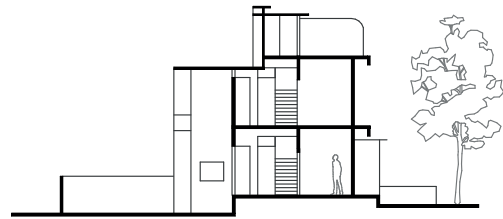
Although architectural guidelines existed, they were applied with varying levels of strictness. A notable example is the work of architect Maxwell Fry, whose design departs from the strict geometries prescribed by Le Corbusier.

One of Fry's housing typologies experiments with push-and-pull elements that contrast with the rigid forms of Le Corbusier and Jeanneret. He integrates precast concrete balconies and a red-and-white color scheme on the façade. Like many of his other designs, this typology includes a *barsati*, a small rooftop room that is a traditional feature in Indian architecture, often used as an extra living or utility space.

The floor plan features two bedrooms and a sleeping ter-



Ground floor plan (below) and first floor plan (above)



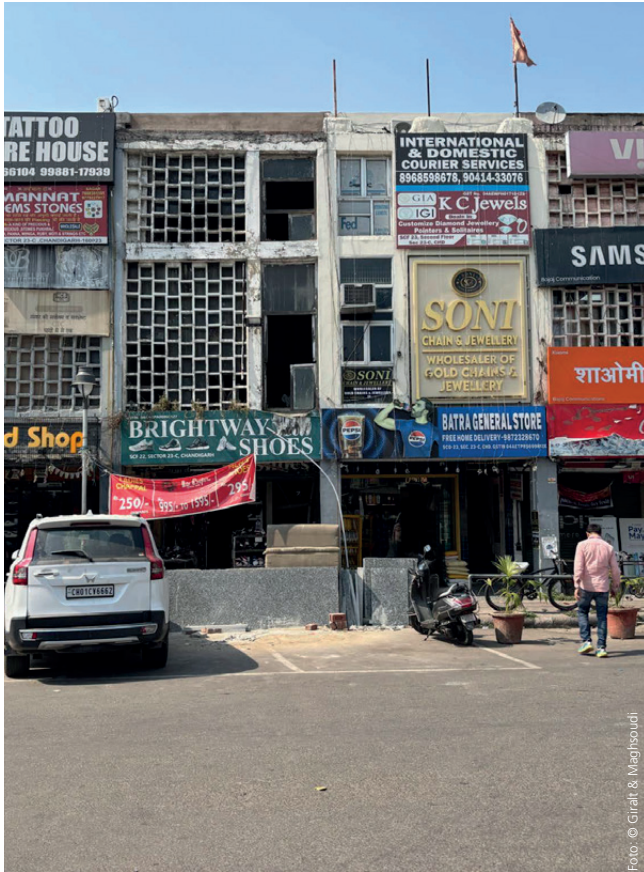
Section X-X

race on the upper floor, while the ground floor centers on the kitchen. To shield the house from summer winds, the entrance is set back beneath a slightly projecting portico, a recurring element in Fry's designs.

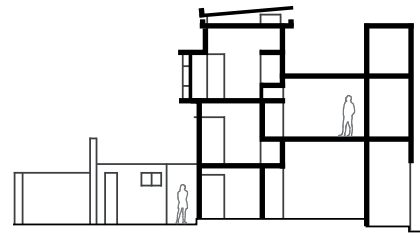
In contrast, Jane B. Drew's typology stands out as the only one incorporating an internal courtyard within the dwelling. While courtyards are a long-established architectural feature, they were rarely used in Chandigarh's housing, as clients did not regard them as modern. Yet Drew's houses remain highly popular today, partly because the courtyard can easily be converted into an additional room.

As noted, Sector 23 is defined by its mixed-use character. Key examples include a nursery school by Jeanneret,





Shop cum flats 2 by Jane B. Drew



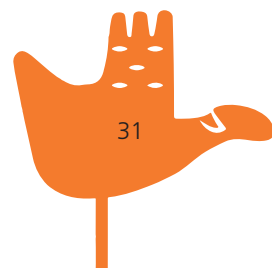
Section of shop cum flats

designed with modular principles that allow for adaptable classroom spaces, as well as shop-cum-flats by Jane Drew, combining narrow, street-facing shops with residences above to merge commercial and domestic functions. Drew also designed a swimming pool, where bold red-and-white contrasts and modernist lines convey a sense of health and hygiene. Complementing these facilities, an open-air theater by Aditya Prakash contributes recreational and cultural value to the sector.

One of the most geometrically striking buildings is the Janj Ghar, also by Prakash, conceived as a city banquet. Its design juxtaposes rectangular and free-form elements, characteristic of Chandigarh's planning at the time. Guest rooms are arranged in linear blocks around an open court,

while the main ceremonial space is enclosed by free-form walls that create light-filled openings where they meet. These areas are linked by an open corridor supported by V-shaped concrete trusses.

Although the building is now deteriorating, preservation efforts are underway, as the Janj Ghar remains a key cultural landmark of the sector. Together with other typologies in Sector 23, it exemplifies Chandigarh's diverse architectural language, where modernist ideals are combined with practical urban needs.



# Sector 14 - Panjab University

Education Campus and Academic Center



Architectural Site Map

## ARCHITECTURAL HIGHLIGHTS

1. Gurudwara Shri Mukatsar Sahib
2. Mehra Botanical Garden
3. Student Center
4. Gandhi Bhavan
5. Fine Arts Museum
6. Open Air Theatre

## SECTOR 14 PANJAB UNIVERSITY

A key area of the city that hosts the main campus of Panjab University, one of India's most prestigious universities. Designed as part of Le Corbusier's master plan, this sector blends modern architecture with an academic environment, making it a site of cultural and urban significance.

The University was founded after the partition of India in 1947. It spans an area of over 200 Acres across Sector 14 and 25. It features a series of architectural landmarks:

**Gurudwara Shri Mukatsar Sahib** – An example of religious architecture, that contrasts with the usual modernist style.

**Mehra Botanical Garden** – Primarily a landscape feature, its spatial layout and integration with built elements showcase thoughtful environmental design.

**Student Center** – A key building with a dynamic form, central to campus life and designed to foster interaction.

**Gandhi Bhavan** – A sculptural and expressive structure blending symbolism with modern architecture.

**Fine Arts Museum** – An important cultural building, notable for its bold geometry and usage of light and materials.

**Open Air Theatre** – Typical public structure to host cultural events, found throughout the City featuring characteristic and expressive forms.





Panjab University Student Center

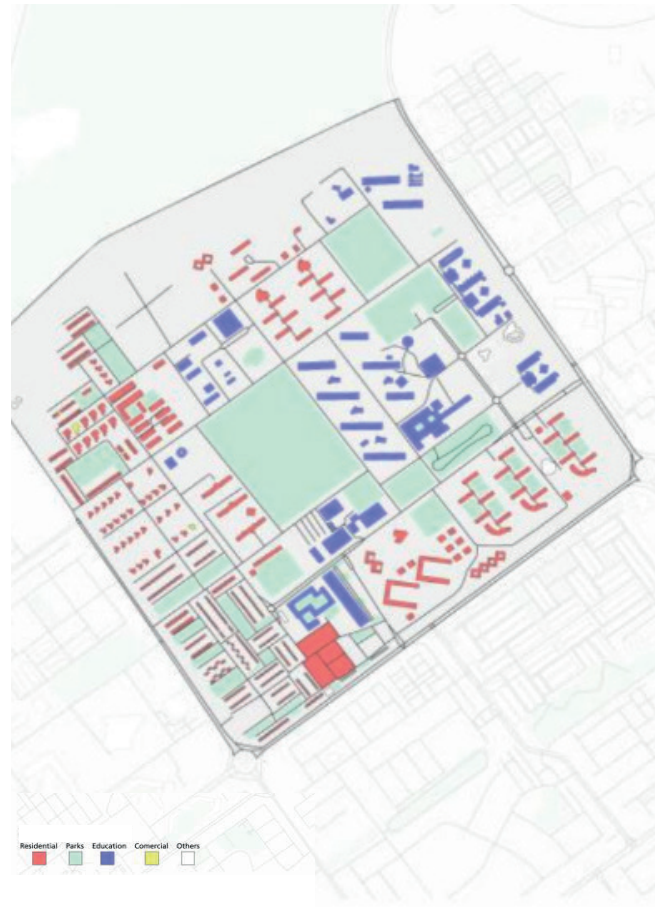


# Sector 14 - Panjab University

Education Campus and Academic Center



Green Spaces



Spatial Use

## ANALYSIS - LANDUSE AND ZONING

The land use map shows a nearly equal distribution between educational and residential functions. There are also a few buildings for religious use, a museum, and some scattered commercial space. These are however notably scarce, indicating a lack of retail services in the area.

The residential buildings are mostly located in the south and west of the sector, surrounding a educational core. In the center of the entire Sector, a large sports park is present. Various additional facilities are housed like a Swimming Pool, Shooting Hall, a University Rose Garden, a Cricket Field and a Botanical garden to name a few.

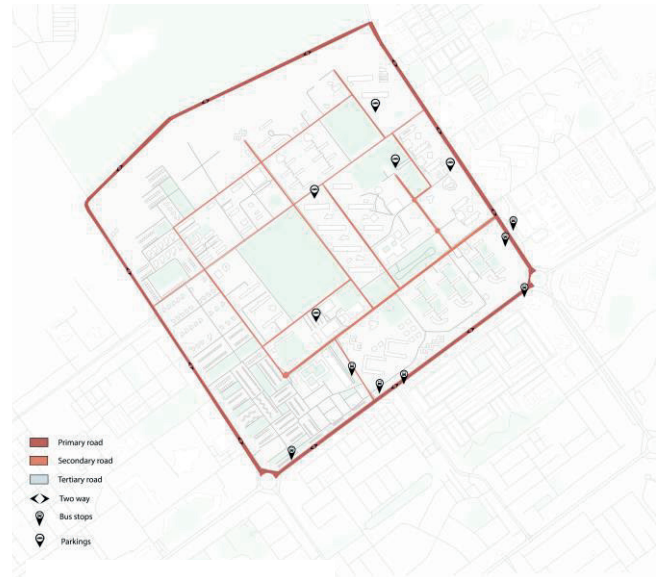
Sector 14 is inspired by the Garden City vision, which proposes, that greenery increased the well-being of inhabitants. It integrates the place with nature by extending the forest in the north into the Sector itself and integrate it into the Botanical Garden.

There are additional urban parks, such as the University Rose Garden in the centre, the Sarojini garden and the Shama herbal park located under the big sports plot. A band of green surrounds the whole Sector creating a buffer zone. Furthermore many of the Green Spaces offer sporting facilities and places for activities in nature. Many Residential houses also have allocated private or semi-private green-spaces.





Building Typologies



Mobility Analysis

## ANALYSIS - BUILDINGS AND INFRASTRUCTURE

The Sector is built in the typical modernistic architectural used throughout the master plan. The typologies used are a mix of detached and semi-detached houses, row-houses and special buildings as architectural focal points. Many of these buildings have a similar modular approach as the buildings in Sector 17 and the topological familiarity works according to modernistic city planning principles.

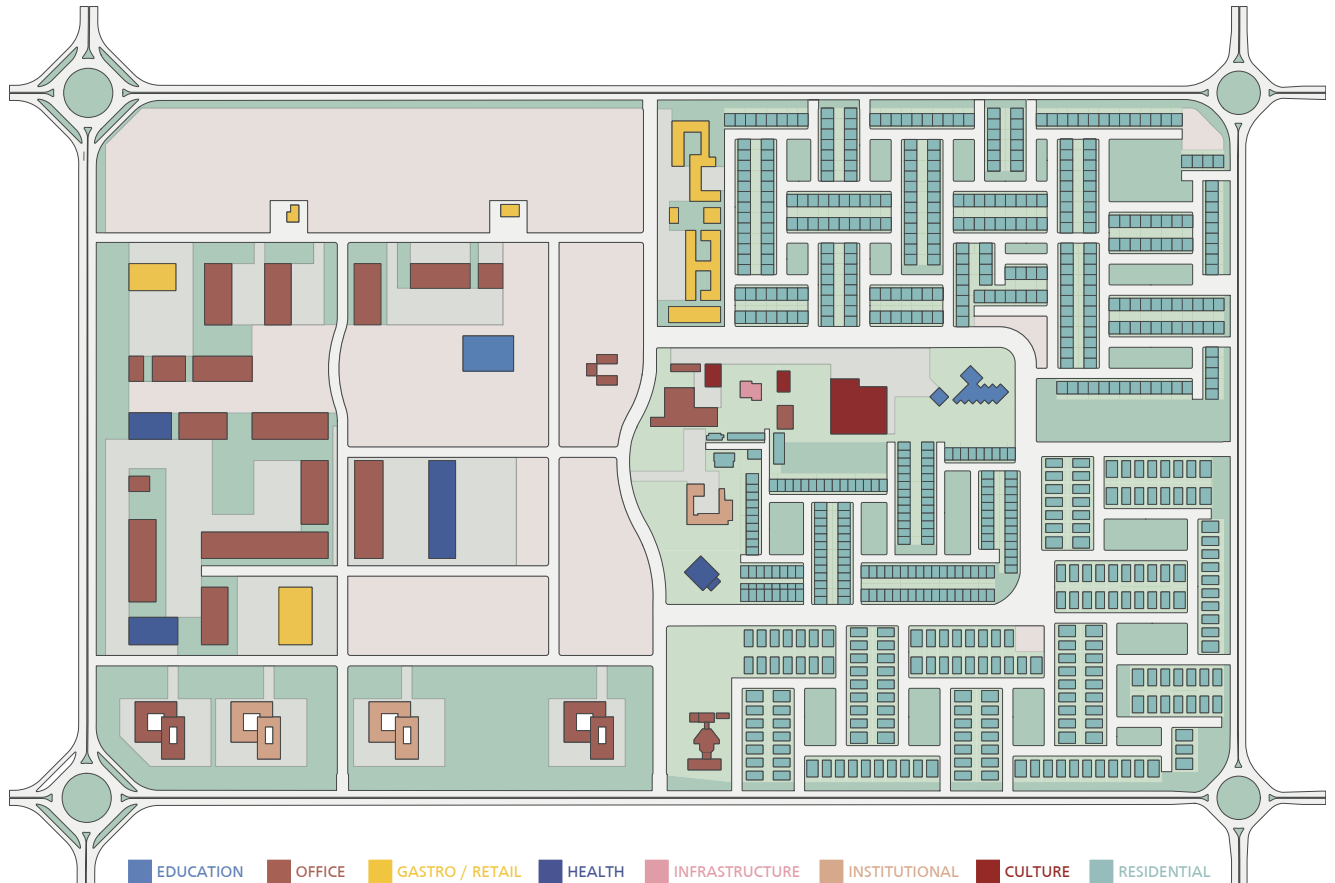
In the centre of the sector we mostly find buildings campus buildings, which are 4-6 stories in height. Residential buildings grouped around the sector centre are mostly for students and employees and 1-2 stories in height.

The whole area is grouped into clusters of functions. The primary vital roads, run along the outer boundary, forming a loop that defines the sector's perimeter and offers access to the wider city network. Additionally, bus stops near key intersections, provide connectivity with the broader city.

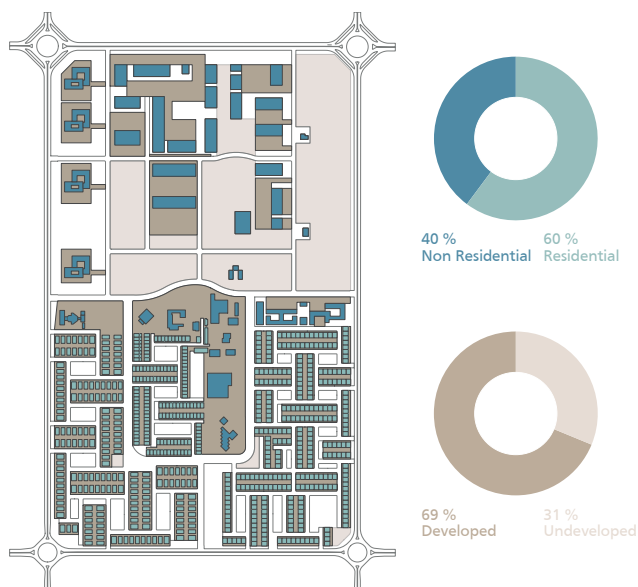
The bottom graphics depicts walking accessibility: the inner circle represents a 5-minute walk (420 meters), and the outer circle shows a 10-minute walk (840 meters). On the right hand side we can see that cycling significantly extends these distances.

# Sector 34 - Sub-Center

Local Supply, Retail and the Role of Sector 34 Sub-Center and the Elante Mall



Site plan



Sector 34 in Chandigarh is divided into four blocks. Blocks A and B are primarily commercial in nature, while Blocks C and D feature a mix of residential and commercial uses. Overall, around 60% of the buildings in the sector are primarily residential, while the remaining 40% serve non-residential purposes. This functional division is clearly visible in the layout of the area.

The plan also reveals that, of the total 116 acres that make up the sector, only 62 acres have been developed. This means that approximately 21% of the land remains undeveloped, while 69% is built-up. Urbanistically, Sector 34 plays an important role, particularly in relation to its neighboring Sector 17. The two are considered complementary and have been identified as potential central commercial hubs for





Subcity Center

Chandigarh. Their connection is expected to create synergies that could help redefine the city's economic center. At present, however, Sector 34 presents a chaotic and unfinished appearance. Ongoing construction projects and unused plots contribute to an incomplete and fragmented urban image.

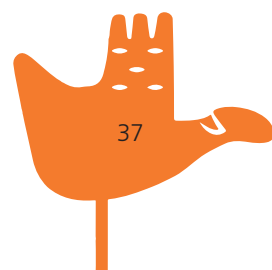
The sector is urbanistically fragmented, with paths and public spaces lacking clear connections and a central design focus. Open spaces and safe pedestrian routes are missing, which lowers the overall quality of stay. Despite this, Sector 34 benefits from a central location and good access to major traffic routes. Several bus stops within 300 meters provide adequate public transport coverage, and parking spans about 30 acres, offering roughly 4,800 spaces. Despi-



Living area sector 34

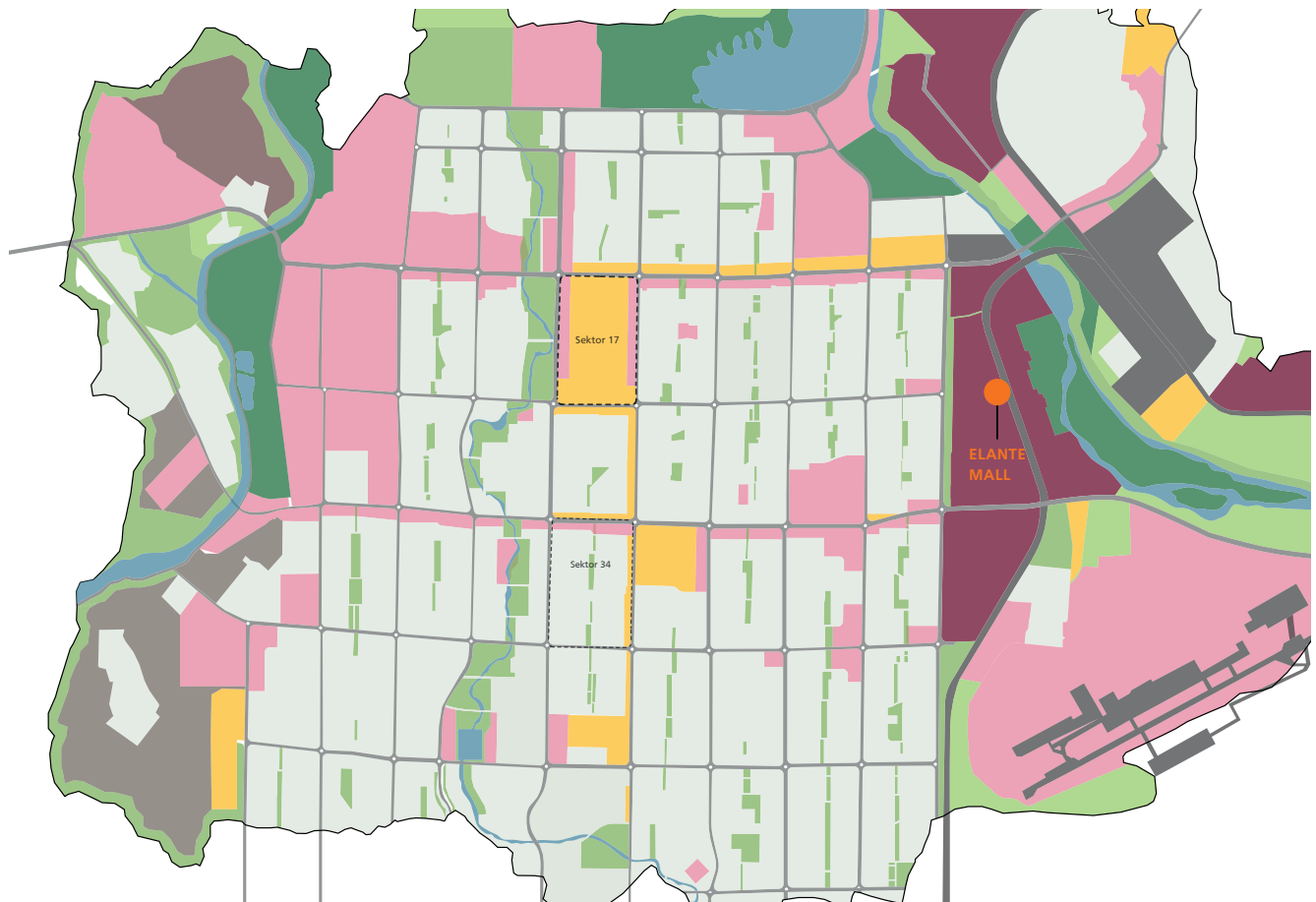
te these challenges, the sector has established itself as a significant center for education and is home to a high density of office buildings, service providers, and small retail shops. Originally, Sector 34 was also envisioned as a cultural and administrative node. Although some projects remain incomplete, the sector includes important public institutions such as the State Library, the Nehru Centre for Performing Arts, a sports center, some hospitals, and a Gurdwara, which functions both as a place of worship and an educational institution for the Sikh community.

In summary, while Sector 34 fulfills several important functions, it continues to face urban design challenges and appears spatially fragmented, with untapped potential for cohesive development.



# Sector 34 - Sub-Center

Local Supply, Retail and the Role of Sector 34 Sub-Center and the Elante Mall



Business & Industrial Area Phase 1

## INDUSTRIAL AREA PHASE 1

The Elante Mall is located within Business & Industrial Park 1, a district originally established in 1970 to promote the development of small and medium-sized industrial enterprises. Spanning a total area of 1,475 hectares, the park was initially focused on industrial activity.

Since 2005, however, the land use has undergone significant change, with parts of the former industrial zone being reclassified for commercial development. This transformation led to the emergence of large-scale projects such as retail outlets, hotels, office buildings, and entertainment venues. A key milestone in this development was the opening

of Elante Mall in 2013. Although Elante Mall stands as a polished and modern commercial centre, its immediate surroundings reveal a sharp contrast. Just beyond the mall complex in the ginger hotel road besides the railway track, several undeveloped plots and fallow areas remain, particularly near the green space originally intended as a forested buffer. These open areas are scattered with rubbish and informal structures, giving parts of the sector an unfinished and neglected appearance. The disparity between the mall's clean, curated environment and the disordered state of the surrounding land highlights broader urban management challenges in the area.





Elante Mall



Immediate surroundings of Elante Mall

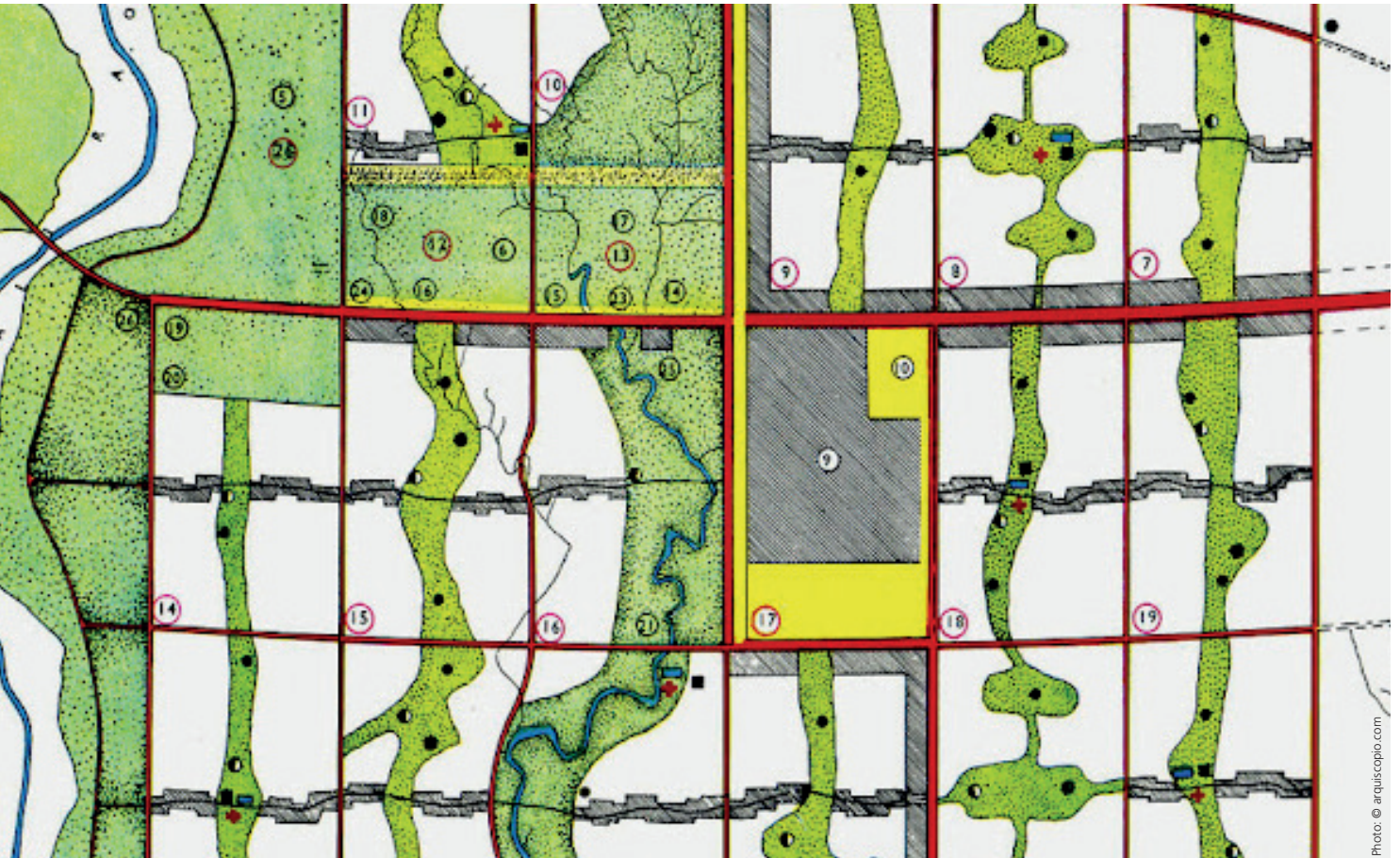
## ELANTE MALL

Covering an area of 20 hectares, it is now one of the largest shopping malls in North India. Its size and central location have made it a major commercial and social hub for the region. It combines a shopping mall, office complex, and hotel, all organized around a central courtyard. The mall features over 225 outlets, a spacious food court, multiple fine-dining restaurants, and a variety of cafés. The mall also houses an 8-screen PVR multiplex cinema, entertainment zones like Fun City and BluO bowling, and frequently hosts public events and brand activations. Existing infrastructure, particularly in terms of water supply, sewage, and electricity, is in part inadequate for the increasing commer-

cial demands. In addition, rising traffic volumes have led to congestion and strain on local roads, especially during peak hours. Despite these challenges, the mall benefits from its central location and strong connections to major roads. Public transport is accessible, with several bus stops located within walking distance. For those arriving by car, the mall provides over 5,800 parking spaces in a multi-storey facility. Elante Mall reflects the broader urban shift from industrial zoning toward commercially driven development. Its role within the Industrial Park Phase 1 marks a significant departure from the area's original function and highlights the ongoing transformation of Chandigarh's urban structure.

# Open Space

Green Belt, Leisure Valley and Sukhna Lake as Open Space Structures



Open space concept of Chandigarh

## GREEN BELT

The Green Belt is a central component of Chandigarh's urban planning and an early example of integrated green infrastructure in India.

As a continuous green corridor, it follows roads, waterways, and city boundaries, fulfilling important ecological, urban, and social functions. It helps regulate the climate, lowers temperatures during the hot summer months, and reduces the urban heat island effect. Trees and lawns filter fine dust and pollutants from the air while also serving as noise barriers, particularly along main roads. In addition, the Green Belt promotes rainwater infiltration and supports urban water management.

It naturally separates city sectors while connecting residential areas, administrative centers, schools, and cultural institutions. In this way, social segregation is avoided and overall quality of life is improved. The open spaces are publicly accessible and provide room for recreation and physical activity.

Moreover, the Green Belt limits the uncontrolled spread of the city into sensitive peripheral zones and protects valuable landscapes. As a functional and design-shaping element, it makes Chandigarh a pioneer of sustainable urban planning and serves today as a model for many Indian cities.





Zakir Hussain rose garden

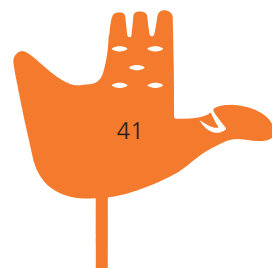
## LEISURE VALLEY

The Leisure Valley is an 8-kilometer-long green axis running north to south through Chandigarh, reflecting Le Corbusier's vision of harmoniously integrating nature and urban life.

It consists of a series of thematically designed parks and gardens, including the Zakir Hussain Rose Garden, Shanti Kunj, and the Garden of Fragrance, each offering distinct atmospheres. Open lawns, water features, and naturalistic elements provide space for recreation, sports, cultural events, and environmental education.

Publicly accessible to all, the valley promotes physical and mental well-being through jogging trails, yoga platforms, and walking paths. Integrated with the city's open-space and transport network, green corridors connect neighborhoods while mitigating noise and air pollution.

The Leisure Valley thus serves as a design backbone and a functional, ecological, and social connector an exemplary model of holistic urban planning.



# Open Space

Green Belt, Leisure Valley and Sukhna Lake as Open Space Structures



Sukhna Lake

## SUKHNA LAKE

The Sukhna Lake was artificially created in 1958 by damming the Sukhna Choe river and is a central element of Chandigarh's master plan. Covering an area of about 3 km<sup>2</sup>, the lake connects the city's urban structure with the surrounding nature and serves as a recreational area for residents. Le Corbusier deliberately designed Sukhna Lake as a zone of tranquility. Motorized boats are prohibited, contributing to a peaceful and relaxed atmosphere. The lake is surrounded by expansive green spaces that offer numerous opportunities for walking, sports, and birdwatching.

Especially during the winter months, Sukhna Lake attracts a variety of exotic migratory birds, including Siberian ducks, storks, and cranes. This ecological significance as a habitat highlights the lake's important role in the region's biodiversity. It also serves as an outdoor classroom, where schools and environmental groups educate visitors about local flora and fauna.

Despite facing challenges such as sedimentation and declining water levels, Sukhna Lake remains a symbol of Chandigarh's sustainable and visionary urban planning. Sedimentation poses a continuous threat to water quality and the lake's ecological health, despite regular dredging efforts. These challenges demonstrate that safeguarding and further developing Chandigarh's green infrastructure requires clear concepts, ongoing maintenance, and political commitment to preserve the city's qualities.

Annual dredging operations, often involving volunteers, help remove accumulated sediments from the lake. Beyond its ecological role, Sukhna Lake serves as a cultural landmark and a valuable recreational resource for the city's residents. It is a popular gathering place for families, tourists, and athletes, offering numerous leisure opportunities. The lake also inspires artistic and cultural activities, from photography to festivals, celebrating the city's connection with nature. The lake thus plays a central role in the daily life of the city.



## CHALLENGES

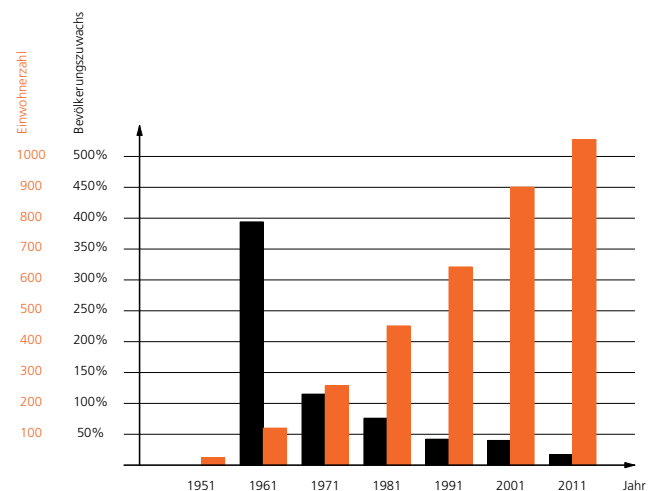
### Challenges in Managing Chandigarh's Green Infrastructure

Despite its progressive urban plan, Chandigarh faces significant challenges in managing its green infrastructure. Urban growth pressures have increased the demand for housing and infrastructure, threatening protected green spaces, particularly at the city's edges and within areas such as the Green Belt and Leisure Valley. Unauthorized constructions and illegal parking in designated green areas have exacerbated the situation, highlighting the need for stricter enforcement of zoning laws and public awareness campaigns. In response, the Chandigarh Municipal Corporation has conducted anti-encroachment drives to preserve public spaces and the city's ecological balance .

Another issue is the neglect of many parks and gardens, which suffer from poor maintenance, litter, overgrowth, and invasive plant species. During dry periods, water shortages negatively affect vegetation. Sukhna Lake also suffers from sedimentation and declining water levels, endangering its ecological importance despite regular dredging efforts. The catchment area of Sukhna Lake is under tremendous pressure, leading to increased siltation .

These challenges demonstrate that safeguarding and further developing Chandigarh's green infrastructure requires clear planning, enhanced maintenance, and strong political commitment to preserve the city's qualities. Implementing sustainable practices, enhancing public participation, and ensuring adequate funding for green infrastructure projects are crucial steps toward maintaining Chandigarh's reputation as a green city .

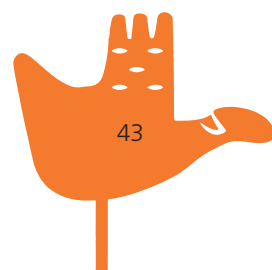
Furthermore, rapid urbanization and encroachments have led to the loss of green spaces, disrupting the city's ecological balance. The process of transformation and its impacts require understanding to determine the direction of growth and formulate strategies for cohesive development.



Source: Wikipedia, own representation

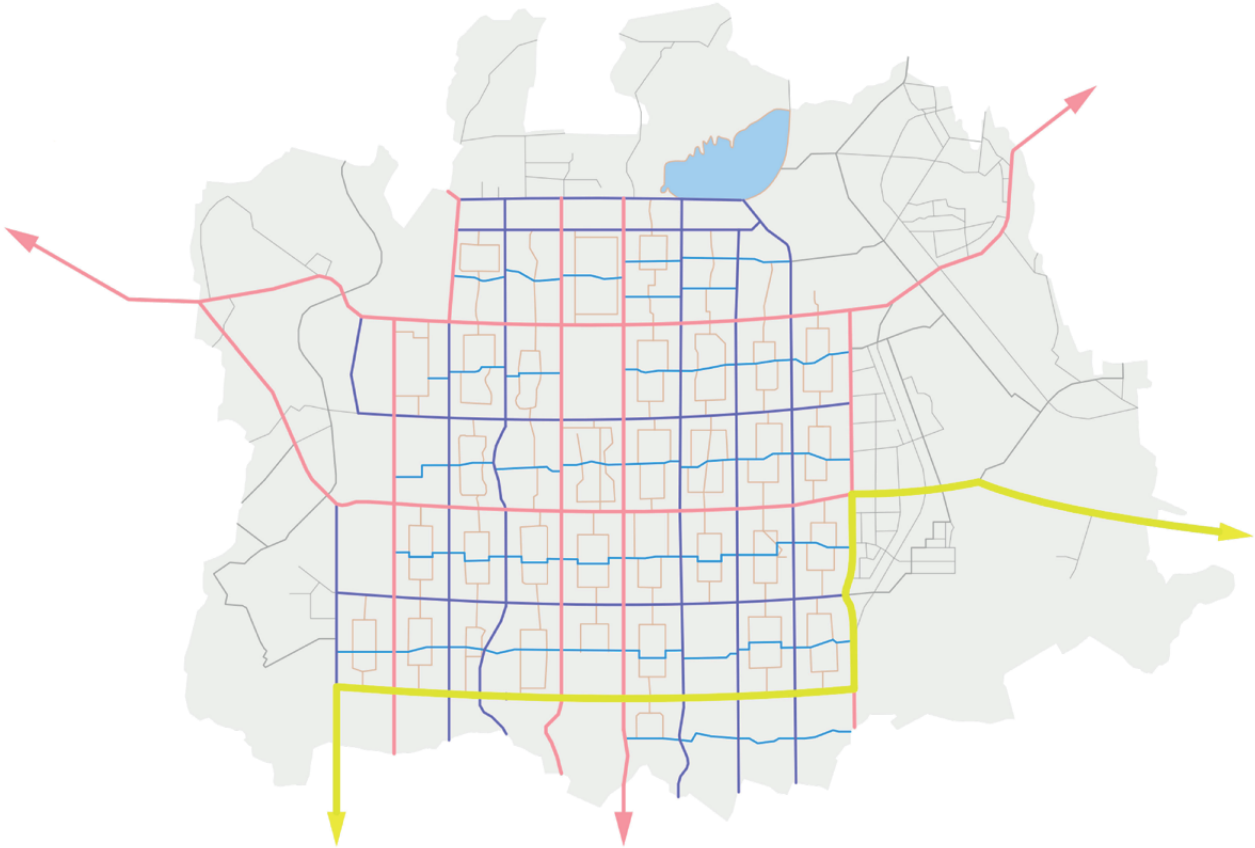
Additionally, the city's green corridors, such as Jan Marg, face threats from urban development and neglect. Community initiatives, like heritage walks organized by tree lovers' groups, aim to raise awareness and promote conservation efforts .

Addressing these issues requires a holistic approach that integrates urban development with environmental preservation. Implementing sustainable practices, enhancing public participation, and ensuring adequate funding for green infrastructure projects are crucial steps toward maintaining Chandigarh's reputation as a green city .



# The Seven V's of Chandigarh

A Planned Hierarchical System of Streets



Map of Chandigarh

## CHANDIGARH'S STREET SYSTEM

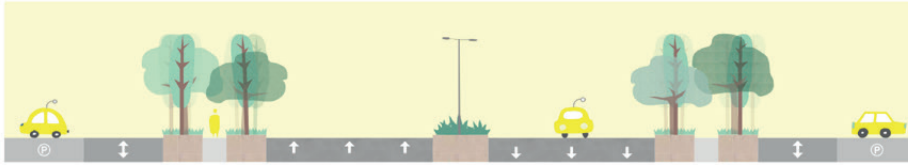
Following India's independence, Prime Minister Jawaharlal Nehru sought to establish a new city that would symbolize the country's break from colonial traditions and embody modern ideals of progress, order, and rational planning. To bring this vision to life, he invited the Swiss-French architect Le Corbusier to design Chandigarh, a city intended to express functionality, clarity, and a departure from decorative form. Le Corbusier approached the city as if it were a living organism: the Capitol Complex would act as its head, the commercial center as its heart, and the road network as the veins and arteries that ensure smooth circulation throughout the urban body.

At the center of this innovative vision was the 7V road hierarchy—a structured system that classified roads into seven types based on their intended function and role in managing

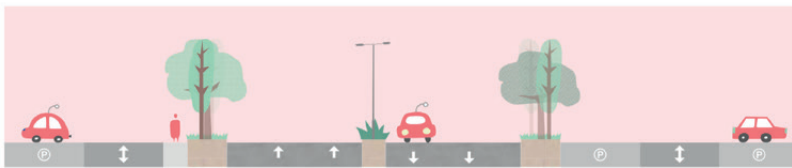
traffic and access. This system was designed to ensure an efficient distribution of vehicles, reduce congestion, and enhance safety by separating different types of movement.

V1 roads were conceived as high-speed corridors, connecting Chandigarh to other regions. These fast roads were placed outside residential areas to allow for uninterrupted regional traffic, functioning similarly to highways. V2 roads, referred to as arterial roads, facilitated movement across the city by connecting key zones and sectors. These roads maintained relatively high speeds and supported the distribution of traffic without disrupting local environments. V3 roads formed the boundaries of each sector and provided access into them. Alongside V1 and V2 roads, they created the foundational grid that structured the entire city.

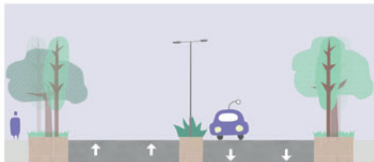




V1 - Fast Road



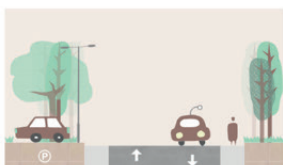
V2 - Aterial Road



V3 - Sector Dividing Road



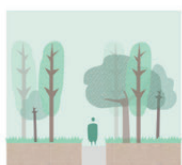
V4 - Shopping Street



V5 - Internal Sector Circulation



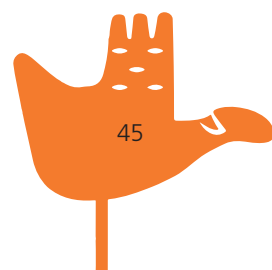
V6 - Access Road To House

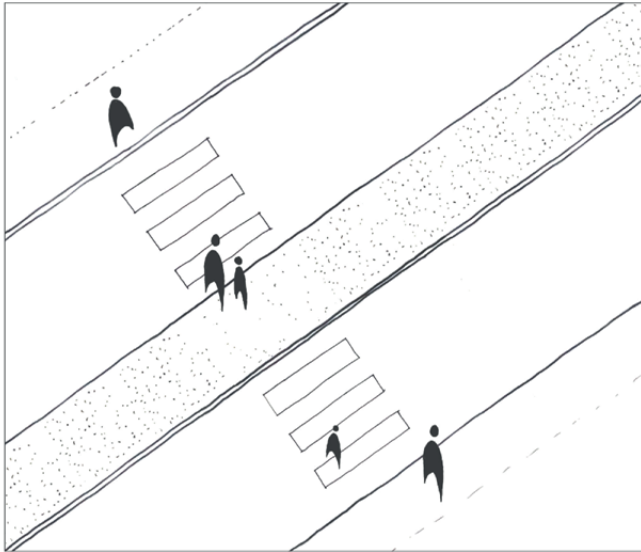


V7 - Footpath

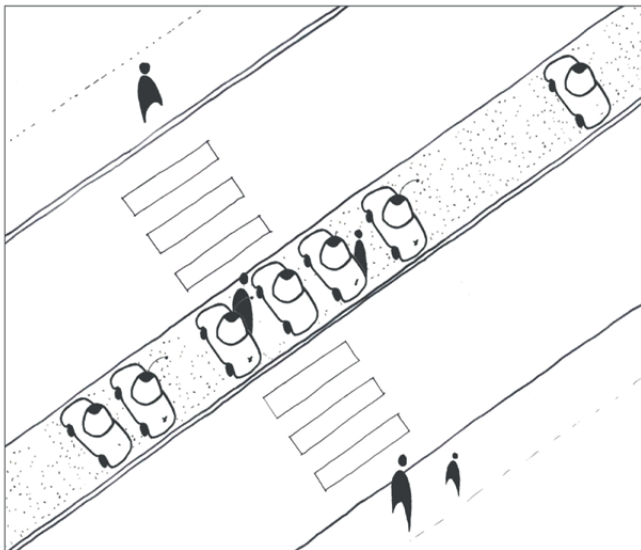
Street Sections

Project and Layout

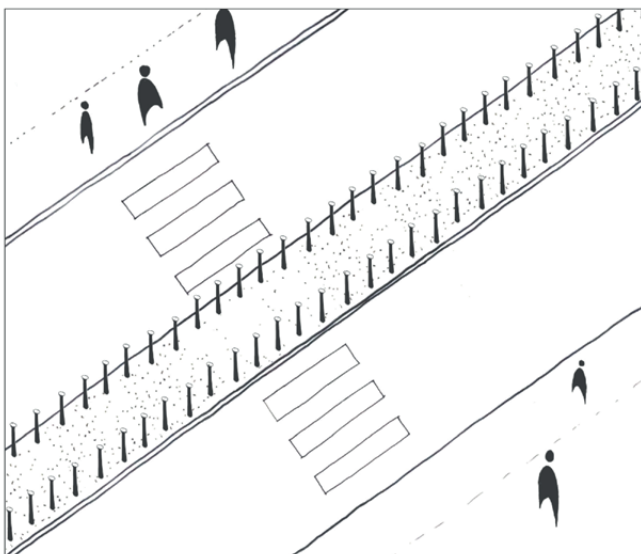




Pedestrian crossing



Unplanned parking



Bollards as a barrier

## LOCAL STREETS AND PEDESTRIAN PATHS

Inside this grid, V4 roads acted as shopping streets within the sectors. These were specifically designed to support pedestrian use, offering wide sidewalks and direct access to storefronts to encourage walkability and local economic activity.

V5 roads were intended for internal circulation within sectors. They connected neighborhoods to shopping areas and public services, ensuring smooth local movement without overloading the main roads. V6 roads provided direct access to individual homes. These smaller quieter streets were designed for low speed traffic, prioritizing residential privacy and safety.

Finally, V7 paths made up an entirely separate pedestrian network that was disconnected from the road system. These walkways linked important destinations like schools, parks, and markets within each sector, enabling residents to move safely and conveniently on foot without encountering vehicles. The clear hierarchy of these streets created a sense of order and orientation that shaped everyday movement within the city and reflected the modernist idea of separating functions to improve urban life.

The 7V system represented a deliberate and forward thinking approach to urban planning. By establishing a hierarchy of circulation and separating various modes of transport, Le Corbusier introduced a degree of organization and clarity that stood in contrast to the more chaotic layouts of older cities. Chandigarh's 7V road hierarchy was a central part of the city's modernist urban planning. It aimed to separate different types of traffic and ensure an organized efficient flow throughout the city. In theory this structure ranging from regional highways V1 to pedestrian paths V7 provided a clear and functional framework. However, over time various factors have led to deviations from the original concept, revealing some gaps between planning and everyday reality.

In practice many roads were not constructed exactly as originally planned and the way they are used today often diverges from the intended functions. For example, barrier free accessibility remains limited in many areas. Sidewalks are frequently too narrow uneven or altogether missing which creates challenges for people with mobility impairments as well as for families with strollers or the elderly. Additionally inadequate lighting in some places makes these areas less usable especially after dark. Parking has become a widespread issue across the city.

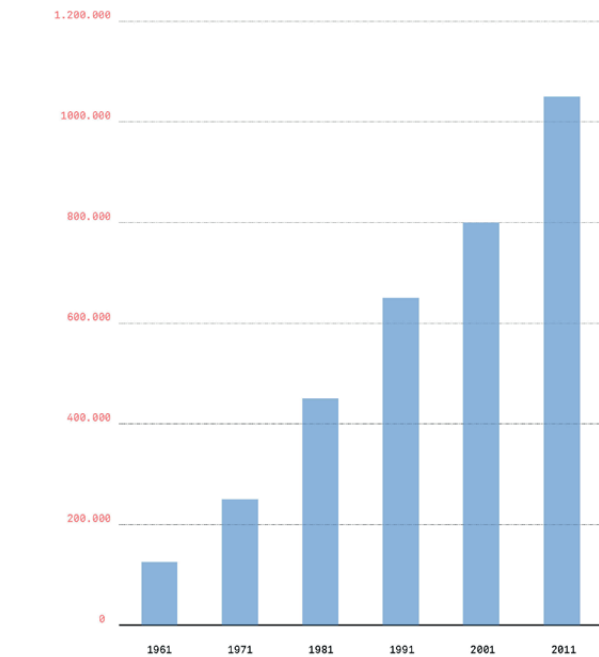
Although the 7V system aimed to maintain clean and orderly streets parking now often occurs on sidewalks green spaces and road shoulders. This gradual transformation shows how the city's everyday practices have reshaped the intended balance between vehicles and pedestrians over time.



## CHANGING MOBILITY PATTERNS

As a response, physical barriers like bollards have been installed in certain zones to restrict vehicle access and protect public areas, but these interventions are not uniformly applied. Another challenge relates to the overall increase in population and traffic since the city was first designed. Chandigarh has grown significantly and with it the number of vehicles has increased including not only cars but also motorcycles and delivery vehicles. As a result, roads that once seemed spacious are now frequently congested and the original traffic volumes anticipated during planning no longer align with current conditions.

Cycling has also become more common but the initial plan did not include dedicated infrastructure for bicycles. In response, a new category sometimes referred to as V8 has been introduced to accommodate bike lanes. These are often located along the sides of main roads which can raise questions about safety and integration within the overall network. Many commuters now rely on motorcycles for short trips while cars dominate longer journeys creating constant pressure on the road network. Public transport has not kept pace with this growth which further increases the dependency on private vehicles. The growing number of delivery services has also intensified traffic in residential areas where parking and accessibility are becoming daily challenges.

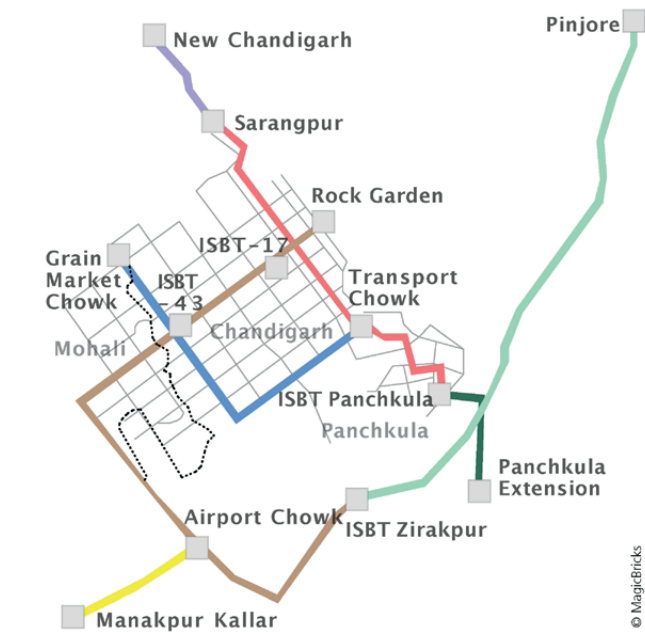


Population of Chandigarh

To meet these changing needs, several developments have been introduced or are being planned. A metro system is scheduled for implementation by 2034 to supplement the existing bus network, and a bicycle sharing program with over 3700 bicycles is already in operation. These efforts reflect the city's attempt to adapt its infrastructure to current demands and promote more sustainable mobility.

Overall, Chandigarh's 7V road system remains a significant planning model, but real world conditions have required adjustments. The growing complexity of urban life, changing transportation habits, and rising population have shown that long term planning must remain adaptable to remain effective.

The planned metro project is seen as an ambitious step toward sustainable mobility but it is also viewed critically since its high costs and long construction timeline may limit its immediate impact. At the same time questions remain about how well such large scale infrastructure will integrate with everyday patterns of movement inside the sectors. The challenge for Chandigarh will be to balance these new investments with smaller human scale improvements that directly benefit pedestrians and cyclists in daily life.



Tricity Metro Project

Diagram: © MagicBricks

## Section B

# Urban Design Concepts for Sector 17







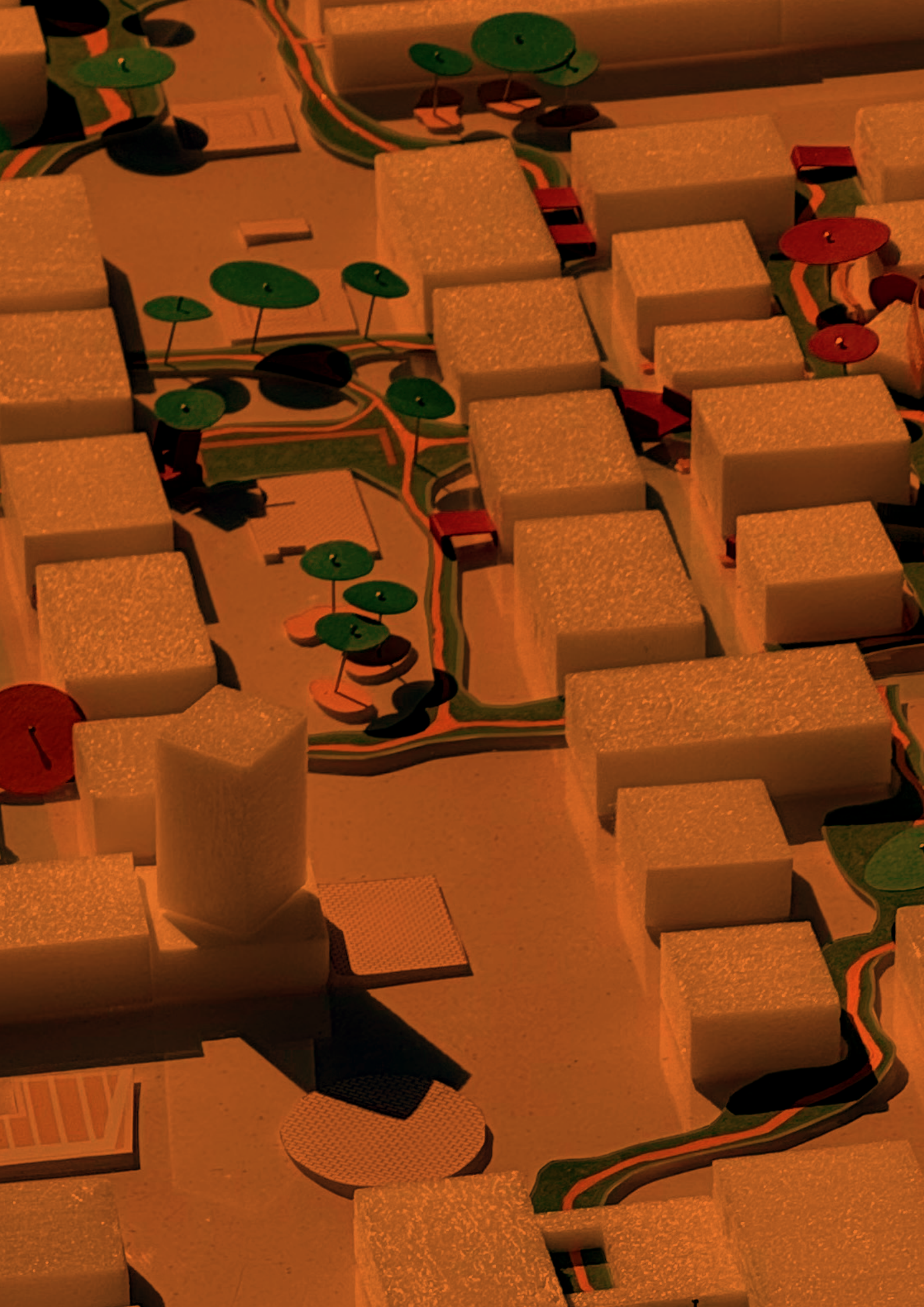


# The Fluid Grid

Team 1: Mattis Epp, Selina hofstetter, Julia Rauch







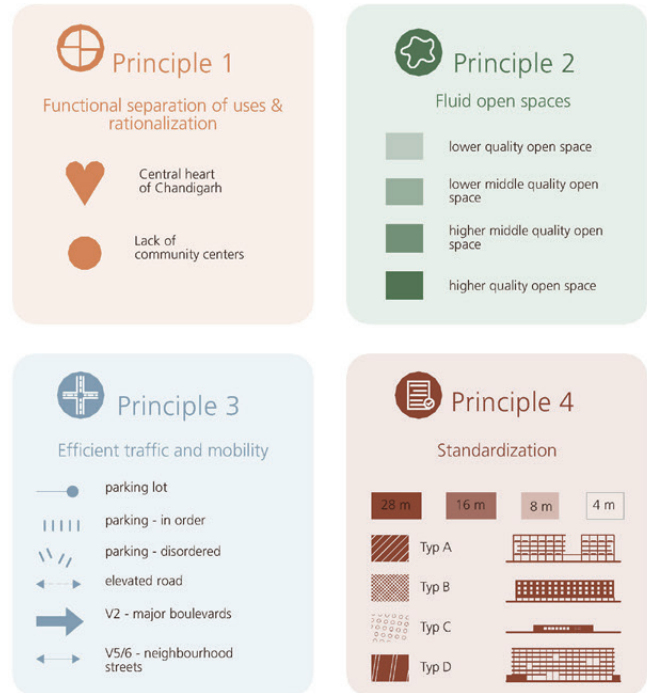


# Spatial Analysis

Charta of Athens



Analysis



Legend

## ANALYSIS

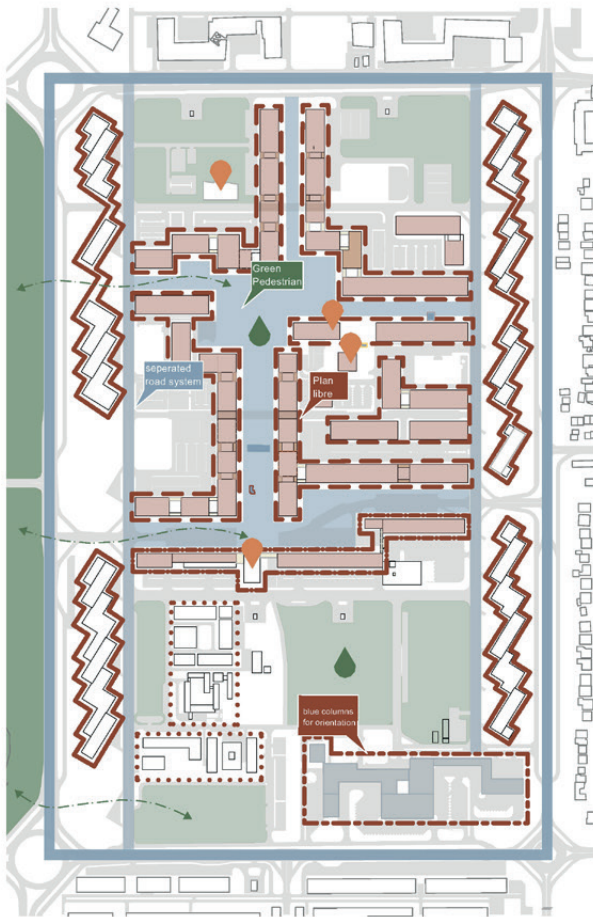
The principle of functional separation of uses advocates for dividing the city into distinct zones for living, working, recreation, and transportation.

This aimed to rationalize urban development, improve hygiene and efficiency, and prevent the chaotic mixing of incompatible functions. The principle of fluid open spaces emphasizes the integration of green and open areas throughout the urban fabric to support health, recreation, and visual relief. These spaces were intended to be freely accessible, interconnected, and evenly distributed, forming a continuous landscape that contrasts with the dense, chaotic structure of pre-modern cities.

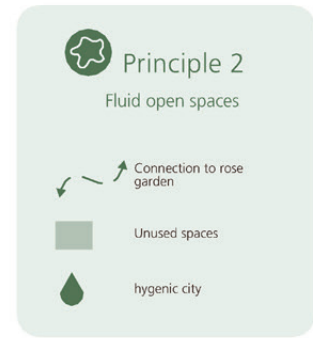
The principle of efficient traffic and mobility focuses on organizing transportation systems to ensure the smooth, safe, and fast movement of people and goods within the city.

It emphasizes the separation of traffic types (e.g., cars, pedestrians, public transit) and the creation of clear, hierarchical road networks. The principle of standardization aimed to improve efficiency, affordability, and scalability in urban development by using uniform building types, materials, and layouts. It was seen as a way to address mass housing shortages, streamline construction, and ensure a minimum quality of living across social classes.





Potentials



Legend

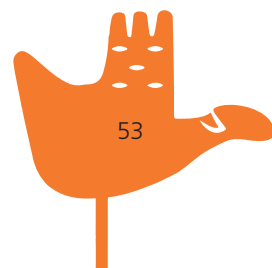
## POTENTIALS

The principle of functional separation offers the opportunity to preserve Chandigarh's valuable cultural heritage buildings while rethinking their roles in a more dynamic urban fabric. By maintaining architectural identity and layering new programs, Sector 17 can be transformed into a vibrant mixed-use center that integrates living, working, culture, and leisure.

The principle of fluid open spaces connects directly to Chandigarh's identity as a hygienic, green city. These green voids can be activated as social, climatic, and aesthetic assets that support biodiversity, microclimate, and public life. The principle of efficient traffic and mobility presents strong

infrastructural foundations, including a central bus terminal, well structured roadways, and a spacious pedestrian zone. These existing elements can be strategically enhanced to promote sustainable, multimodal mobility, reducing car dependence and enabling safe, accessible movement for all users. The principle of standardization becomes a strength in terms of architectural adaptability. With structures based on the Plan Libre and convertible interiors, the sector contains a high degree of spatial flexibility.

This opens up possibilities for modular housing, repurposing of upper floors, and multifunctional spaces that respond to changing urban demands.



# Concept and Objectives

The New Principles



Visualisation Community Center

## THE FLUID GRID

Our project, The Fluid Grid, is a critical and future-oriented response to the rigid planning doctrines of the Charta of Athens. While the Charta played a key role in shaping modern cities, most notably Chandigarh, it also led to challenges such as strict functional zoning, monotonous urban forms, and social segregation. Nowhere is this tension more visible than in Sector 17, the symbolic and functional heart of Chandigarh. Once envisioned as a civic and commercial hub, the sector today faces fragmentation, underutilization, and lack of residential density. Our design reactivates this central area by introducing housing, social infrastructure, and green connectivity within a flexible

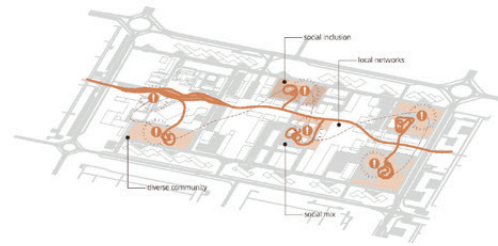
urban framework. Instead of erasing Le Corbusier's grid, we reinterpret it. The result is a layered, adaptive design strategy that combines urban memory with contemporary needs—social inclusion, climate resilience, and urban vibrancy. The Design Concept as a fluid grid remains as a structural base, but instead of being filled with rigid monofunctional blocks, it becomes porous, open, and heterogeneous. Buildings are strategically placed to leave fluid spaces in between, allowing for the creation of green corridors, public squares, and shared third places. Through a controlled yet open system of building modules and voids, the grid evolves into a structured and adaptive urban fabric.



## CONCEPT

### 1. The Principle of Participation:

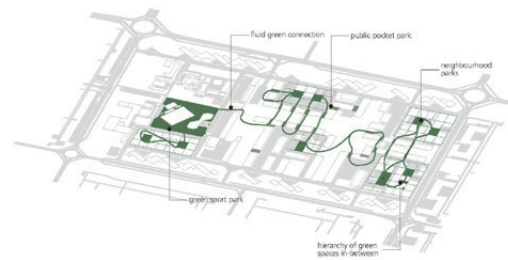
The principle of participation emerged as a response to the rigid, top-down logic of functional separation and rationalization, aiming to create cities shaped by the needs, voices, and diversity of their inhabitants. It emphasizes social mix, inclusive decisionmaking, and the co-creation of spaces to counteract segregation and social fragmentation. As part of this approach, we will actively establish community centers, creating places for exchange.



Principle 1 - Principle of Participation

### 2. The Principle of Spaces „In-Between“:

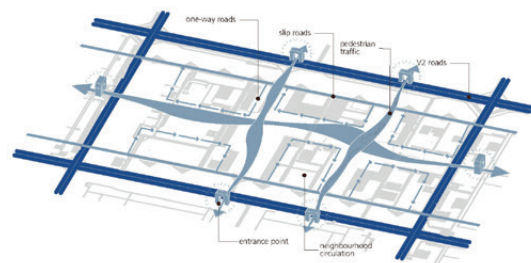
The new principle of spaces in between focuses on activating the often-overlooked areas between buildings by creating green corridors, community squares, and shared “third places” that foster social interaction and environmental resilience. In contrast to the isolated zoning of modernist planning, these in-between spaces are designed to be fluid, multifunctional, and ecologically integrated, enhancing urban climate adaptation through increased greenery and permeability.



Principle 2 - Principle of Spaces „In-Between“

### 3. The Principle of Hierarchy and Classification of Roads:

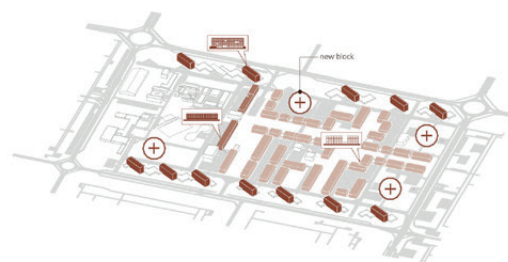
The new principle of hierarchy and classification of roads reinterprets traditional traffic planning by prioritizing pedestrians, cyclists, and public transport over private cars. Instead of expanding car infrastructure, we introduce more pedestrian streets, traffic-calmed zones, and vertical parking structures. This shift reflects a broader move toward human-centered mobility, creating safer, accessible, and environmentally sustainable urban environments.



Principle 3 - Principle of Hierarchy and Classification of Roads

### 4. The Principle of Heterogeneity:

The principle of heterogeneity embraces diverse building heights, facades, and typologies while maintaining an overall coherent urban design language. This approach moves away from the monotony of standardized architecture by fostering a rich, varied cityscape that reflects different identities, uses, and time layers. At the same time, it ensures clear orientation through spatial anchors like taller buildings or landmark structures.



Principle 4 - Principle of Heterogeneity



## Site Plan





# Concept and Objectives

## The New Principles



Section Perspective

## THE FOUR PRINCIPLES OF DESIGN

Our design is grounded in four interrelated principles that respond directly to the shortcomings of functional separation, car-centric planning, and architectural monotony.

### 1. Principle of Participation

This principle promotes a socially inclusive city where people participate in shaping their environments. We open up building structures to create porous urban forms and introduce community centers tilted to generate dynamic sightlines and new connections.

These centers are strategically placed in areas previously underserved, becoming anchors of local identity. To foster everyday culture, the ground floors of residential buildings are activated with communal and cultural uses—workshops, cafés, small galleries.

In addition, the fourth floors of existing buildings are converted into new housing units, addressing both housing

shortage and urban vacancy. This low-intervention reuse strategy boosts density and revitalizes underused infrastructure.

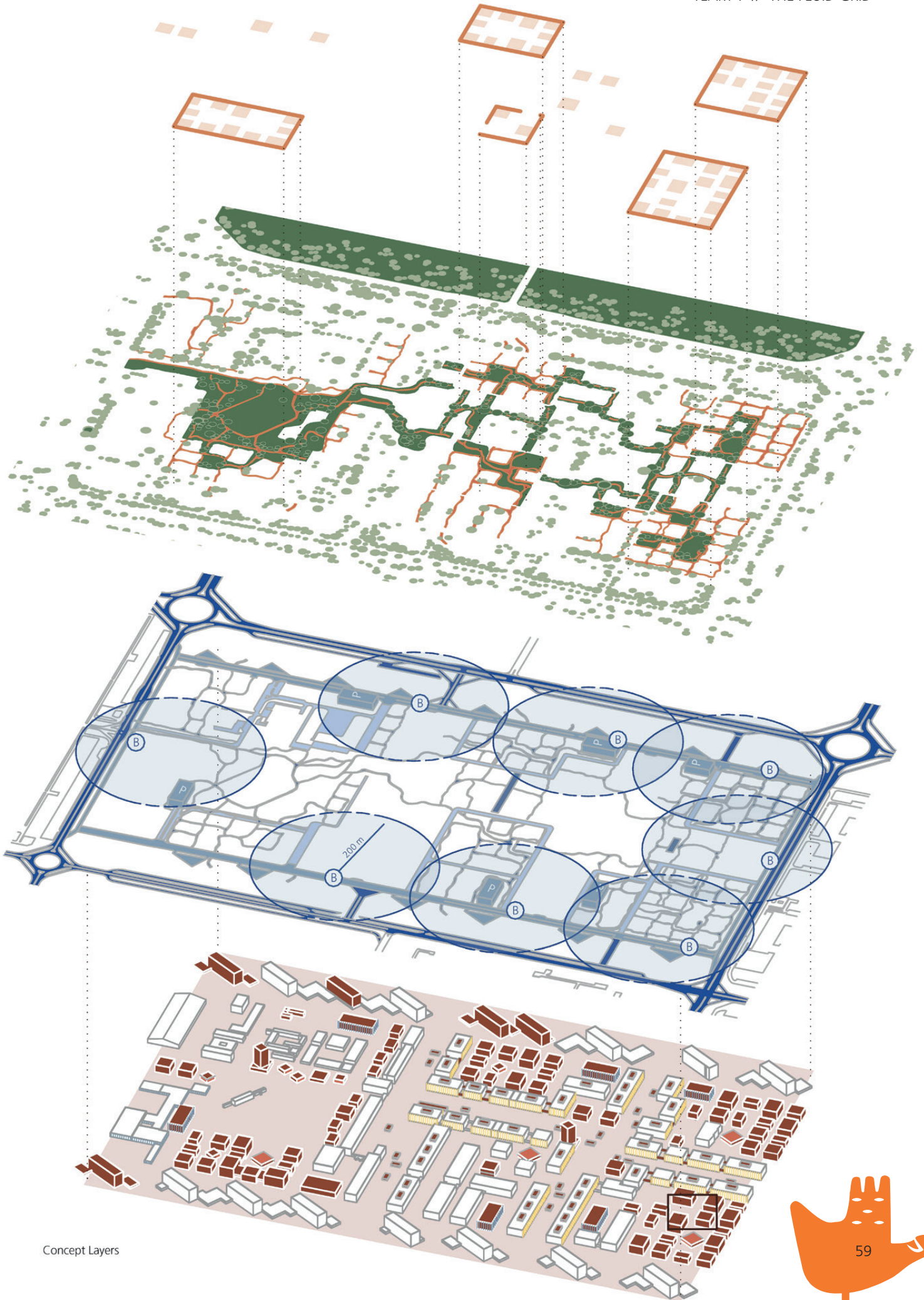
### 2. Principle of Spaces In-Between

This principle focuses on reclaiming the gaps, those neglected interstitial spaces between buildings, by turning them into pocket parks and green pathways.

The design classifies three types of open spaces within the grid: connectors, neighborhood commons, and community parks.

Each space features a differentiated ground surface like gravel, lawn, paving, and permeable materials to improve water retention, reduce urban heat, and enhance biodiversity. Together, they form an ecological network that supports both climate adaptation and social exchange at the micro scale.

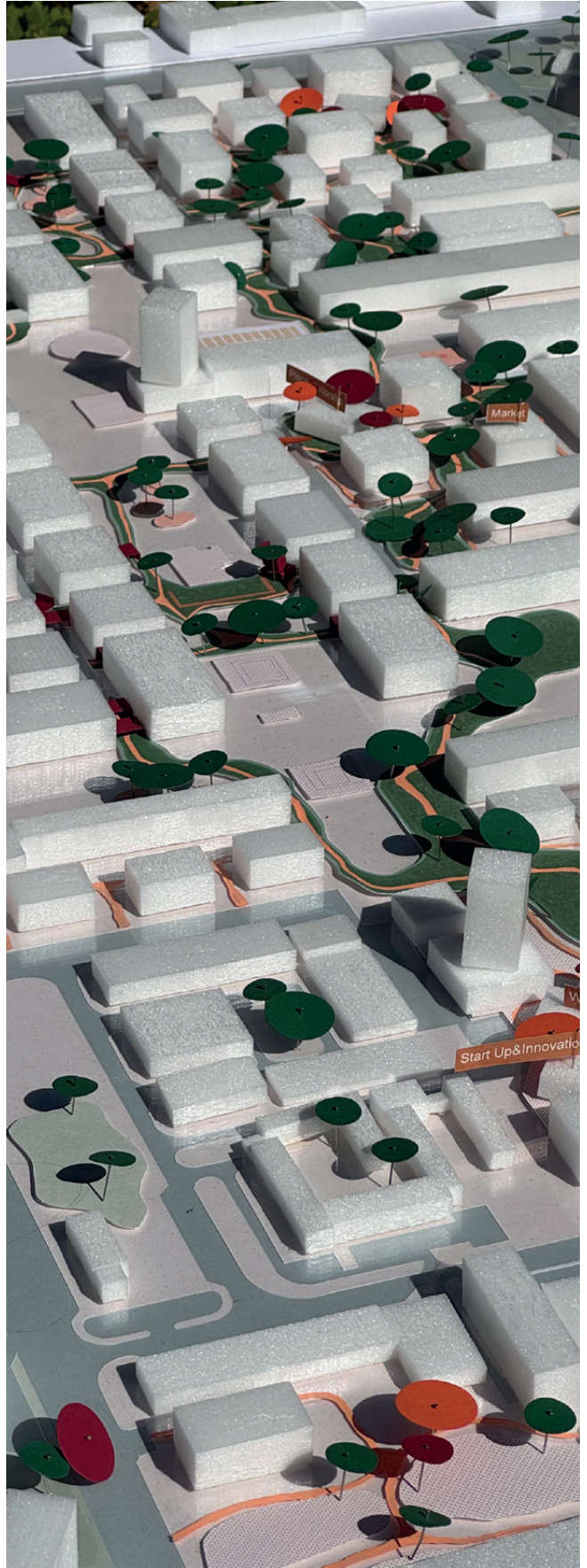
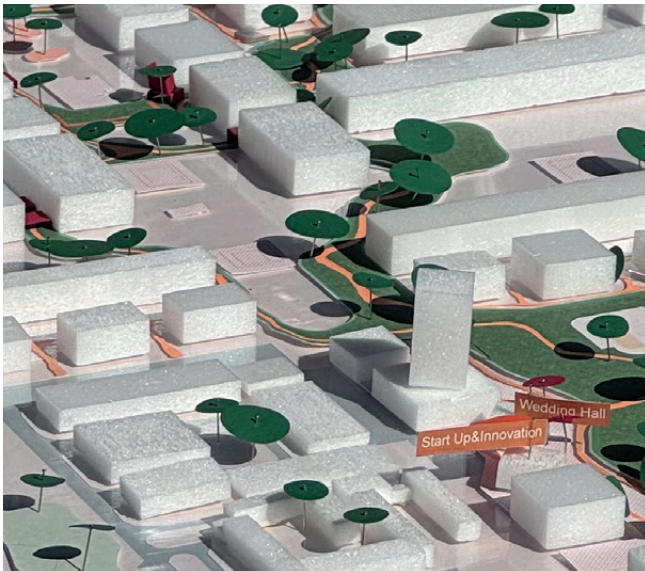
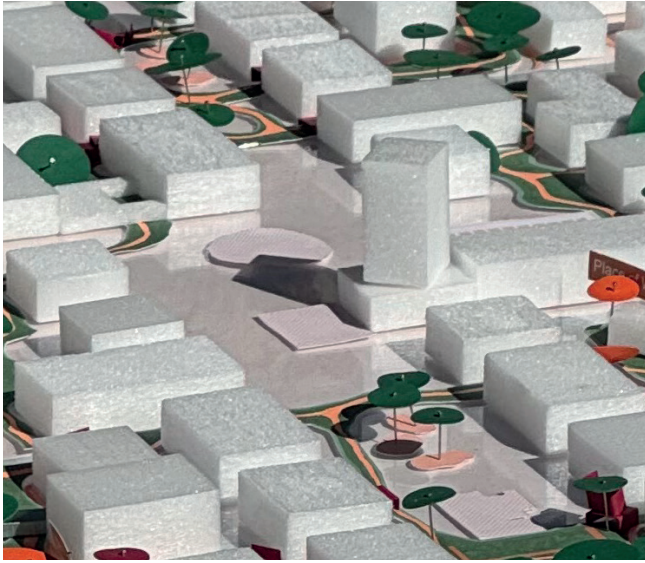












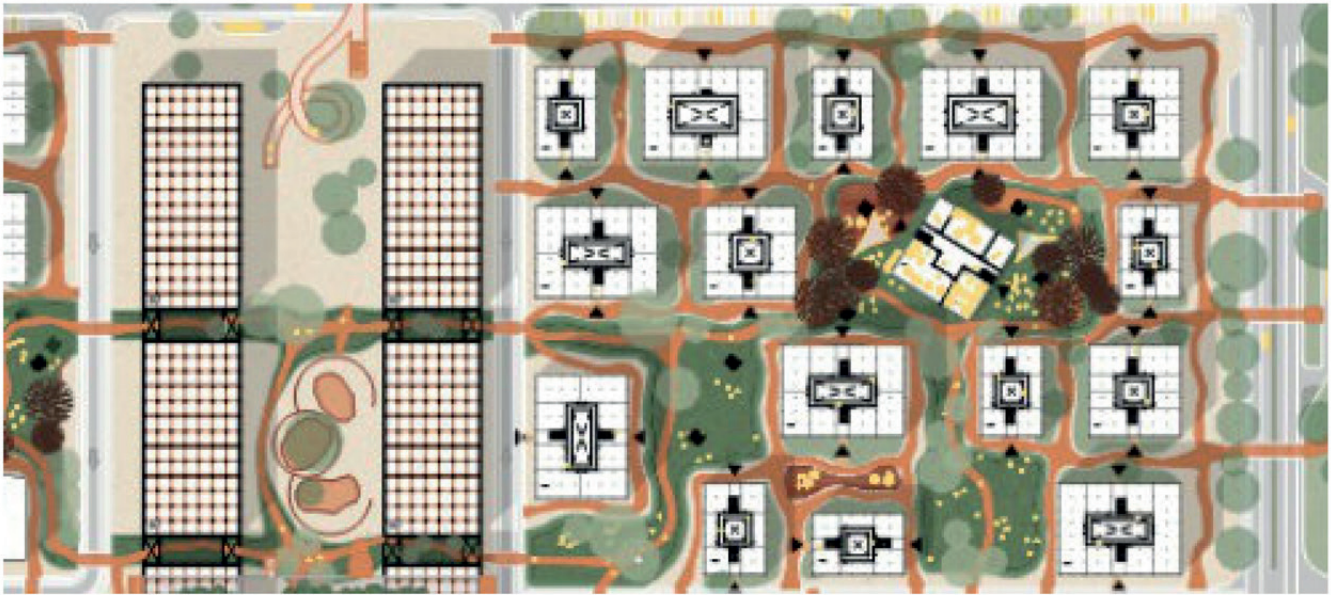


## Zoom-in View

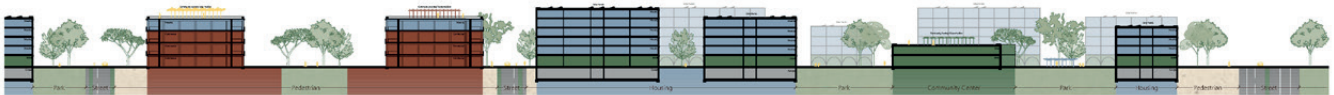


Block Visualisation





Zoom In Floor Plan



Section Zoom In

### 3. Principle of Hierarchy and Classification of Roads

We redefine mobility through a human-centered street hierarchy. Instead of prioritizing cars, our new street typology introduces brick pathways for pedestrians and cyclists.

Through-traffic is reduced to one-way roads with slower speeds and integrated green buffers as well as a bicycle lane. Key intersections are reconnected with pedestrian bridges, enhancing cross-sector mobility.

To address space consumption, we incorporate vertical parking structures with flexible ground floors, freeing surface area for public use. The aim is not just to manage traffic but to reclaim the street as public space.

### 4. Principle of Heterogeneity

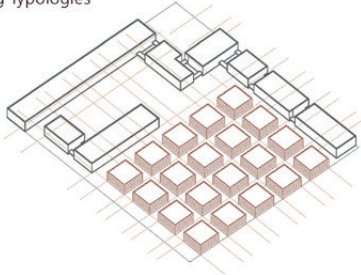
To overcome the monotony of standardized urbanism, this principle introduces architectural diversity within a cohesive framework. We propose three new typologies (housing, culture, parking), which vary in form, height, and material. To strengthen orientation and identity, colored columns and roof structures are added to existing buildings as subtle but effective spatial markers. A key element is the pavilion system, with different canopy types like green, solar, textile, and water designed to activate open areas and provide comfort in Chandigarh's climate. These lightweight structures contribute to climate resilience while offering spatial variety and a playful atmosphere. These pavilion structures can also be used on the roof of existing buildings.

# Design Manual

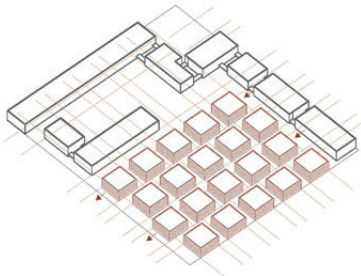
How to design a Block & Building Typologies

## How to Design:

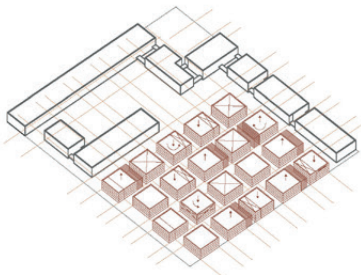
Building Typologies



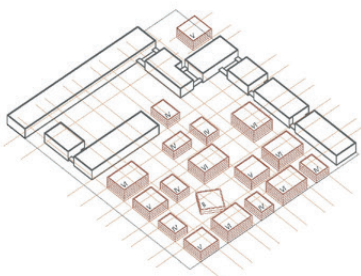
Grid based on surroundings measurement 30 - 15 - 30 - 15  
= Buildings with 30m x 30m and 15m distance



Move one building line 10 meters towards edge

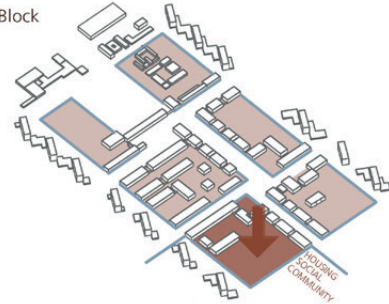


Add or subtract 10m to create a variety of building typologies -  
rotate some buildings to create open spaces

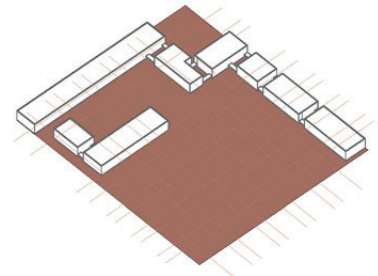


Implement three types of building heights

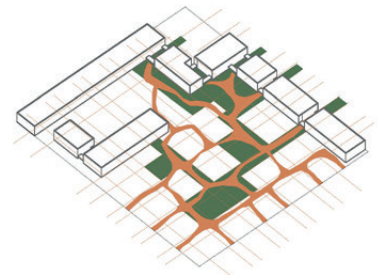
A Block



Identify the Blocks and choose one to develop further



Build grid based on surrounding measurements 30 - 15 - 30 - 15



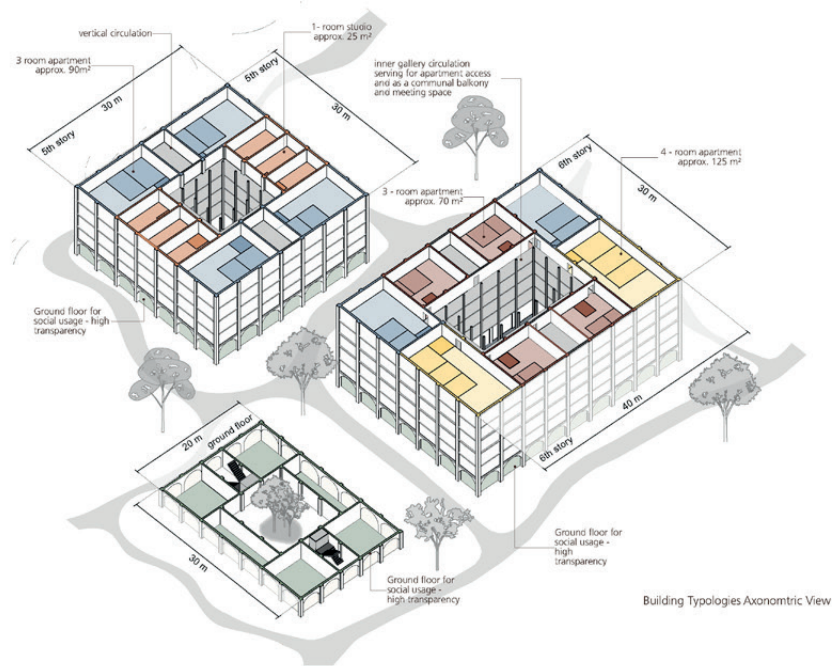
Implement green space and pedestrian circulation in the area



Implement buildings in the grid

Graphic „How to“





Floor Plan Axonometrie

## THE BLOCK AS A BUILDING UNIT

A central design tool is the creation of a systematic block-building method, shown in our axonometric diagrams. Each block begins with a modular grid, onto which building volumes are placed strategically, maintaining voids for open space. These gaps are then programmed with public green, community functions, and circulation routes. This layered system allows for flexible growth: blocks can densify or loosen based on changing needs, while maintaining coherence with the surrounding context. Sectional Strategies: Reuse, Orientation, Climate Our sectional perspective highlights three key spatial interventions: First, pocket parks between existing buildings act as local climate regulators and gathering spaces for neighbors. Second, the reuse of fourth floors for housing supports sustainable densification and addresses vacancy with minimal structural change. Third, color-coded building elements enhance orientation and identity, creating an intuitive and visually legible public realm. These sectional moves reinforce our goal of a city that is not only built efficiently but lived meaningfully.

## OUR DESIGN GOAL

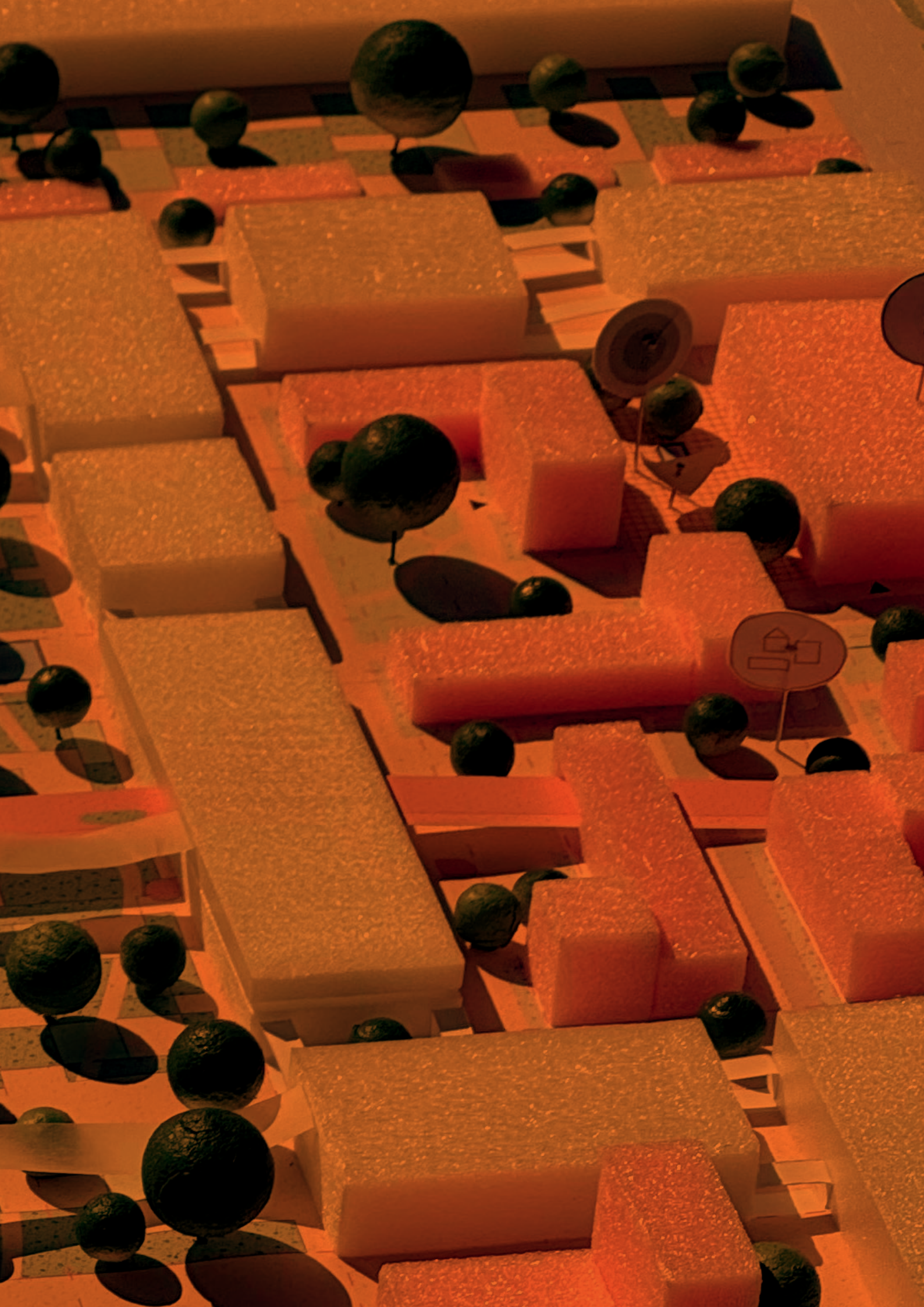
The Fluid Grid is not a tabula rasa, it is a careful reinterpretation of Chandigarh's DNA. Through participation, green connectivity, mobility reform, and architectural diversity, we challenge the old paradigms of separation and control. By embedding new life into the rigid grid, it offers a vision for a more resilient, inclusive, and livable urban core. By keeping the fluid green spaces as a main design factor the image of Chandigarh isn't changed but adapted to modern times. Through this we archive the design of the past and adapt the modern approach. Sector 17 becomes the idea of a living archive where history meets careful and sensible approaches of the modern times. Sector 17 becomes once again a place to live, gather, and belong. A dynamic heart within a historic grid, reimagined for the 21st century. The Living Archive in the Fluid Grid.

# Same Heart New Pulse

Team 2: Christina Giers, Anna Glock, Samuel Ruf

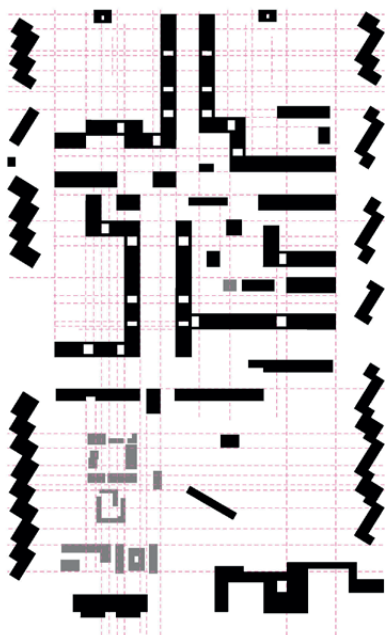




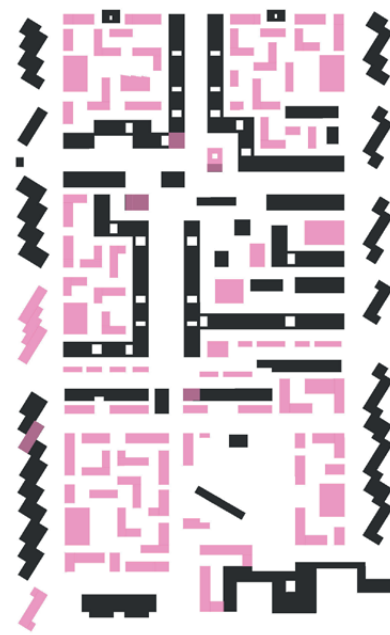
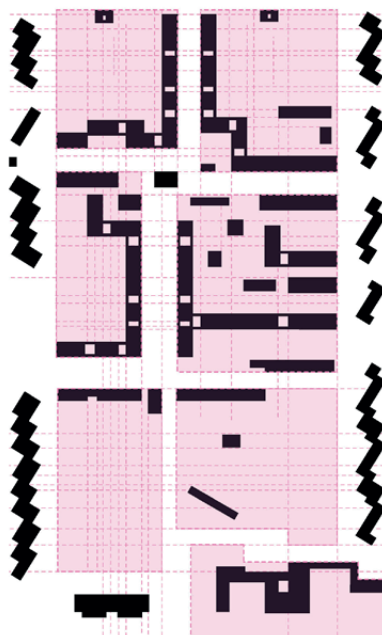




# The Grid



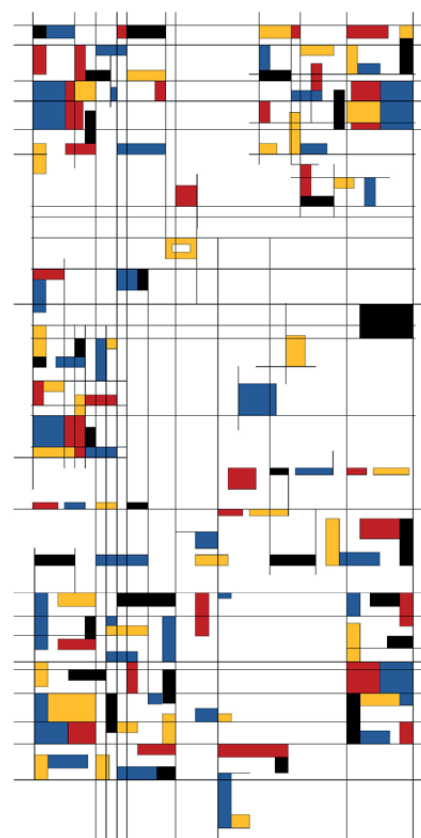
Development of grid



## WHAT'S THERE?

The conceptual foundation of the proposal lies in the recognition and respectful evolution of Sector 17's original planning principles. The existing grid, a clear result of Le Corbusier's masterplan, forms the basis of the intervention. Instead of introducing a new structure, the design builds upon and thoughtfully extends this grid—drawing inspiration from Piet Mondrian's abstract compositional logic to create a structured yet dynamic urban system.

The grain resulting from the building layout follows a clear grid with a strong structure, yet still allows for lightness and freedom within the individual areas, ensuring that the overall composition does not appear dull or overly geometric. It recalls the works of Piet Mondrian, which also follow a strict grid system. However, just as Mondrian's paintings transform rigid order into dynamic compositions through rhythm, color, and variation, the urban fabric here gains vibrancy and character. The grid becomes not a constraint, but a framework that brings harmony, balance, and a sense of openness to the cityscape, while allowing each part to develop its own identity within the larger whole.

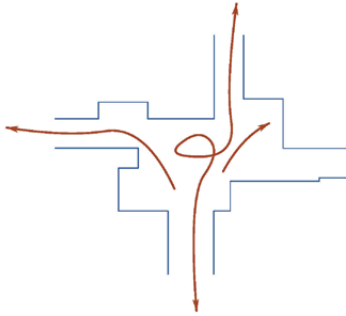


Piet Mondrian as inspiration



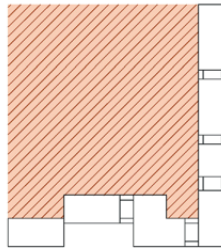
# Potentials and Deficits

## Flowing Space



Based on the Athens Charter's principles, wide and flowing spaces were created leading to lack of sense of orientation and direction

## Lack of Housing



Existing building structures are mainly utilized as commercial and retail premises, which means the sector is not visited in the evening or at night.

## Sealed Surfaces



A significant proportion of existing surfaces is sealed, strengthening the effects of the Urban Heat Island and not allowing seepage.

## Structure of Zones, Spatial Edges



The zoning from the original Masterplan can be used to further define Sector 17's inner access and standalone areas.

## Green Belt



The city's grid intends green zones running from the northern to the southern borders. The sector's nature offers the Green Belt's revival.

## Points of Attraction



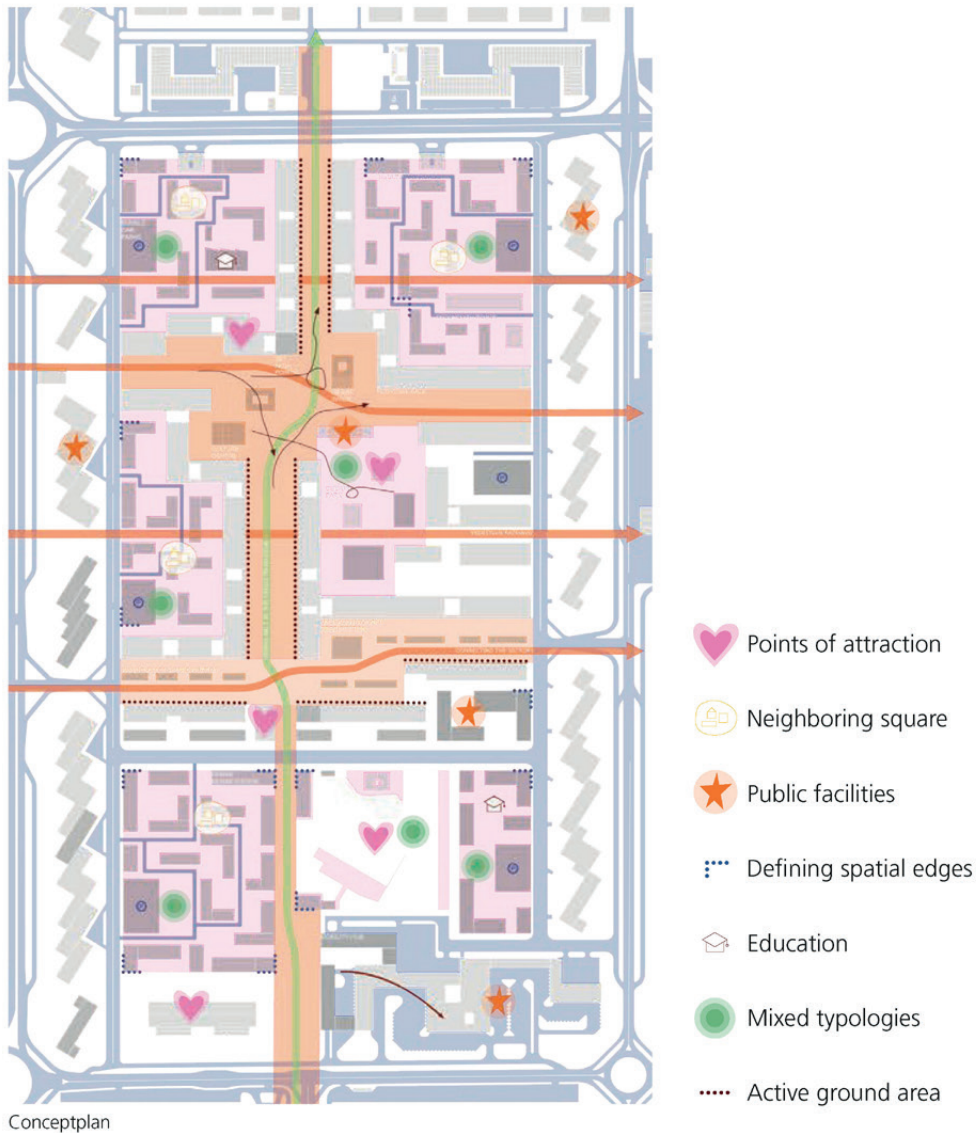
Existing functioning attractors can be implemented in developing Sector 17's future diverse offer of public and (semi-) private activities.

Sector 17 faces several challenges: the urban fabric lacks clear spatial edges, leaving areas undefined and unframed. Predominantly commercial uses have created a shortage of housing, making the sector lively by day but empty at night.

In addition, extensive sealed surfaces intensify the urban heat island effect and hinder natural water infiltration. At the same time, the district holds great potential. The masterplan's zoning offers the possibility to strengthen

spatial definition and improve circulation. Reviving the idea of a north-south green belt can reintroduce ecological corridors and open spaces. Existing points of attraction, when enhanced and complemented with new ones, can bring vibrancy and identity. Together, these strategies can transform Sector 17 into a more resilient, livable, and balanced urban environment.

# Goals

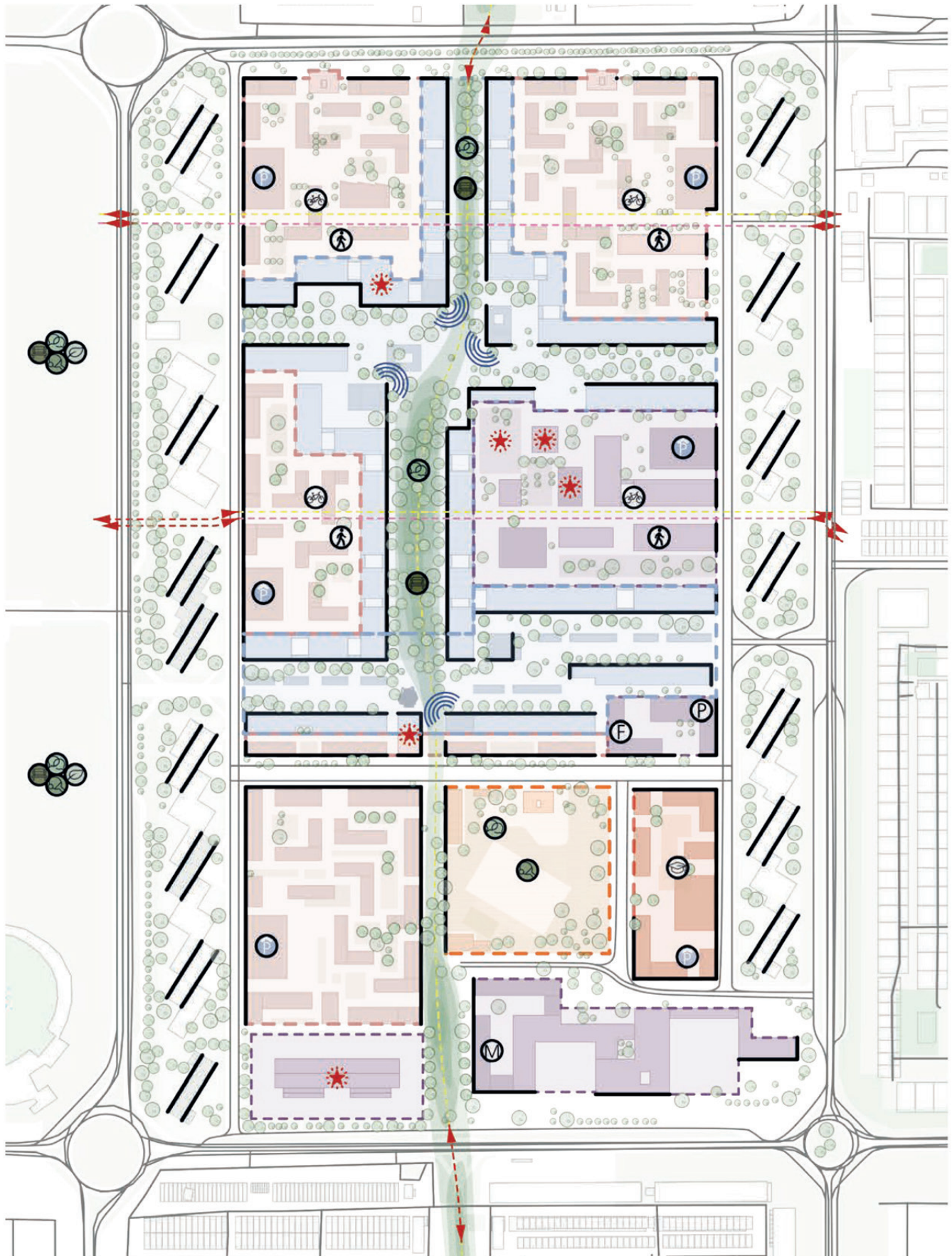


## CONCEPT

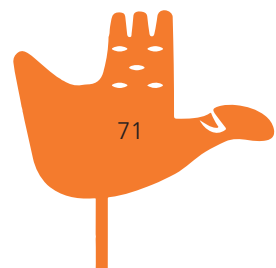
The proposal for Sector 17 builds on Le Corbusier's original grid while adapting it to contemporary needs. The concept aims to restore spatial cohesion, strengthen urban life, and transform the sector into a resilient and mixed-use city center. The extended grid provides a clear structure while allowing variation and openness. A reactivated Green Belt establishes a continuous north-south landscape spine, replacing sealed surfaces and improving both ecology and microclimate. New housing is integrated into underused areas, balancing the sector's monofunctional character

and ensuring vibrancy throughout the day and night. At the same time, existing cultural and social anchors are complemented with new public amenities, creating orientation, identity, and new points of attraction. Together, the concept and framework plan offer a sensitive evolution of Chandigarh's modernist heritage, turning Sector 17 into a lively, sustainable, and inclusive urban core.





Framework plan







Site Plan

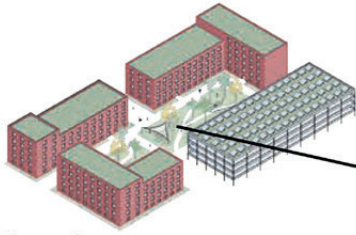




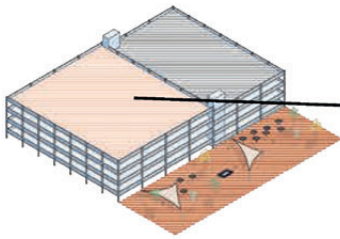




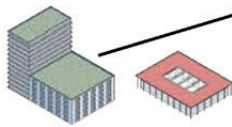
# Typologies



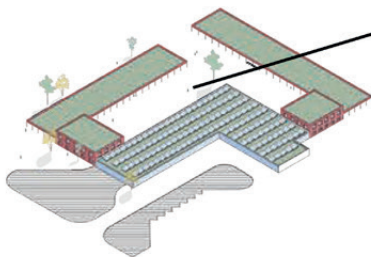
Planned open spaces



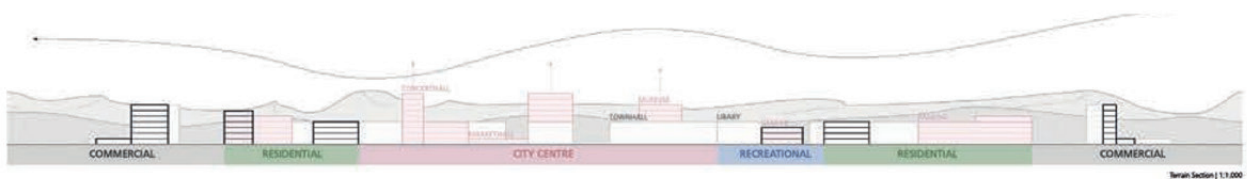
Bundled parking spaces



Urban densification

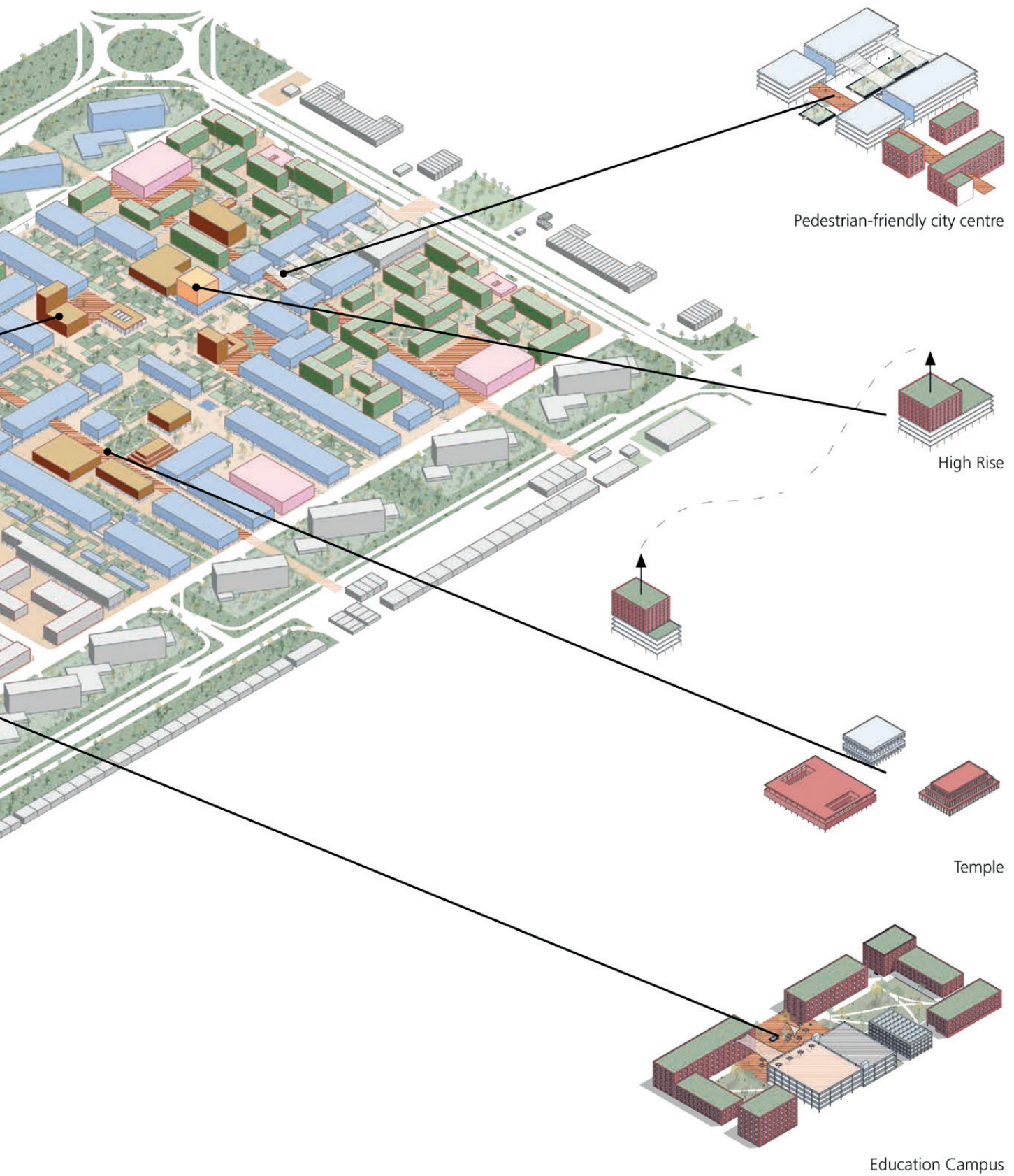


Mobility Hub



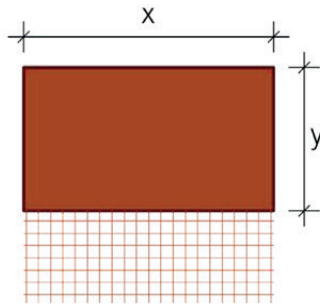
Section height development





# Design Manual

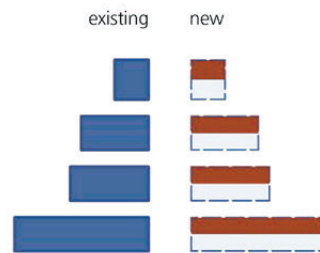
## Bundled Parking Spaces



Parking garages are placed along main roads and include parking facilities for residents. They function as meeting places due to neighboring the central district squares.

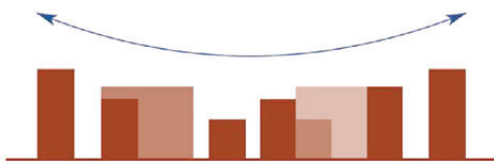
## Construction Kit

### Building Blocks



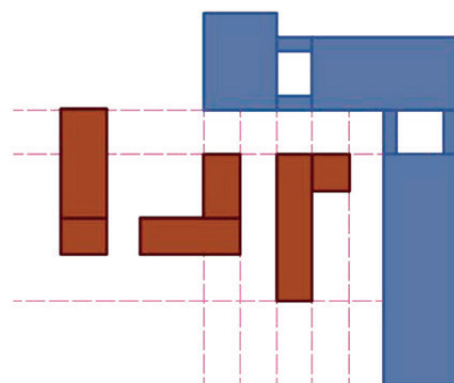
The Lengths of existing structures are defined by those of existing buildings. The building depths are slimmed down for one-sided access.

## Building Heights



Heights of buildings in the planned quarters differ between three to six floors. Buildings along streets are higher to absorb noise and to protect semi-private spaces in between the buildings.

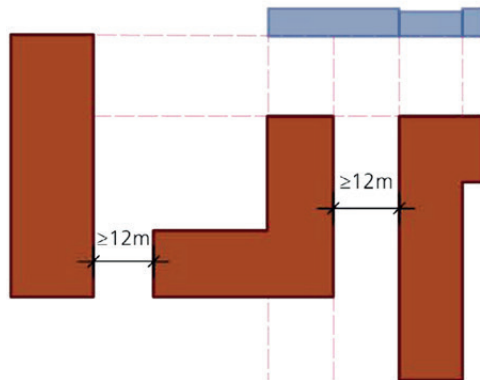
## Grid Alignment



Planned buildings are aligned with the grid, which follows existing structures.

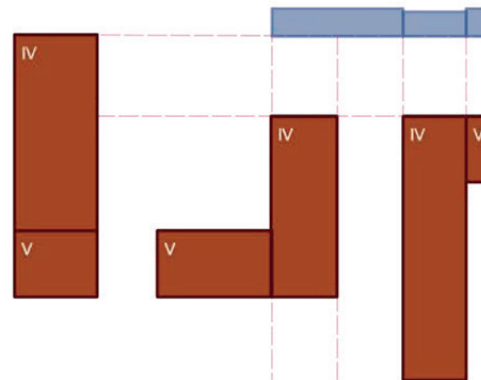


### Spaces between buildings



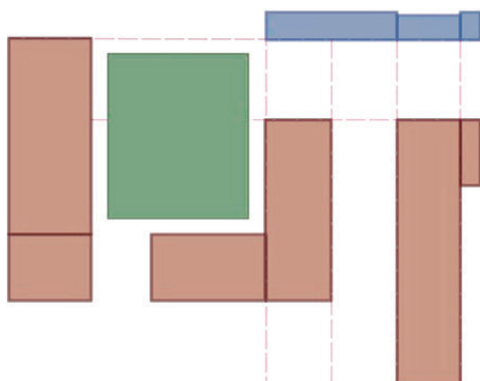
Distances between buildings are at least 12m wide to ensure sufficient lighting, ventilation and use of the space between buildings.

### Building settlement



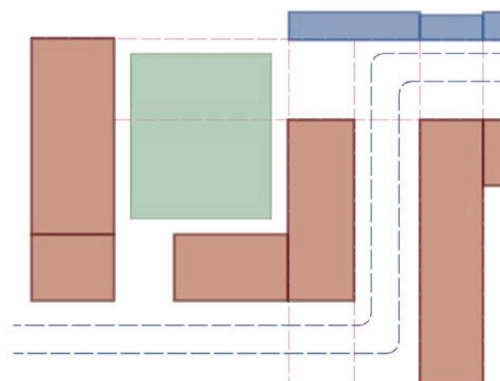
Touching building structures are offset by one floor in height.

### Courtyards



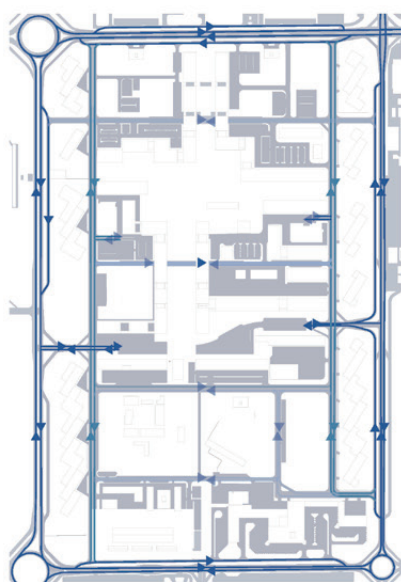
Differently sized courtyards of various qualities are placed in between structures.

### Inner access

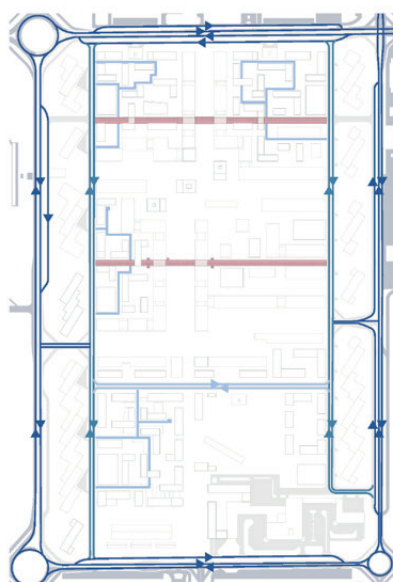


Buildings can be accessed through internal roadways, while areas between greenery and built structures can also be driven on by motorized vehicles.

# Redistribution of Open Spaces



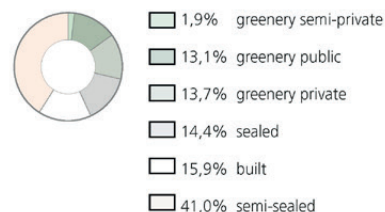
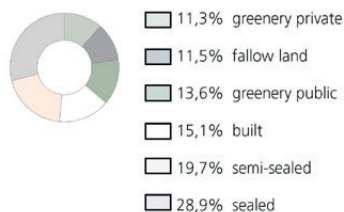
- V3 Road motorized traffic
- V4 road Motorized traffic
- V5 road mixed traffic (motorized, bike, pedestrian)



- V3 Road motorized traffic
- V4 road Motorized traffic
- V5 road mixed traffic (motorized, bike, pedestrian)
- Restricted pedestrian access

## SEALED SURFACES

Today, Sector 17 is dominated by sealed plazas, parking lots, and a car-oriented street network with wide lanes and bridge structures that fragment the urban fabric. These hard surfaces intensify heat and block natural infiltration. In the new plan, traffic space is reduced and reorganized: parking shifts into multifunctional structures, former car bridges become pedestrian links, and sealed ground is replaced with permeable and green surfaces. This transformation improves microclimate, mobility, and cohesion.

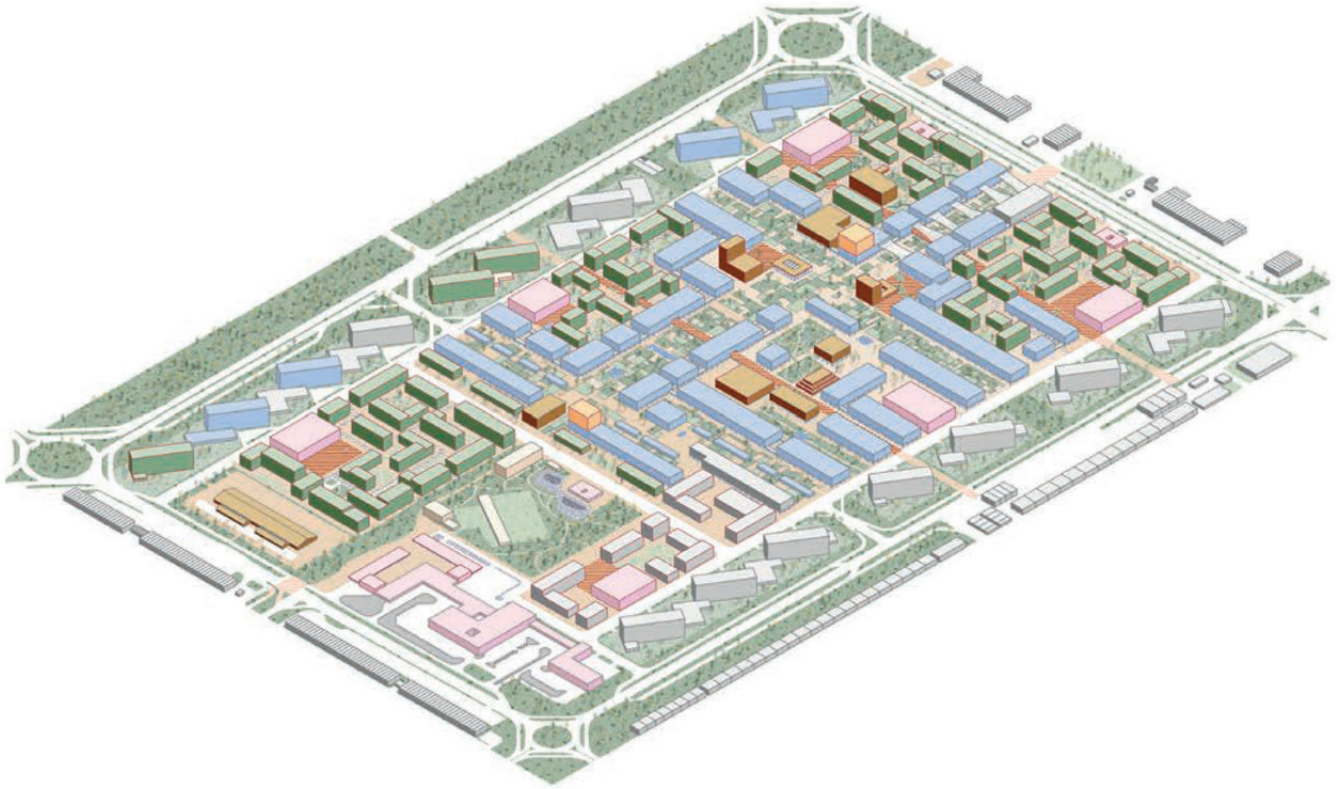


## GREEN SPACES

While the original masterplan envisioned Sector 17 with a strong green belt running north-south, today this structure has largely lost its relevance and continuity. Green areas are fragmented, underused, and disconnected from everyday urban life. The new concept reactivates and extends the Green Belt as a continuous landscape spine, linking open spaces across the sector. In addition, new neighborhood plazas, courtyards, and roof gardens enrich the spectrum of green and semi-green spaces, creating a coherent network that improves ecological functions and provides attractive places for recreation and social life.



# Distributions of Functions



Commercial



institutional



Infrastructure



Culture



Residential



Office

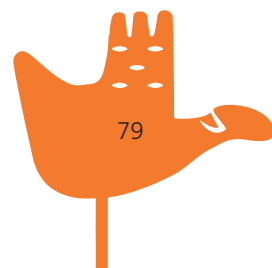


Overall

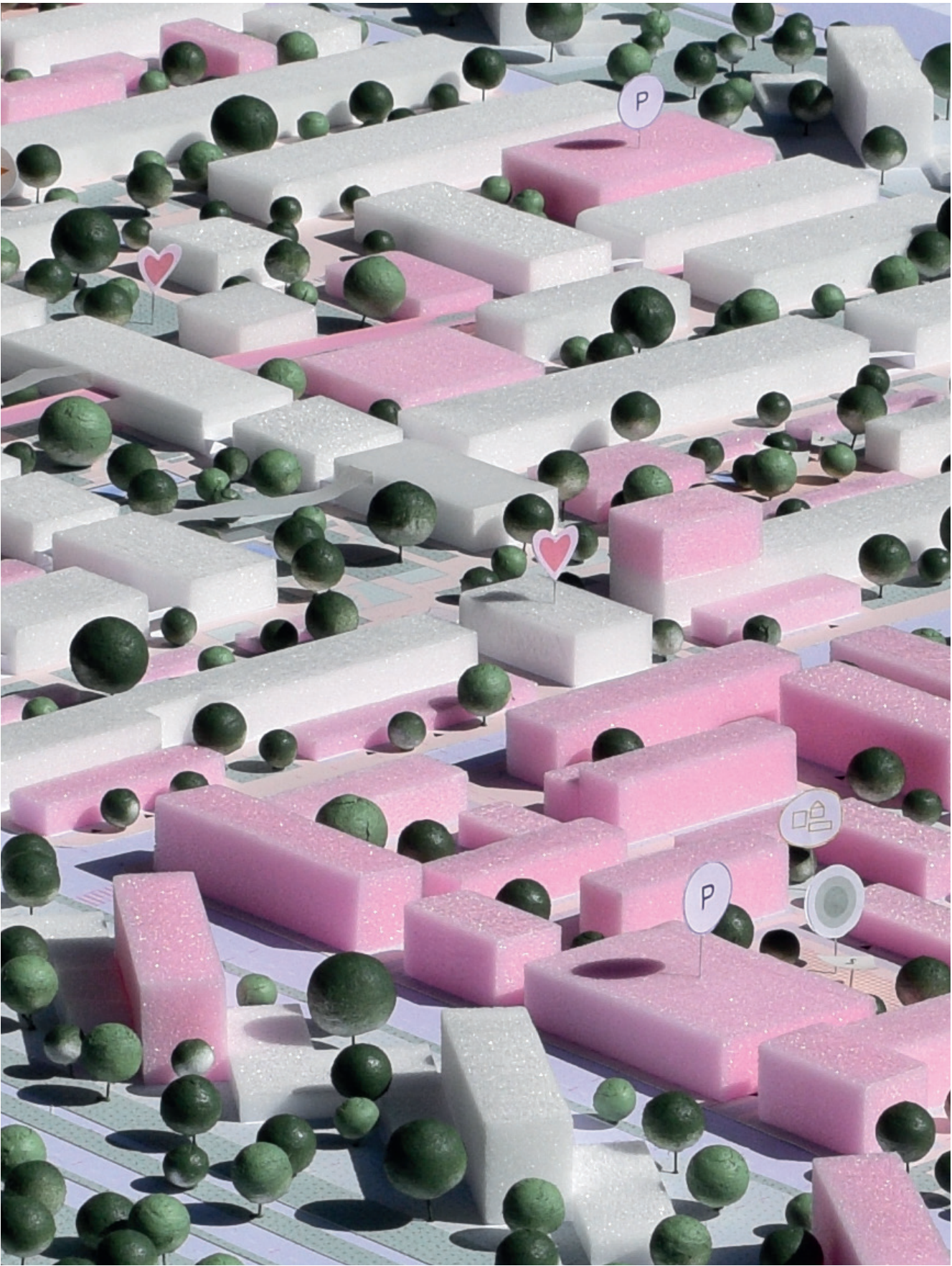
<b>PCR (GRZ)</b>	
0,18	0,3
<b>FAR (GFZ)</b>	
0,6	1,1
<b>GFA (BGF)</b>	
676.980	1.175.809

The draft mainly introduces new infrastructure typologies with parking structures, cultural facilities such as the temple complex, and the two landmark buildings including the central market hall. A new residential area has also been added.

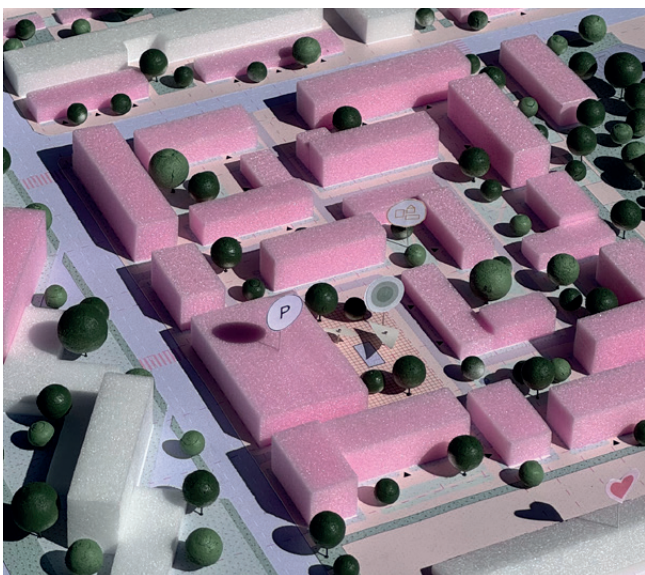
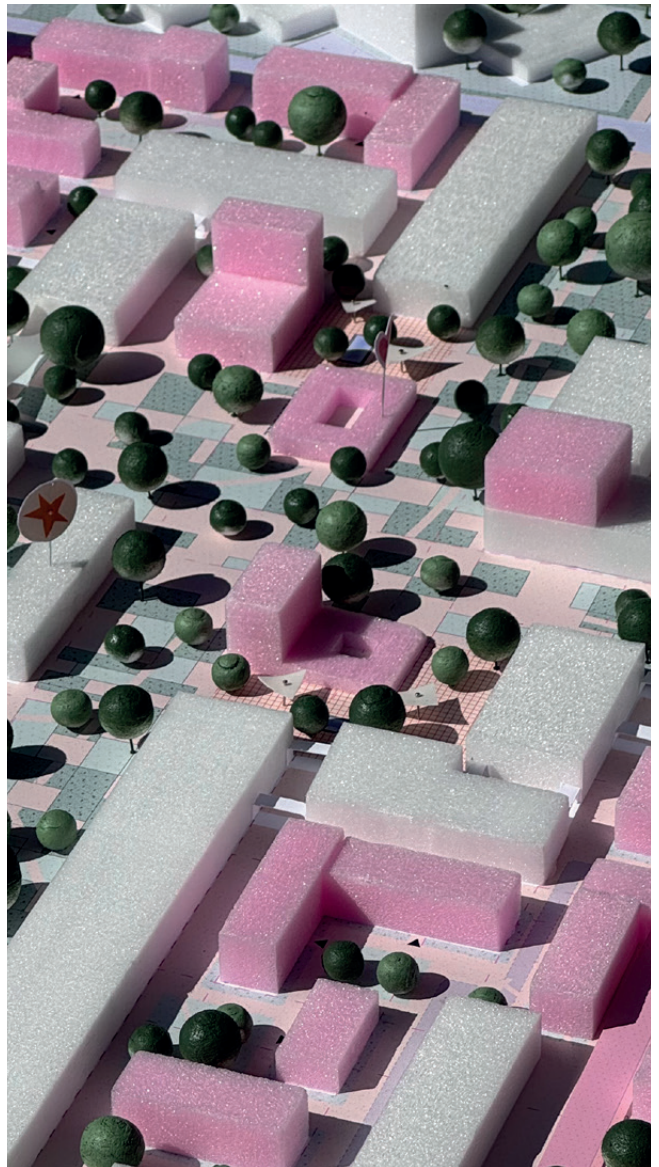
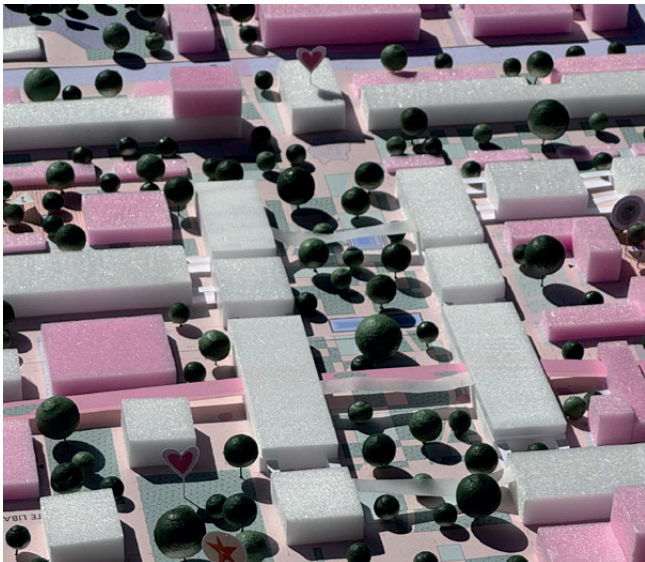
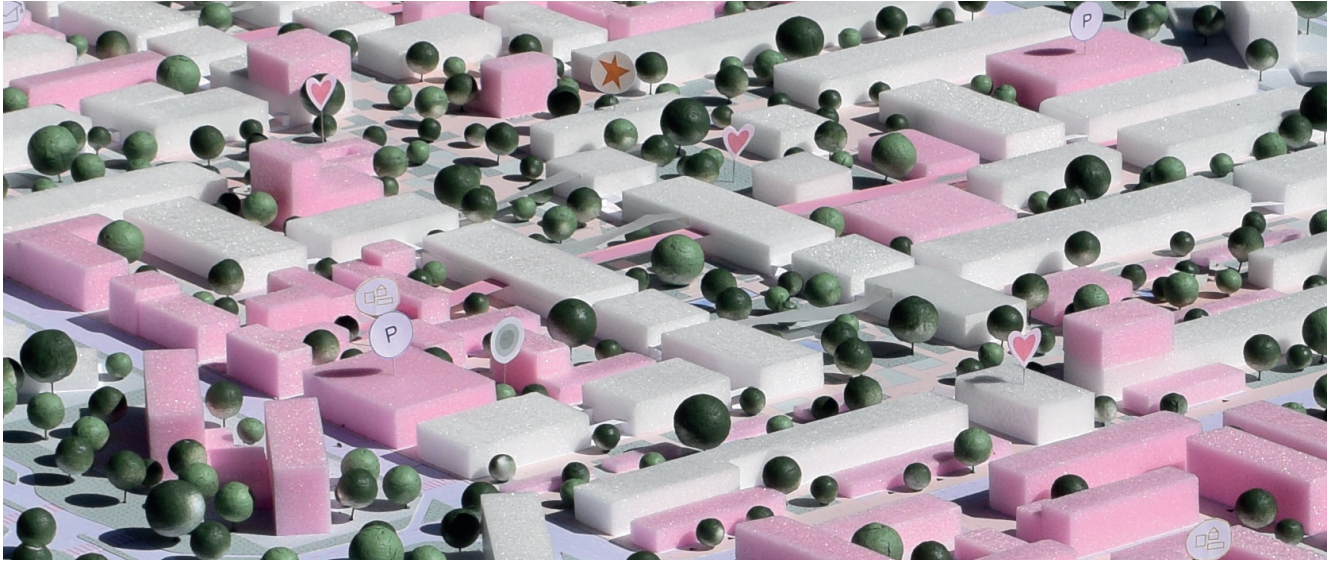
Commercial use still dominates the sector, followed by residential use. The Floor Ground Area (FGA), the PCR (Plot Coverage Ratio) and the FAR (Floor Area Ratio) have all doubled without altering or demolishing existing buildings.





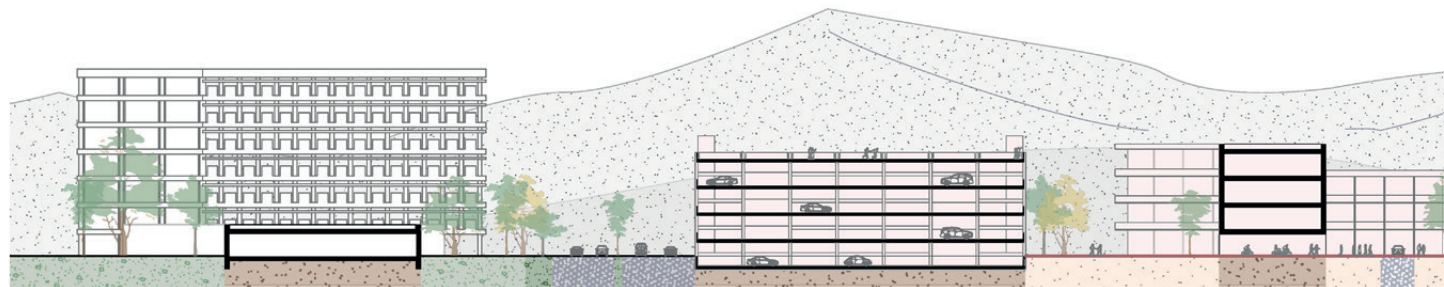
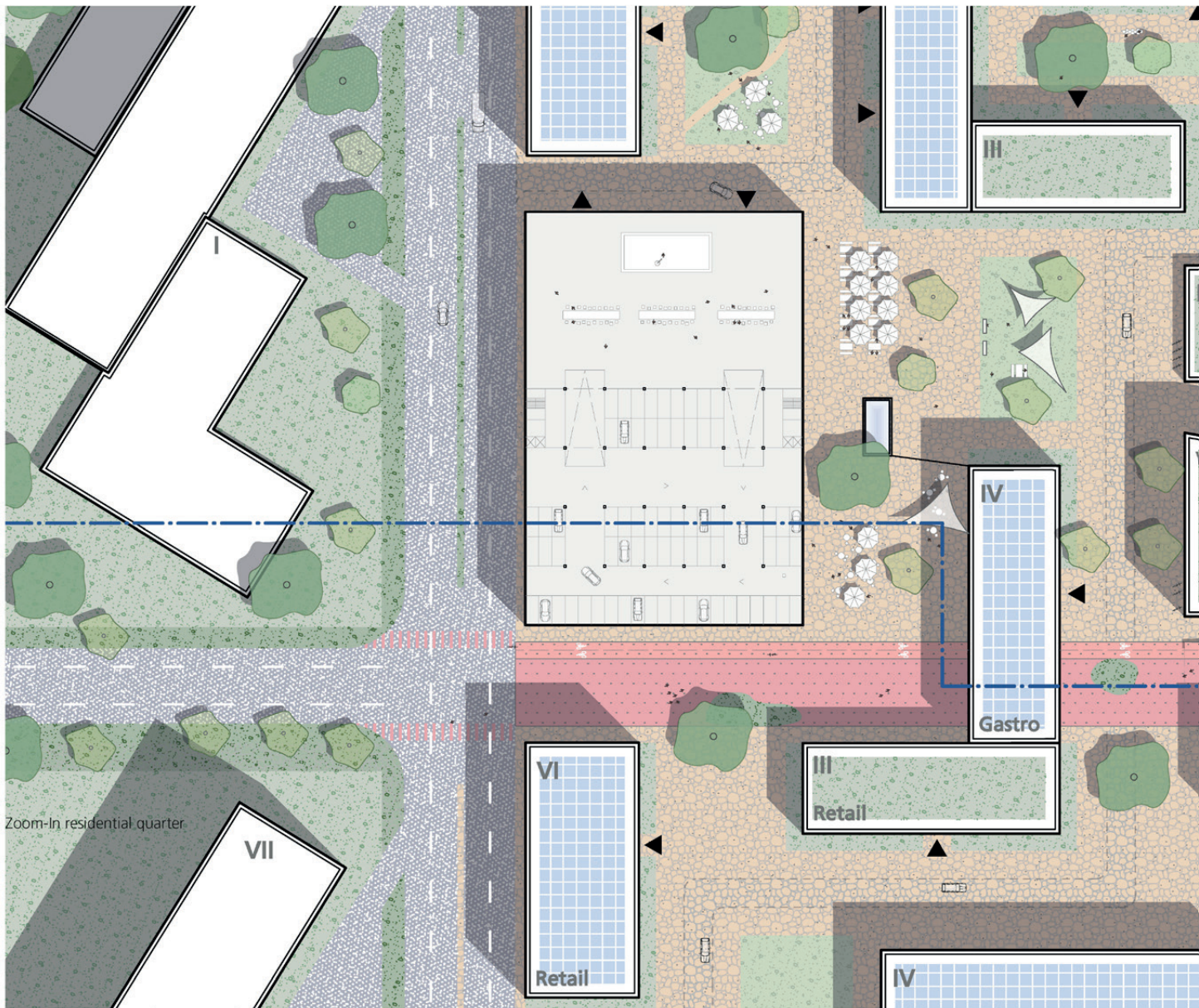






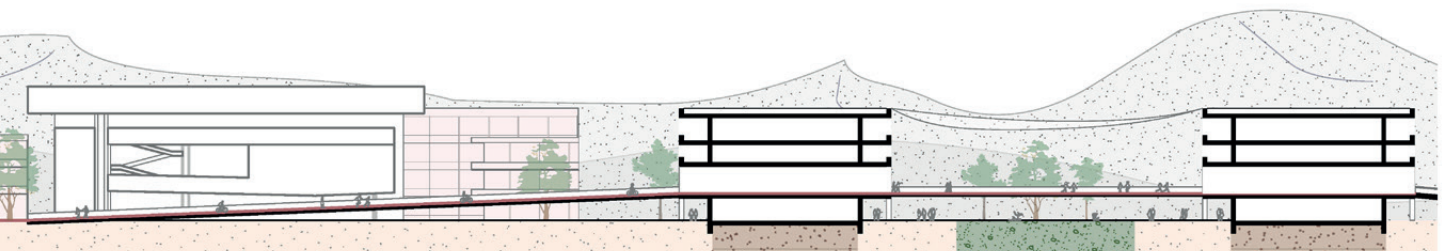
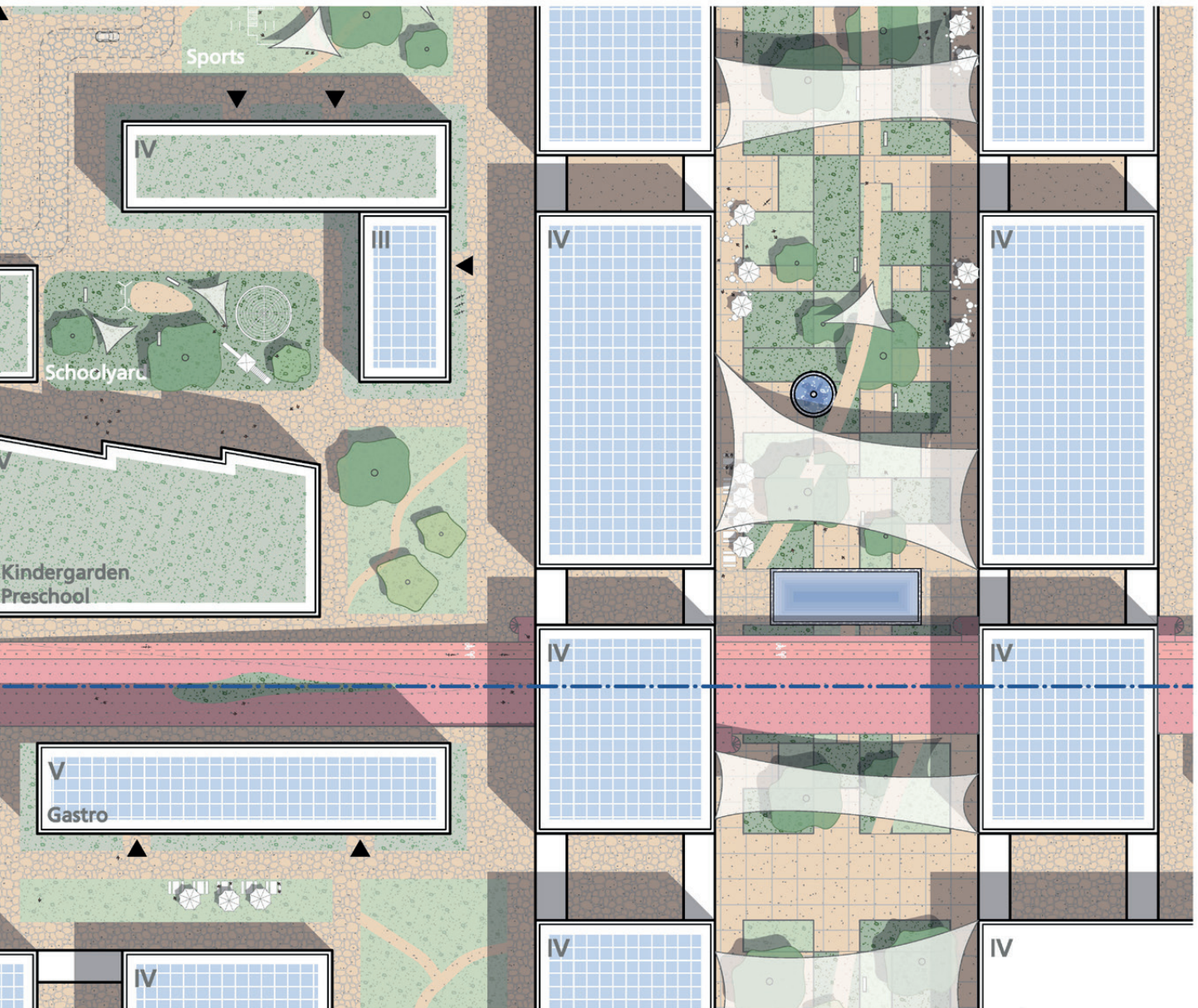


# Residential Quarter

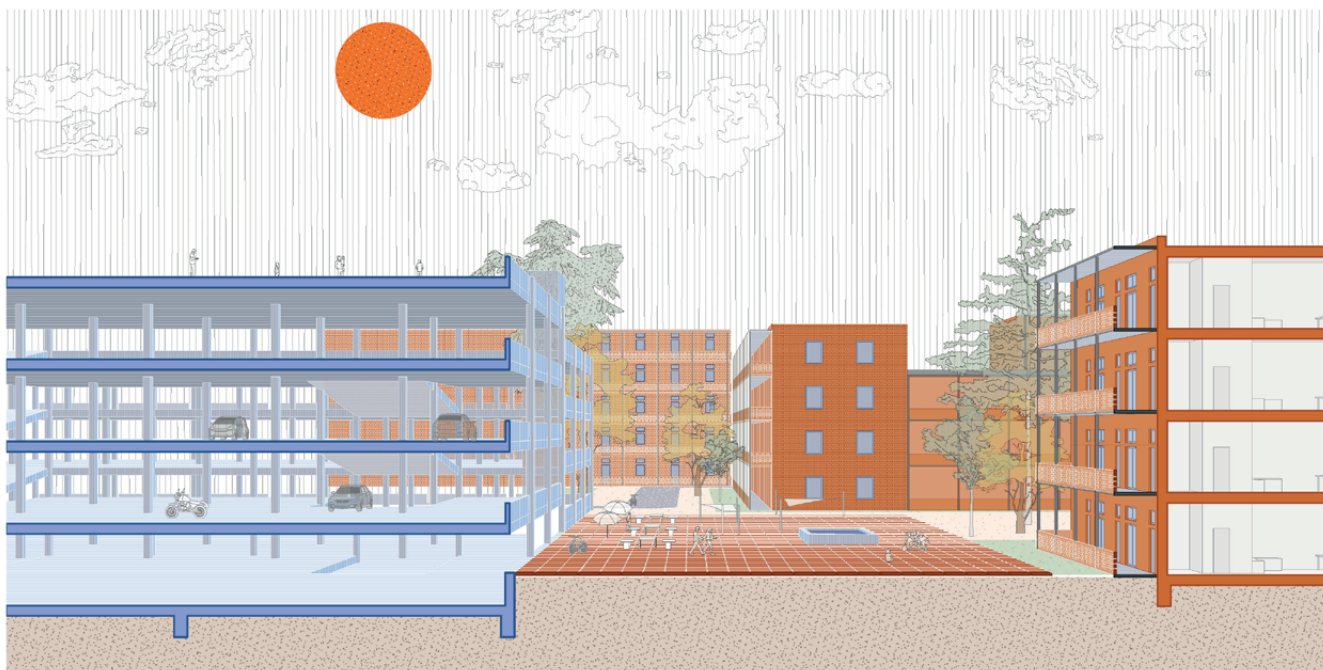


Section





# Residential Quarter



Section through residential quarter plaza

## RESIDENTIAL QUARTERS

The newly planned residential quarters are central to the revitalization of Sector 17, providing the missing element that balances its previously monofunctional character. By carefully integrating housing into underused plots, they introduce a permanent community and continuous presence, ensuring vibrancy not only during business hours but also in the evenings and weekends. Their placement follows the extended grid, preserving Chandigarh's strong sense of order while generating a finer urban grain and a more diverse, livable fabric.

Each cluster is organized around L-shaped building typologies with offset heights, producing a varied roofscape and softening the overall massing. This arrangement creates

clear spatial edges and defines semi-public courtyards, neighborhood squares, and open passages. At the center of every cluster lies a generous plaza, conceived as the social heart of the quarter. These plazas are more than circulation spaces: they are gathering points, stages for community events, and places of identity that encourage interaction between residents, workers, and visitors.

The multifunctional parking structures form a second key element. Instead of being purely technical infrastructure, they are reimagined as hybrid buildings that combine mobility with urban life. Alongside solving the problem of wild parking, they incorporate cafés, cultural venues, event halls, and rooftop terraces. By layering these programs, the





Perspective into Neighbourhood square

parking structures act as hubs that anchor each quarter, supporting everyday needs while enriching the public realm. Their presence transforms what is often a lifeless typology into a driver of urban vitality.

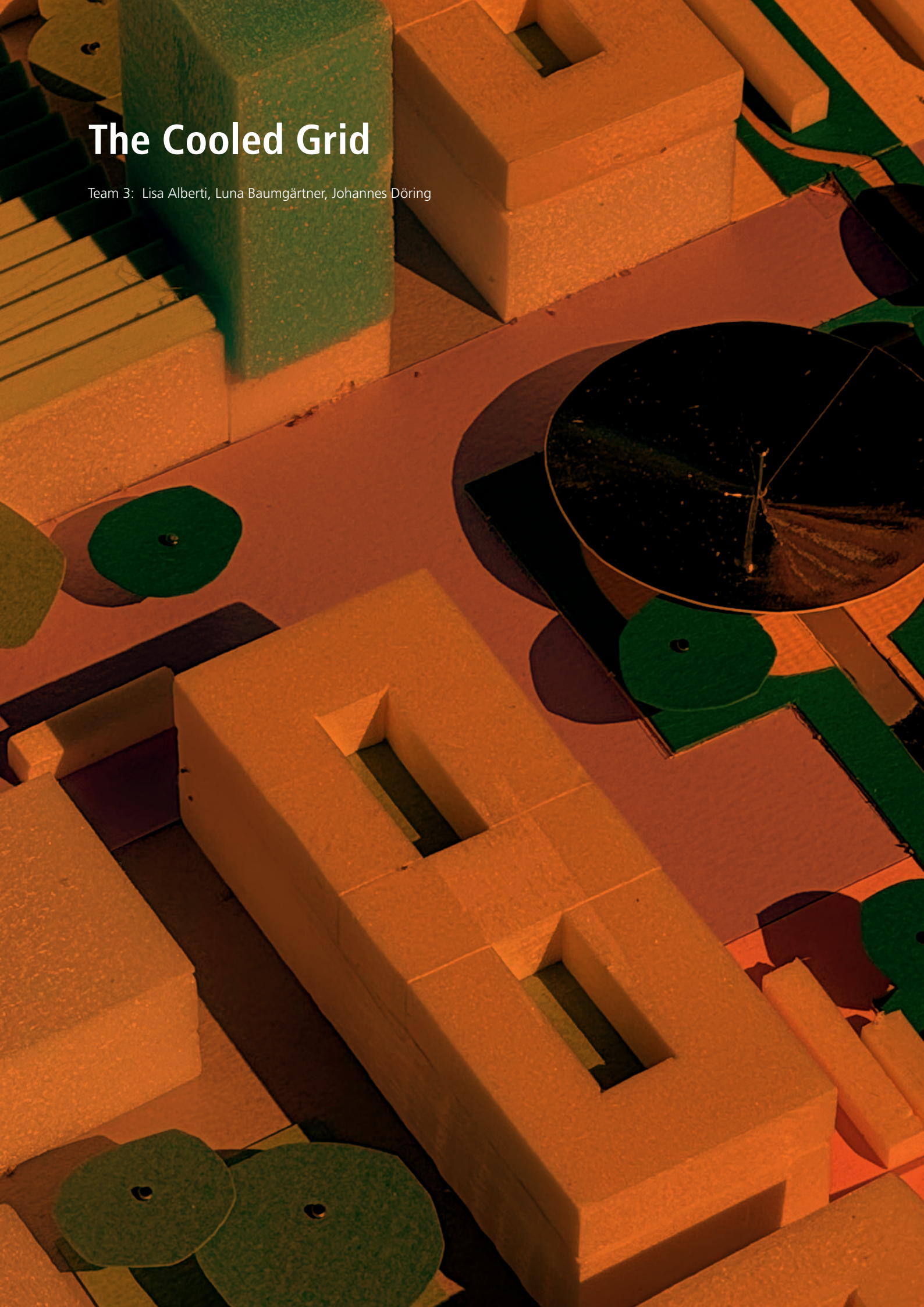
Connectivity is further strengthened by adapting former car bridges for pedestrians. These links reconnect the residential clusters with the central Green Belt and the Rose Garden, opening new perspectives along the main axis and weaving the previously fragmented parts of Sector 17 back together. Within the clusters themselves, the permeable layout allows for easy movement and creates a hierarchy of spaces ranging from intimate courtyards to open plazas and lively edges.

Through this combination of housing, plazas, and multi-functional infrastructures, the quarters evolve into complete urban neighborhoods. They enrich the sector with everyday life, cultural opportunities, and spaces for interaction, while remaining rooted in Chandigarh's modernist grid. Together, they form a coherent and resilient framework that transforms Sector 17 into a diverse, inclusive, and vibrant urban core once again.



# The Cooled Grid

Team 3: Lisa Alberti, Luna Baumgärtner, Johannes Döring









# The Cooled Grid

Chandigarh's climatic challenges as the starting point for a new urban strategy



Manifesto

## INTRODUCTION

Chandigarh is a city designed in the 1950s by Le Corbusier as a symbol of rational urban planning in post-independence India. Organized in a strict grid system, the city is divided into numbered sectors, each conceived as a self-sufficient neighborhood with housing, commerce and recreation. At the heart of this grid lies Sector 17, once planned as the cultural and commercial core. Originally a lively hub of public life, but changing social dynamics, urban growth and climatic challenges have weakened its role as the central place of the city.

Compared to Germany's moderate climate, Chandigarh faces extreme heat, high humidity and intense monsoon

rains. These conditions reduce comfort and demand different architectural and urban responses. Conventional strategies are insufficient because climatic stress shapes everyday life more strongly. This underlines the urgency of developing new, climate-adapted approaches for Chandigarh's urban spaces.

Our project The Cooled Grid responds to these challenges by rethinking Sector 17 through climate adaptation and spatial reactivation. Key strategies include cooling open spaces, intelligent rainwater management and large shading structures. We also address sealed ground surfaces and missing greenery that influence the microclimate. By



transforming open spaces into shaded, green and water-cooled environments the project directly improves public comfort.

Beyond climate resilience the project redefines the urban role of Sector 17. Vertical extensions and complementary new structures create opportunities for densification, variety and mixed use. The oversized pedestrian zone, often perceived as empty, is reorganized into strips with distinct characters. This generates new areas for art, culture, commerce, sports and mobility.

Mobility is another challenge. Large parts of Sector 17 are dominated by cars and informally used as parking. Our proposal consolidates parking into compact structures and introduces a new tram line that connects the city core with surrounding areas such as Mohali and Panchkula. This strengthens accessibility and reduces car dependency, freeing valuable land for public use.

Through these interventions The Cooled Grid proposes a resilient, livable and climate-adapted structure. The project addresses climate change while revitalizing Sector 17 as a vibrant center. The strategies developed here form a transferable model for other sectors and help Chandigarh adapt while preserving its modernist heritage.

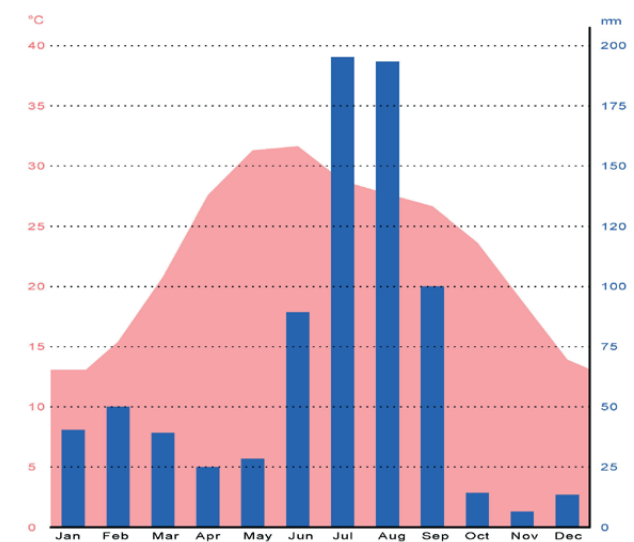
## WHY CLIMATE MATTERS

Chandigarh's climate is defined by extremes. In the summer, temperatures rise above 40 degrees, the air is heavy with humidity and during the monsoon sudden downpours flood the city. In comparison with Germany's moderate climate these conditions demand very different architectural and urban responses. Public spaces that are not shaded or cooled quickly lose their quality and are avoided during the hottest months. Sector 17, once designed as a lively and shaded center, can no longer fulfill this role under today's circumstances.

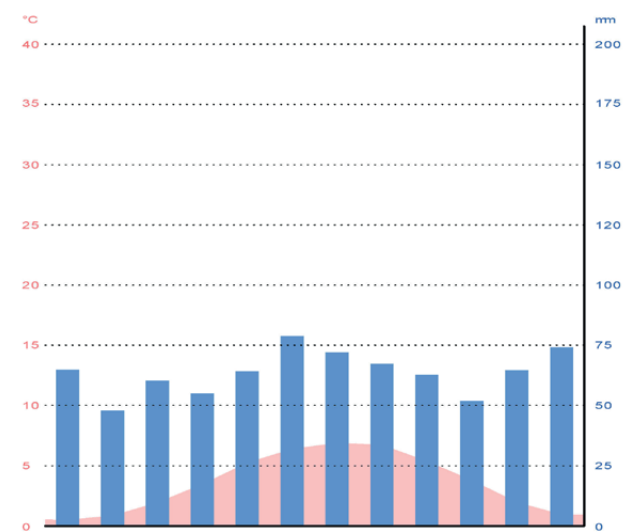
The Cooled Grid addresses these challenges through the integration of greenery, open water features and flexible sun protection systems. Together these measures create a more comfortable microclimate and transform Sector 17 into a model for climate resilience while restoring its importance as the cultural and social core of Chandigarh.



Chandigarh and Sector 17



Chandigarh heatmap



Germany heatmap

# Goals and Interventions

Translating analysis into strategies for a resilient and vibrant Sector 17

## FROM ANALYSIS TO GOALS

Our analysis showed that Sector 17 struggles with heat stress, sealed surfaces, unused spaces and a loss of significance as the city's center. From this we defined four goals: improving the microclimate, enabling living oriented densification, revitalizing art and culture, and enhancing accessibility. These aims are translated into strategies that are visible in the framework plan.

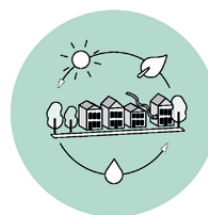
Although Sector 17 borders the Rose Garden, green space does not extend into the interior. The open areas are isolated and have little effect on climate comfort. To increase the microclimate the framework plan integrates greenery, shaded areas and water features to create cooling and comfortable places to stay.

The existing four to five storey buildings offer limited possibilities. By adding vertical extensions and new structures we increase density and variety. The framework plan introduces new housing quarters and educational spaces, enriching the mix of uses and strengthening vitality for a living oriented densification.

The oversized pedestrian zone currently lacks identity. By dividing it into distinctive strips, the framework plan creates places for art, culture and social interaction. This supports relaxation, activity and exchange, restoring vibrancy to the public realm. With that we are improving art and culture.

Many vacant plots are informally used as parking areas. Our mobility concept consolidates these into compact parking houses and introduces a tram line that links the sector with surrounding areas to improve accessibility. Freed spaces are reintegrated into the public realm, enhancing comfort and accessibility.

Together these measures form a coherent framework that repositions Sector 17 as a resilient and lively core of Chandigarh.



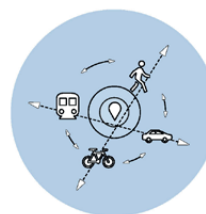
Increase microclimate



Living oriented densification

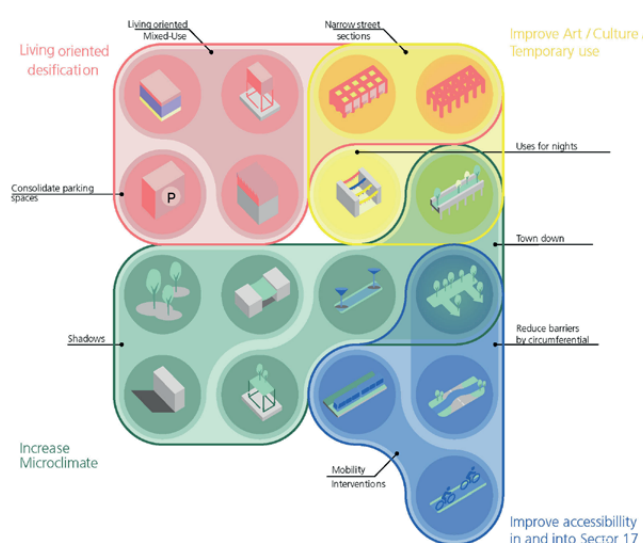


Improve art and culture



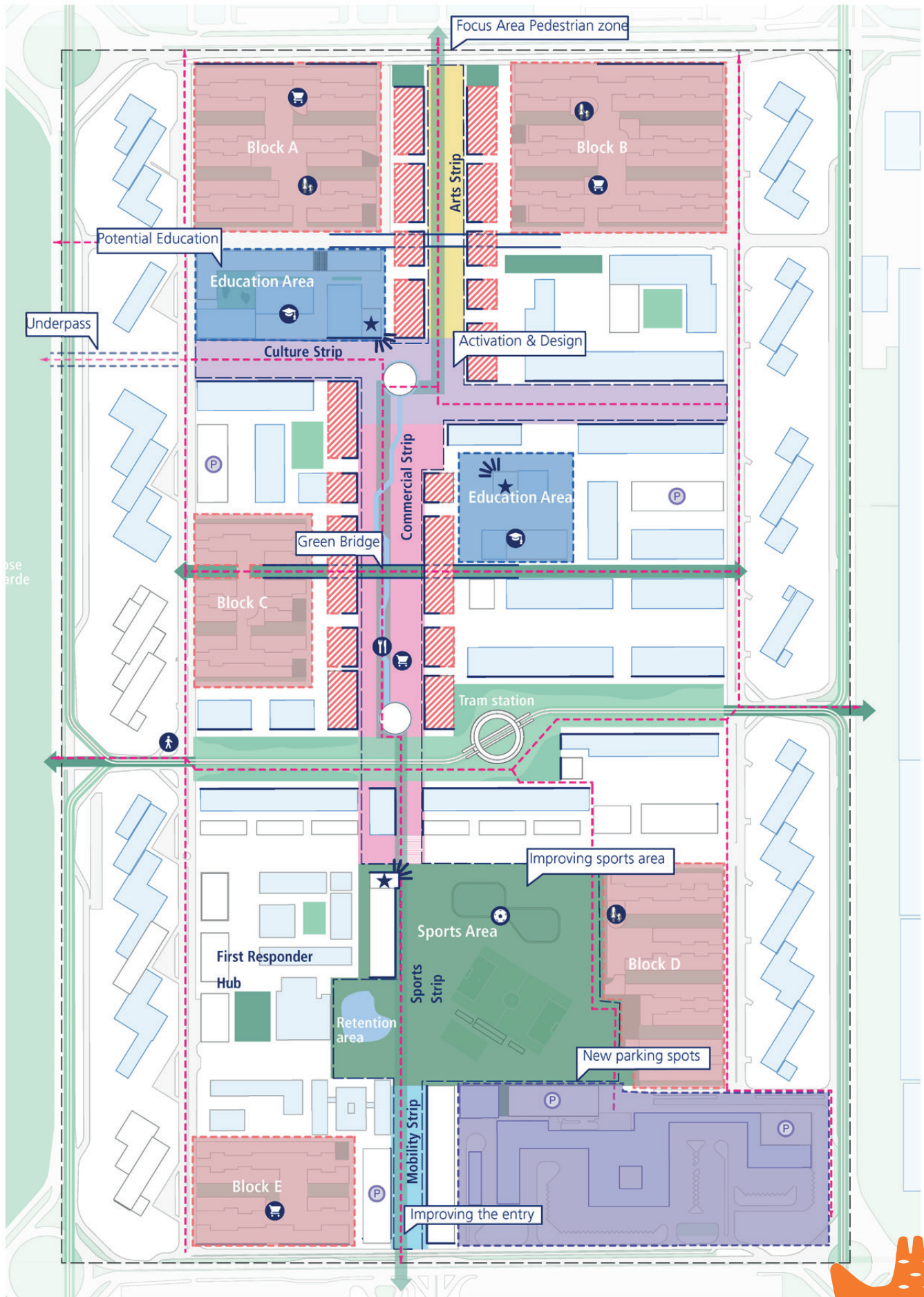
Improve accessibility

Goals



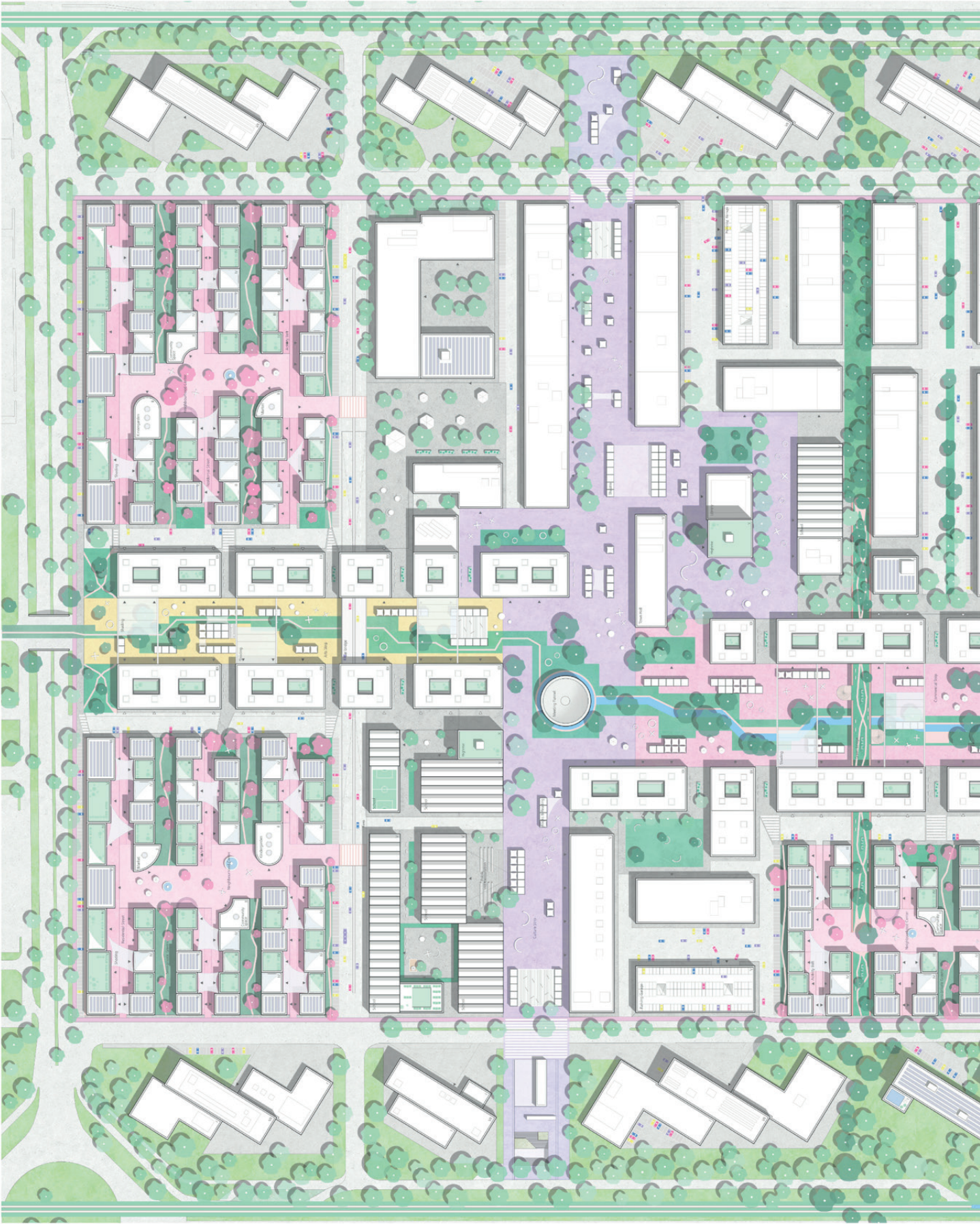
Interventions





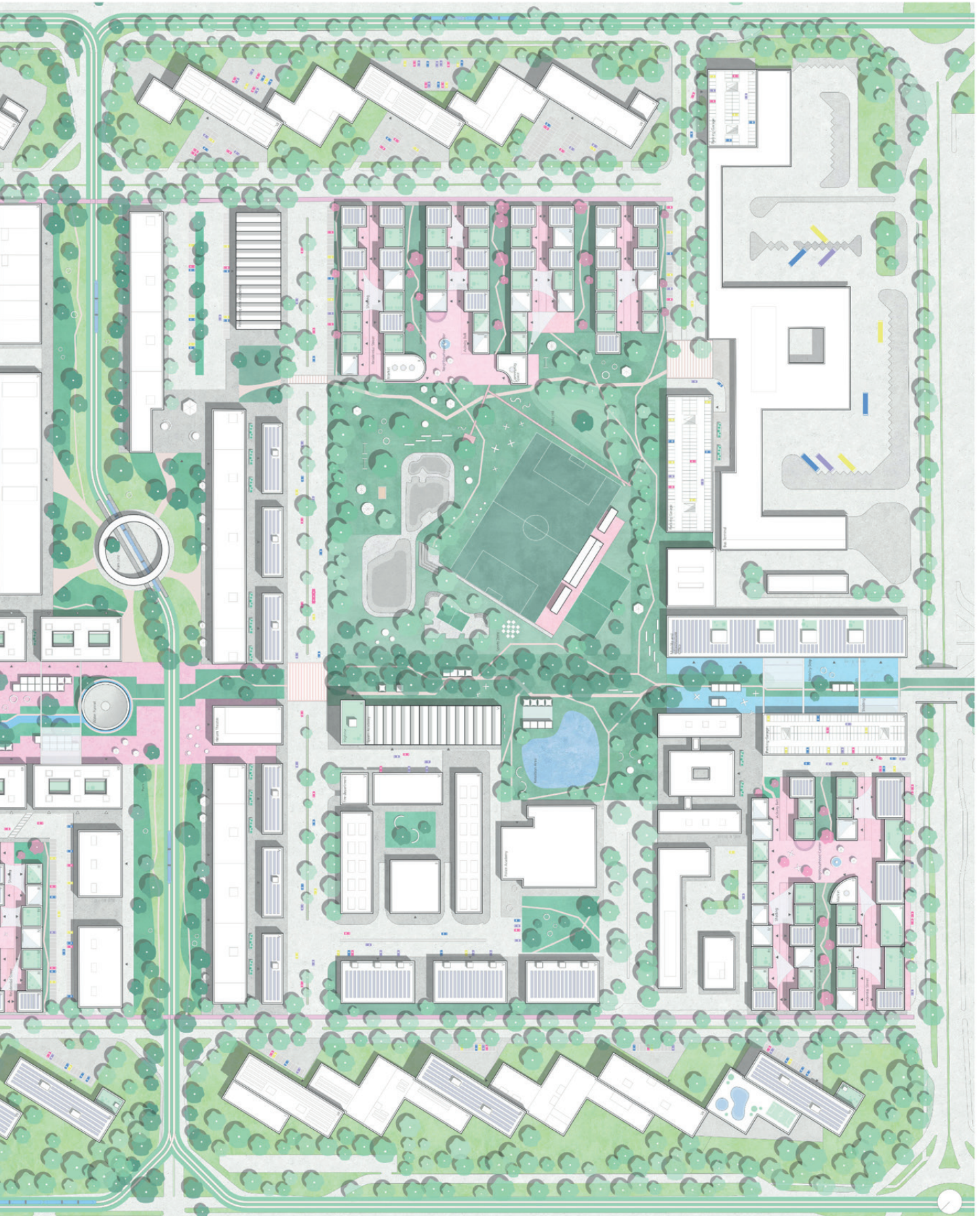
Framework plan





Siteplan







# Mobility and Open Space

Tram connection, green corridors and structured public zones for a resilient Sector 17



New tram line plan

## FRAMEWORK PLAN AS SPATIAL STRATEGY

A central element of our design is the introduction of a new tram network for Chandigarh. It connects important destinations such as the High Court, the airport, Mohali and Panchkula, and positions Sector 17 once again as the transport hub of the city. The tram offers a sustainable alternative to the car, reduces the demand for parking areas and frees up land that can be reintegrated into public use. In the south a new mobility hub combines buses, tram and bike services into one compact node, improving accessibility and strengthening the civic role of the sector.

The framework plan shows how mobility and open space are closely linked. Parking is consolidated into compact

structures, which allows vacant plots to be used for new housing, cultural programs and green areas. A continuous green corridor extends into the heart of the pedestrian zone, reducing sealed surfaces, improving the microclimate and creating new places to stay.

The wide pedestrian zone, often perceived as oversized and empty, is restructured into thematic strips that follow the rhythm of the grid. Each strip has its own identity, ranging from art and culture to commerce, sports and mobility. This order gives the public realm clarity, orientation and variety. In this way the framework plan translates analysis into a clear spatial strategy.





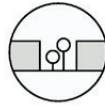
### Zoning the Open Space

Open space divided into thematic strips with clear identity.



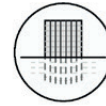
### Moduls for Open Space Activation

Modular units extend uses and activate public life flexibly.



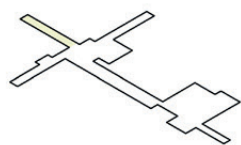
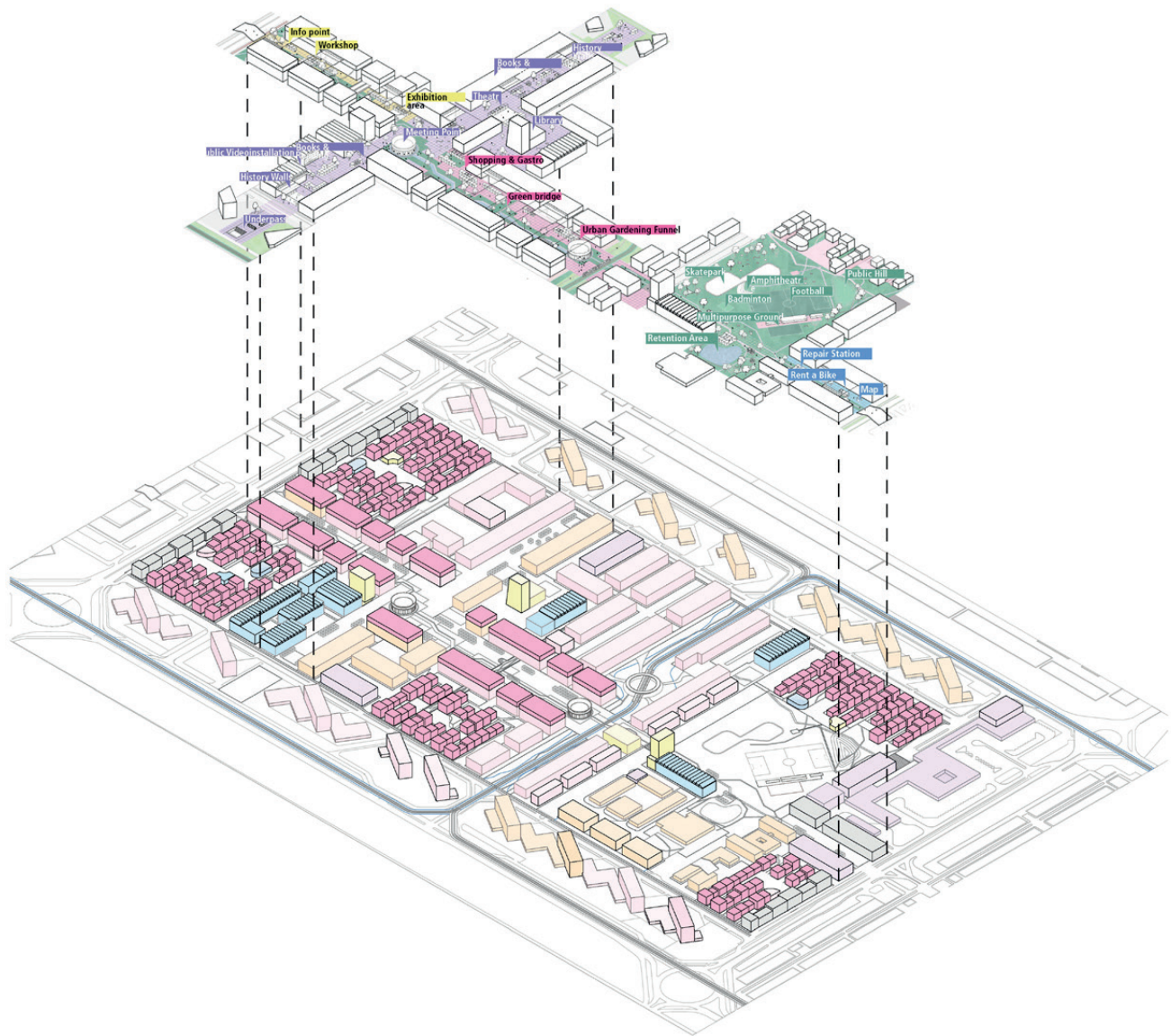
### Green Belt in Open Space

Continuous green corridor cools, shades and improves microclimate.

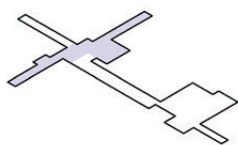


### Facade Grid in Open Space

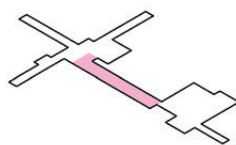
Building grid extends into landscape, giving order and structure.



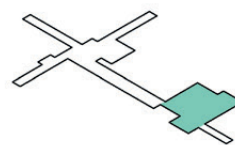
Art strip



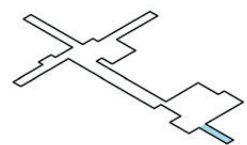
Culture strip



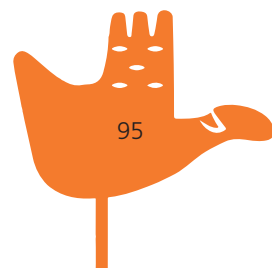
Commercial strip



Sports strip



Mobility strip





# Implemented Interventions

Activating the pedestrian axis and linking mobility with public life



Perspective new tram station

## REVITALIZING THE PEDESTRIAN ZONE

The central pedestrian axis of Sector 17 is one of its most striking features but today it feels empty and lacks atmosphere. Our design gives this wide space new character by dividing it into thematic strips. The Art Strip provides workshops and exhibition spaces, the Culture Strip offers platforms and open stages, the Sports Strip extends recreational opportunities, the Mobility Strip promotes sustainable transport and the Commercial Strip strengthens retail and gastronomy. Each strip has a distinct identity yet can be adapted flexibly with modular and temporary structures. In this way the pedestrian zone gains depth, orientation and vitality.

The perspective view of the Commercial Zone shows how existing shops and restaurants expand into public space. Instead of a closed mall, the area becomes an open street with modular terraces, stalls and pavilions. These structures not only activate the ground floor but also create shaded seating areas and lively edges that invite people to linger. The combination of permanent uses with flexible temporary modules ensures that the commercial street remains vibrant at different times of the day and offers opportunities for local businesses and community initiatives.





Perspective new Commercial Zone

## MOBILITY HUB AND TRAM INTEGRATION

While the focus lies on the pedestrian experience, mobility also plays a crucial role. A new hub in the south integrates tram, bus and bike services, turning transport infrastructure into a civic place. The tram network strengthens Sector 17's role as the central node of Chandigarh, while consolidated parking frees land for housing, culture and greenery. The perspective from the tram station illustrates how this infrastructure is not only functional but designed with shade, generous proportions and adjacent green space, making it comfortable and welcoming for daily use.

The measures for open space and mobility reinforce each other and create a holistic structure. The thematic strips activate the pedestrian zone, while the tram and mobility hub ensure accessibility on a larger scale. Freed land is returned to the public realm, offering space for housing, green corridors and cultural programs. Together these systems establish a balanced urban fabric in which public life and sustainable transport work hand in hand, turning Sector 17 into a climate resilient and socially active center of Chandigarh.

# Climate Responsive Design Tools

From public space interventions to resilient neighborhoods

## COOLING AND SHADING STRATEGIES IN THE PUBLIC REALM

Sector 17 is directly exposed to heat, humidity and heavy monsoon rains. To create comfortable public spaces under these conditions, we developed a catalog of water and shadow elements. This catalog functions as a flexible toolbox that can be adapted across scales, ranging from small modules in the pedestrian strips to large shading structures integrated into the wider urban fabric.

The water funnels are a central part of this system. During rainfall they collect water and guide it into the ground, irrigating gardens and supporting groundwater recharge. At the same time they act as visible landmarks that give orientation and highlight the connection between climate adaptation and urban design. Their presence makes environmental strategies understandable and accessible for everyone using the public realm.

Additional water features such as shallow basins, channels and misting devices introduce evaporative cooling. They refresh plazas and pedestrian areas, improving comfort while also creating playful and social spaces that invite people to gather. Together these measures reduce heat stress, add atmosphere and make the sector's open spaces more resilient to climatic extremes.

Sun protection is equally important. Small textile sails, modular canopies and large roof structures provide shade at different scales. These devices transform exposed zones into usable places, making it possible to spend time outdoors even in extreme heat. Combined with vegetation they create layered microclimates, turning previously hostile surfaces into shaded and inviting urban environments.

Together the water and shadow elements create a resilient public realm. They improve the microclimate, provide identity and make climate adaptation tangible for residents and visitors alike.



water fountain



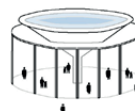
retention area



cooling mist wall



water basin  
between the funnels



funnel of  
togetherness



funnel of  
gardening

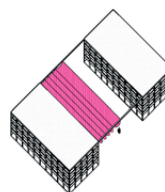
### Water Elements



small sun sails  
within a cluster



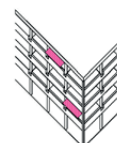
larger sun sails  
between two cluster blocks



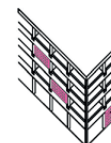
folding  
sun sails



sun sails stretched  
between existing trees



sun shading



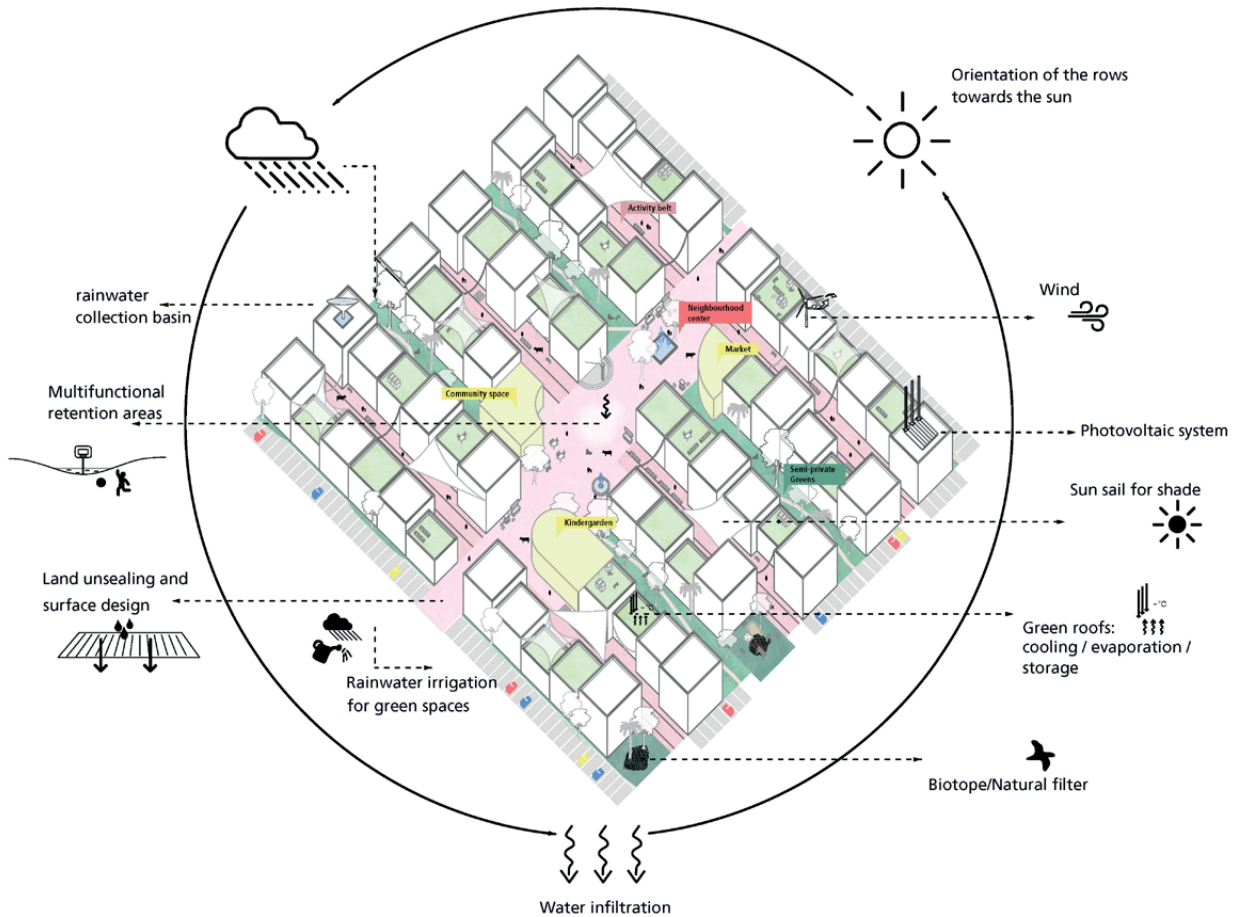
"Jaali"

### Sun Elements



# Neighborhood Climate Strategies

Integrating adaptation into everyday living environments



Neighborhood Climate Cycle

## CLIMATE ADAPTATION INTEGRATED INTO DAILY LIVING

The climate responsive elements also extend into the residential neighborhoods of Sector 17. Here they are part of everyday life and contribute to a sustainable and comfortable living environment.

Water funnels are placed in courtyards and along neighborhood streets. They collect rainwater, prevent flooding and irrigate nearby gardens, ensuring that greenery remains vital throughout the year.

Green roofs and planted facades reduce heat gain and improve the microclimate around the housing modules. They

also support biodiversity and create shaded outdoor areas that residents can use collectively.

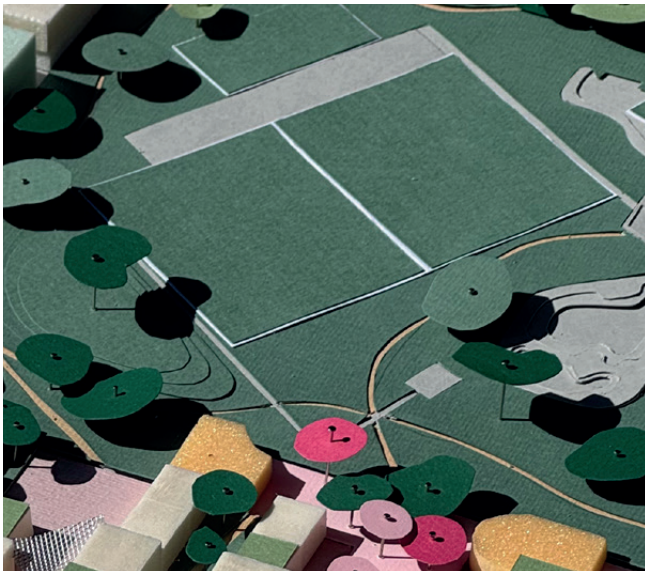
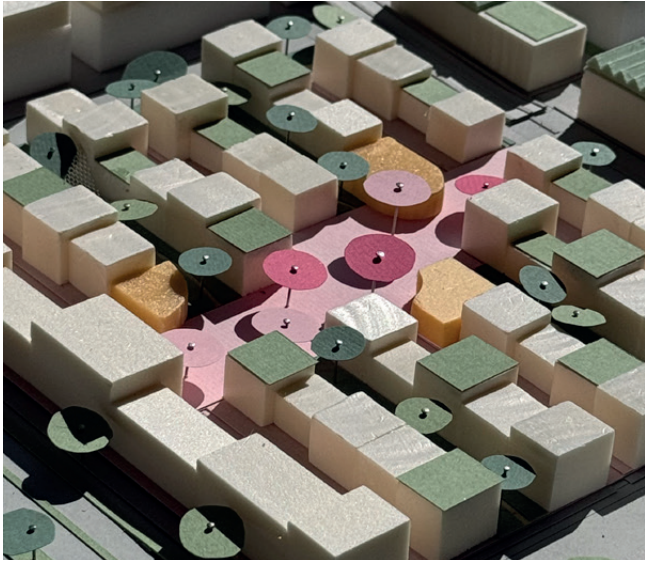
Shading elements are integrated directly into the building framework. Entrances and facades are complemented by canopies and lightweight structures that create transitional spaces between indoors and outdoors. These shaded thresholds not only provide comfort but also support social interaction within the neighborhood.

By embedding water and shadow elements into the housing areas, climate adaptation becomes visible and tangible at the scale of daily life. Residents benefit from improved comfort, healthier green surroundings and a strong sense of identity within their neighborhood.











# Neighborhood Development

Flexible housing modules and diverse living environments



Residential street with activity belt

## LIVING STRUCTURE AND COMMUNITY SPACES

Our design for Sector 17 not only transforms public space but also redefines the character of its neighborhoods. At the core lies a flexible housing system based on a fixed structural framework. This framework provides stability while allowing residents to adapt floor plans to their individual needs. By working with three different module depths, the system offers compact apartments for singles as well as larger family units. The openness of the structure ensures that different life concepts can coexist within one neighborhood, creating a socially mixed and resilient community.

The residential buildings are arranged in rows that form clear front and rear sides. On the front, facing the active pede-

striar strips, the so-called “Activity Belt” is located. Here loggias, terraces and small extensions create a lively edge that supports interaction between neighbors and strengthens the link to public space. On the rear side each unit opens to a quiet green oasis, which provides shade, privacy and recreational qualities. This dual orientation produces a balance of vibrancy and retreat within the same urban block.

The modules are complemented by climate responsive elements such as green roofs, water funnels and shading devices. Together they reduce heat gain, improve ventilation and provide comfortable conditions inside and outside the housing. Courtyards are planted with trees and shrubs, functioning as collective gardens that enhance biodiversity





Semi-private green space

while also improving the microclimate. These spaces act as informal meeting points where residents can come together, reinforcing social cohesion.

Each neighborhood is structured around a central square that serves as a local hub. Community buildings and small service facilities are placed here, ensuring that daily needs can be met within walking distance. This strengthens the sense of identity and reduces dependence on motorized transport. In addition, the squares serve as focal points for neighborhood events, markets or cultural programs that add another layer of collective life.

The system's openness also allows incremental growth over time. New modules can be added, existing ones transfor-

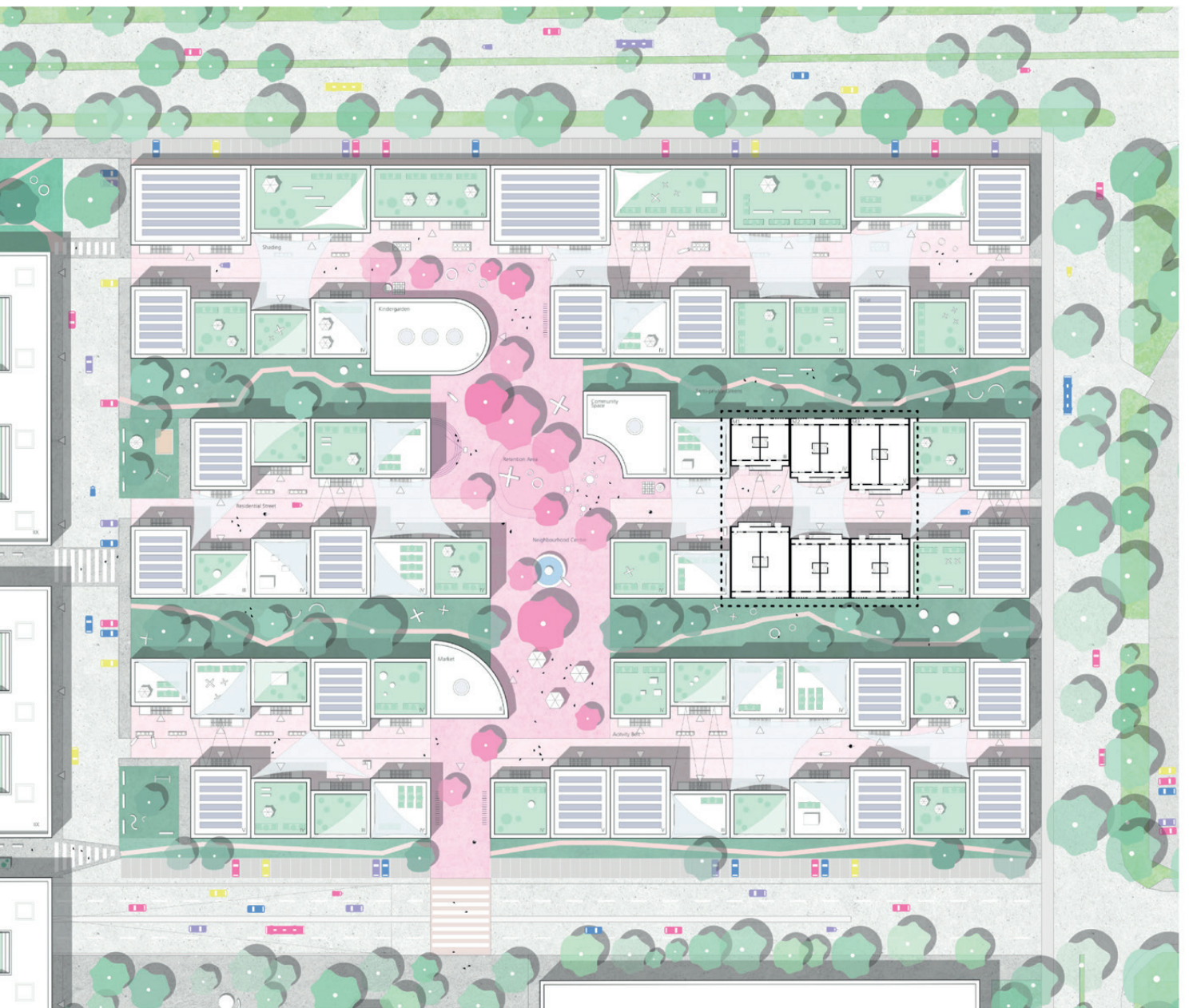
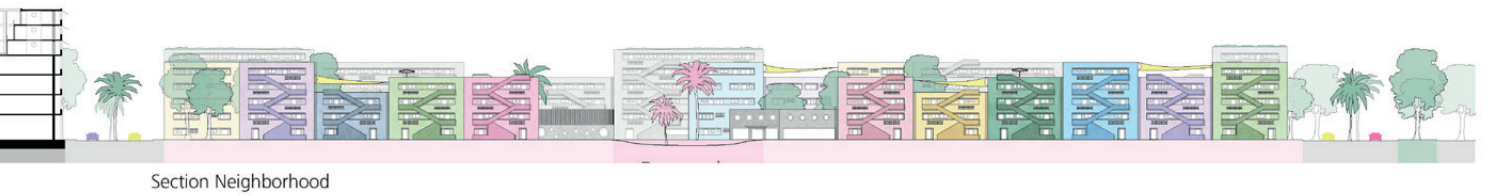
med, and residents can adapt their living environments as needs change. This capacity for evolution ensures long-term resilience and supports generational diversity.

The resulting urban fabric balances density and openness. The Activity Belts connect neighborhoods to the vibrant public strips, while the rear gardens and courtyards offer quiet retreats. This interplay creates diversity within a clear order. By embedding climate strategies, social infrastructure and architectural flexibility into one system, the neighborhoods of Sector 17 become resilient models for sustainable urban living in Chandigarh and provide a transferable approach for future developments.

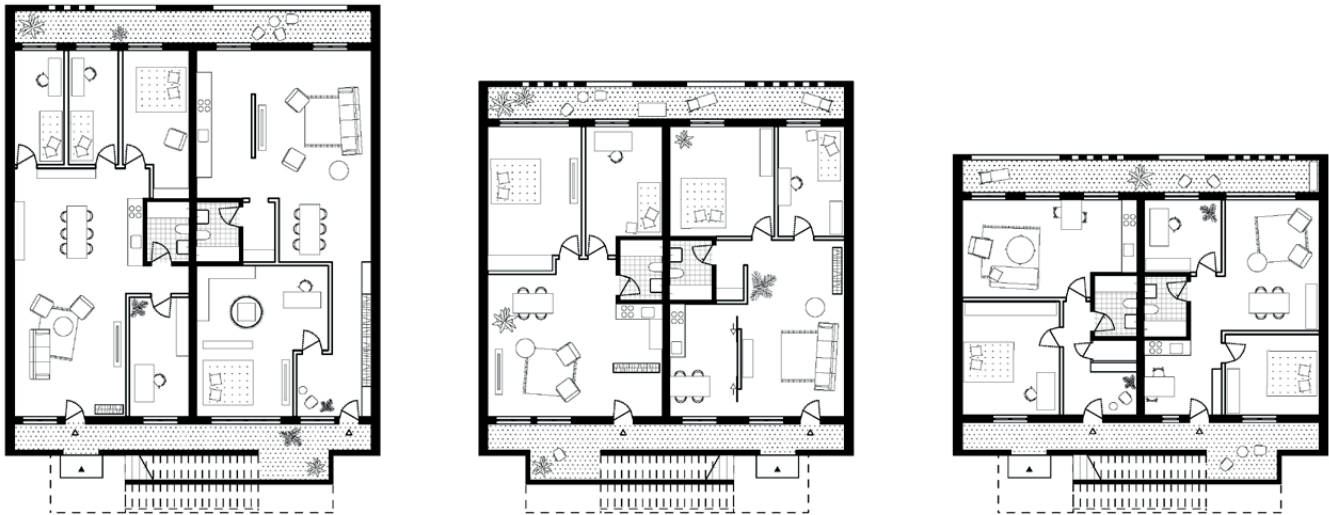


# Neighborhood Typologies

Three housing modules as a flexible system







Housing Modules (Module 3: 100qm, Module 2: 80qm, Module 3: 60qm)

## RULEBOOK AND RESIDENTIAL VARIATIONS

The housing concept of Sector 17 is based on a simple but adaptable framework. At its core lies a clear rulebook that defines the structural logic while leaving room for diverse interpretations. Buildings are organized according to a fixed grid, which provides order and stability, but within this framework different living types and layouts can evolve.

The system works with three module depths that result in apartments of approximately 60, 80 and 100 square meters. This range allows for compact single units as well as spacious family homes. By combining the modules in different ways, varied living environments emerge while the overall order of the neighborhood remains consistent.

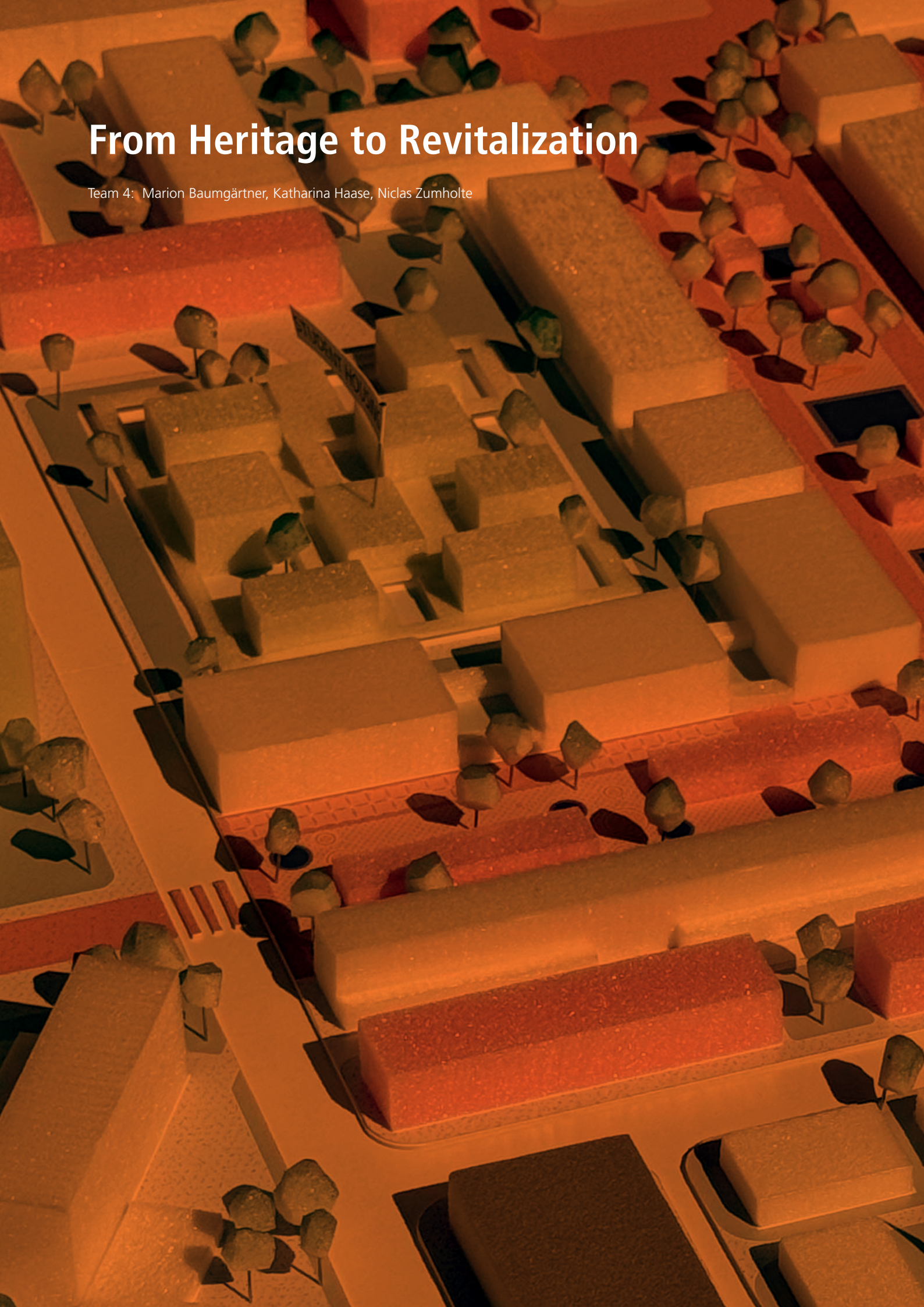
Each unit opens toward a green oasis at the rear, ensuring access to quiet, shaded outdoor space. The front side connects to the Activity Belt with terraces, entrances and communal edges that encourage social interaction. In this way every building contributes both to vibrancy and to retreat, creating a balance within the urban block.

The rulebook also integrates climate responsive measures such as green roofs, shading devices and water management elements. Together they support comfortable indoor conditions and resilient neighborhoods. The result is a flexible housing system that offers identity, adaptability and long-term sustainability for Sector 17.

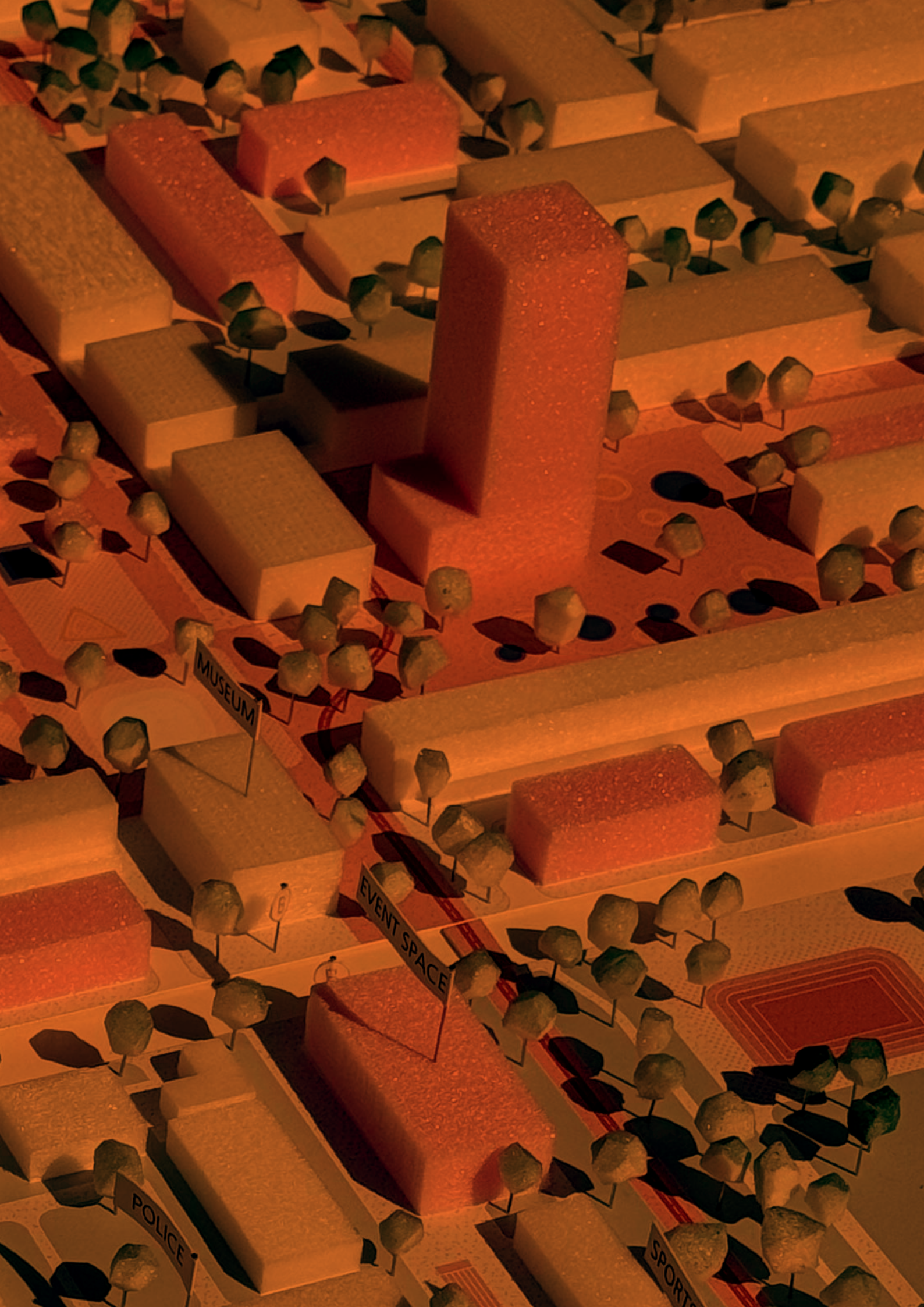


# From Heritage to Revitalization

Team 4: Marion Baumgärtner, Katharina Haase, Niclas Zumholte





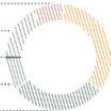




# Spatial Analysis

## Open Space

sealed surface and parking  
built-up area  
water  
unsealed surface  
green space



## Uses

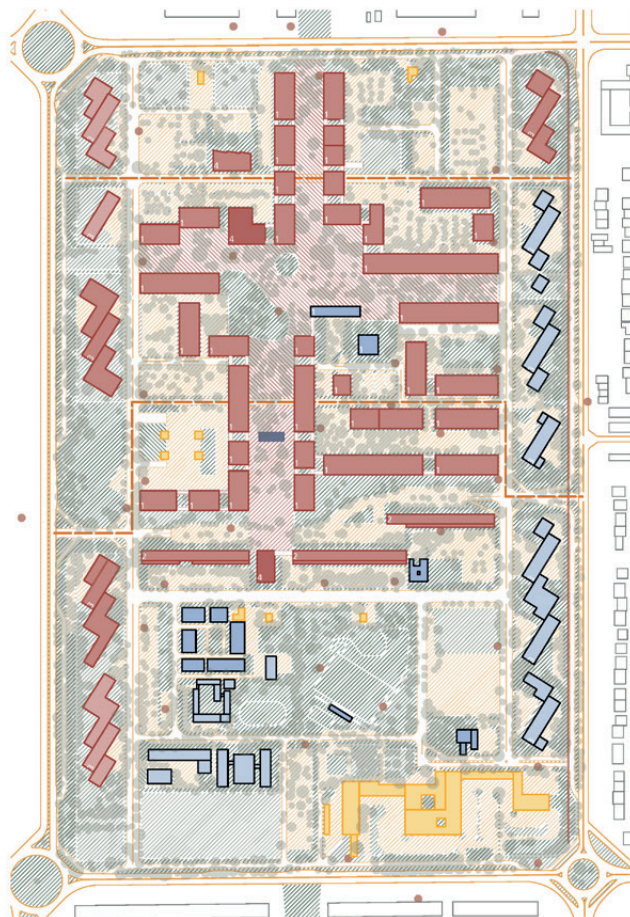
public institutions and administration  
mobility  
office, retail and gastronomy



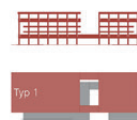
## Mobility

street V2 / V3  
street  
bridge  
bike lane  
parking  
bike sharing

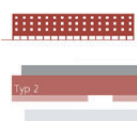
## Analysis



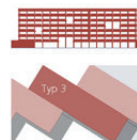
## Type 1 post-and-beam construction



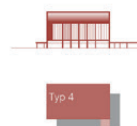
## Type 2 perforated façade



## Type 3 post-and-beam construction



## Type 4 special structures



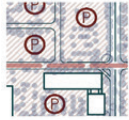
## ANALYSIS

In preparing the design concept, we focused on three key areas in our analysis: mobility, open spaces and distribution of uses. While the city is well-suited for car traffic, with the sector being surrounded by V2 and V3 category roads and featuring extensive parking infrastructure, it lacks a continuous cycling network and adequate connections to neighbouring areas for pedestrians and cyclists. Although there are many unsealed areas and a substantial tree population consisting of approx. 2,500 trees that provide shade and define the urban landscape, there are only few high-quality green spaces. Particularly concerning is the presence of extensive unused brownfield sites, including areas such

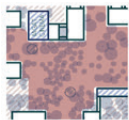
as the Parade Ground, which represent missed opportunities for creating meaningful public spaces and ecological enhancement. Furthermore, Sector 17, according to the master plan, accommodates only office buildings and retail facilities, apart from specialized uses such as cinemas and hotels. The building typology reinforces this mono-functional character, with predominant steel-concrete skeleton structures housing commercial and administrative functions, while seven story high-rise buildings in peripheral zones serve primarily as office complexes. The absence of mixed-use development is particularly problematic during evening hours when the office buildings remain vacant.



## Challenges



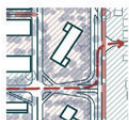
1 Brownfields



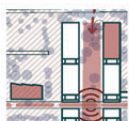
2 Pedestrian Zone



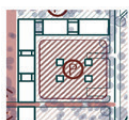
3 Traffic



4 Connectivity

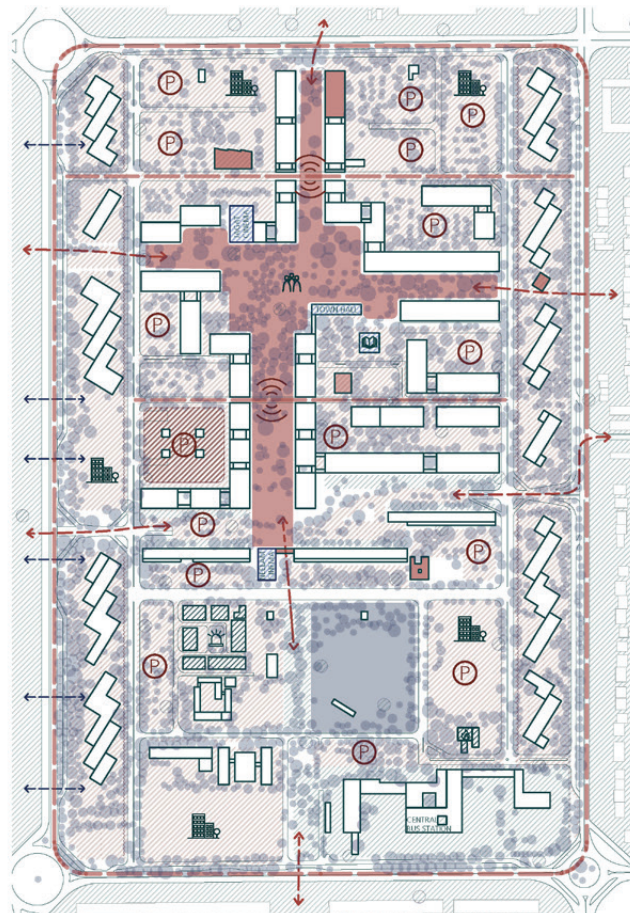


5 Vacancy

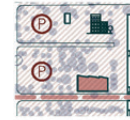


6 Underground Car Park

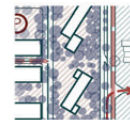
Challenges and Potentials



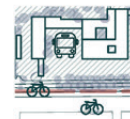
## Potentials



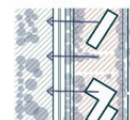
1 Open Spaces



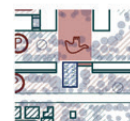
2 Tree Population



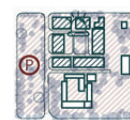
3 Mobility



4 Rose Garden



5 Cultural Heritage



6 Infrastructure

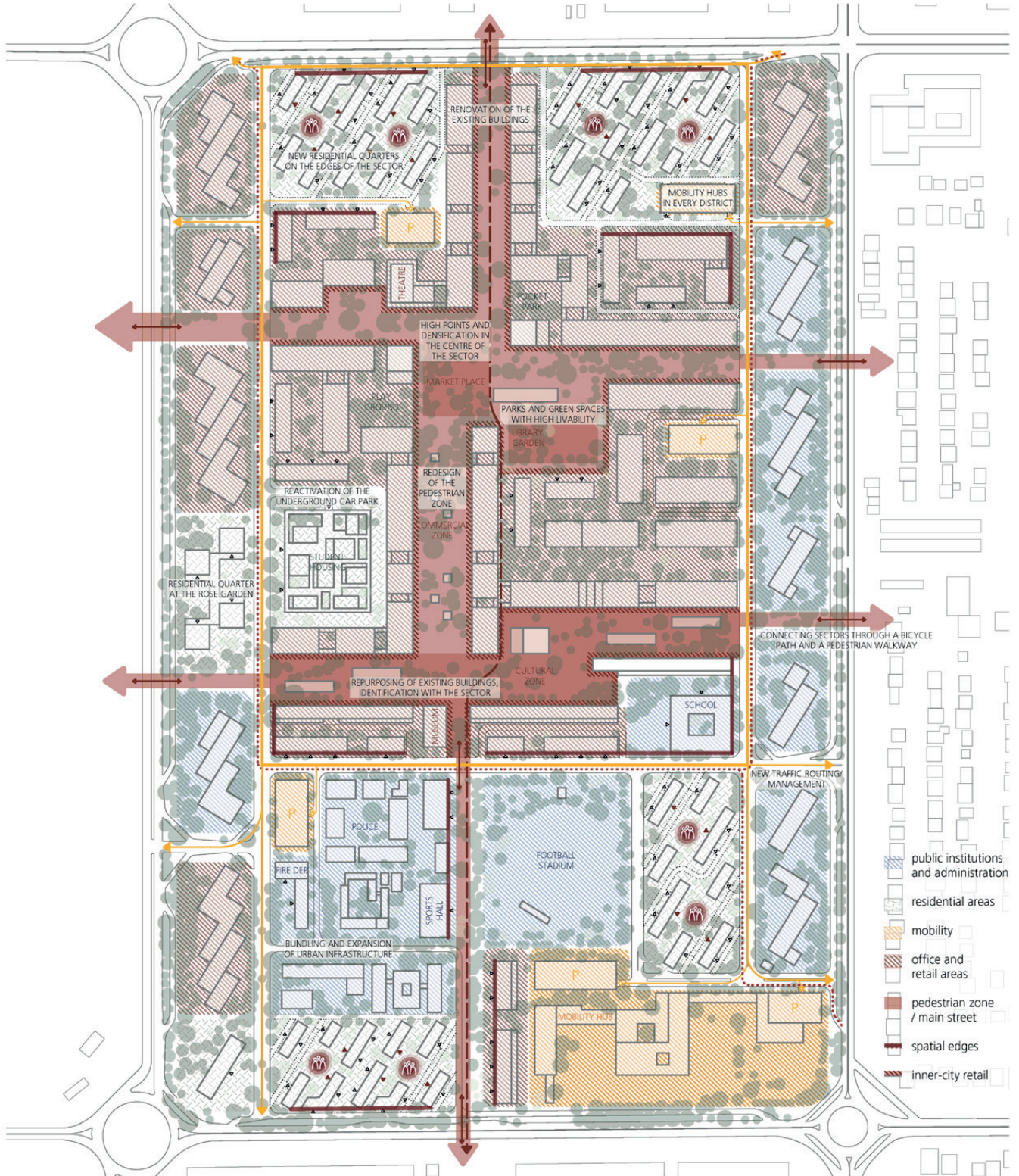
## CHALLENGES AND POTENTIALS

During the analysis, however, we also identified significant opportunities, one of which now forms the core of our design concept. The proximity to the Rose Garden, with its successful underpass connection, and residential Sector 22 demonstrates potential for meaningful connections. The extensive open spaces, while currently fragmented by brownfield areas, represent considerable potential for revitalization. The existing infrastructure, including the bus station providing mobility functions, offers a foundation despite connectivity challenges. The rich tree population provides valuable potential for shading and urban climate improvement.

However, it is buildings such as the Neelam Cinema that embody Chandigarh's architectural heritage and can foster identity and connection with the city's history. These iconic buildings should be preserved and revitalized rather than allowed to decay. This cultural dimension is essential to prevent further deterioration and move away from declining retail quality. The large unused space offers tremendous potential that, when properly activated, can transform the area into a thriving urban center honoring its architectural legacy while meeting contemporary needs.

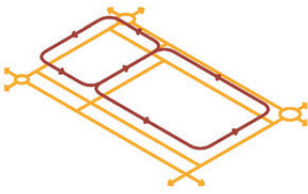


# Concept and Objectives

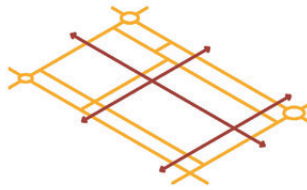


Framework Development Plan

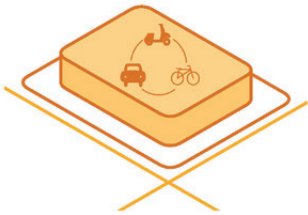


**TRAFFIC**

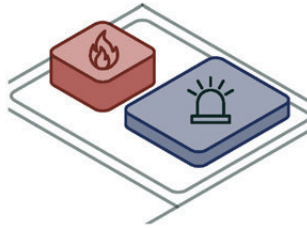
Simplified traffic management reduces noise while a new bus line connects the sector to central station.

**CONNECTIVITY**

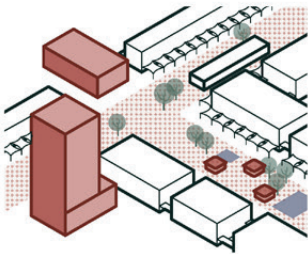
New pedestrian and cycle crossings connect the sectors. The bicycle network in the sector is being expanded.

**MOBILITY**

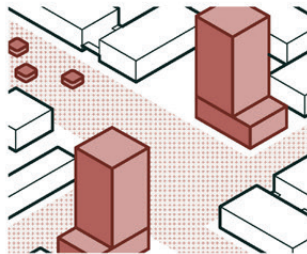
Neighborhood mobility hubs and comprehensive bike-sharing enable a mostly car-free city center.

**INFRASTRUCTURE**

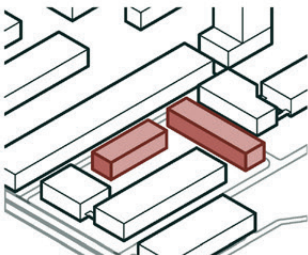
There are many existing infrastructure buildings that can contribute to sustainable urban development and longterm viability.

**PEDESTRIAN ZONE**

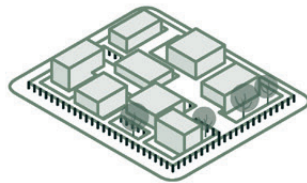
The pedestrian zone will be freed from traffic noise and redensified. Redesigned open spaces will improve inner city quality of life.

**OPEN SPACES**

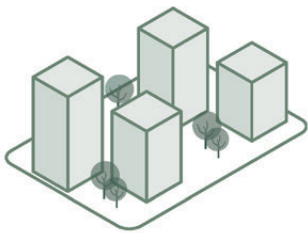
Three high-rises modernize Chandigarh's main street while preserving local architectural style.

**DENSIFICATION**

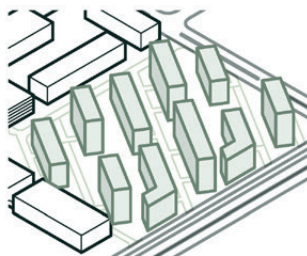
Building renovation and strategic additions support redensification and sustainable development.

**STUDENT HOUSING**

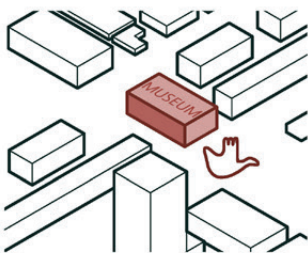
Student housing above the reactivated car park creates urban space below and open space above.

**ROSE GARDEN**

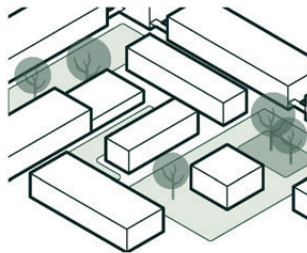
A new residential quarter with four high-rises overlooks the rose garden, contributing to Chandigarh's skyline.

**RESIDENTIAL QUARTER**

Brownfield sites provide space for new residential areas with small neighborhoods.

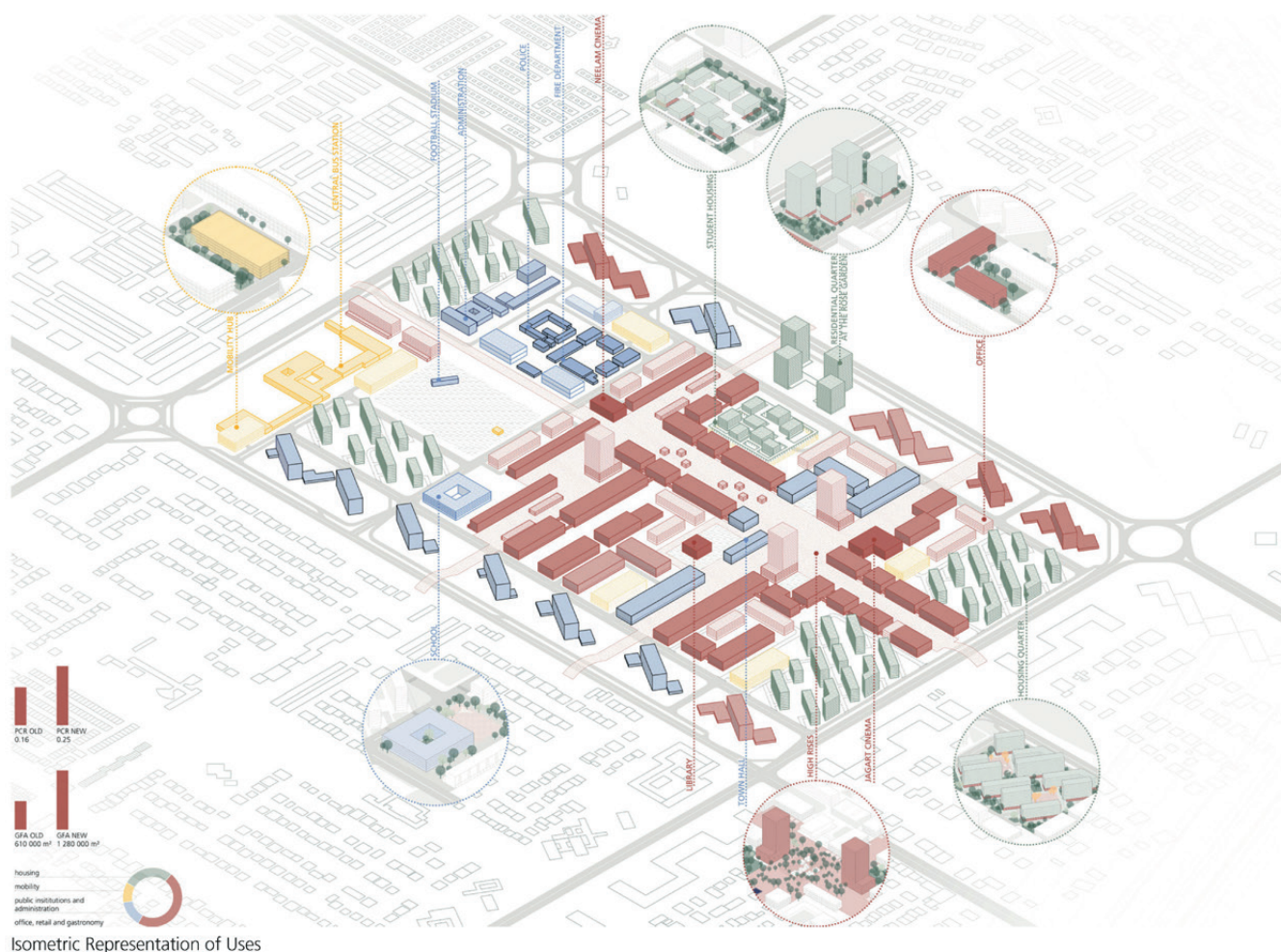
**CULTURAL HERITAGE**

Repurposing the two cinemas preserves Chandigarh's cultural heritage and honors the site's historical significance.

**PARKS AND OPEN SPACES**

New parks, library garden, sports facilities, and urban gardening improve inner city livability.

# Sectoral Topics



## MIXED USES

The isometric representation of uses shows that, in addition to retail and office buildings, there are many administrative uses in the inner city area. Our concept is to enhance sector 17 and increase well-being in the inner city through better mixing uses and the integration of residential buildings as a new typology. This is also intended to combat vacancy rates. The hatched buildings in the illustration are new additions. In addition to the newly created residential areas, you can also see the concentrated urban infrastructure, consisting of police, fire brigade and administrative buildings in the immediate vicinity of the sports and event hall. There is also a new school campus and the different new

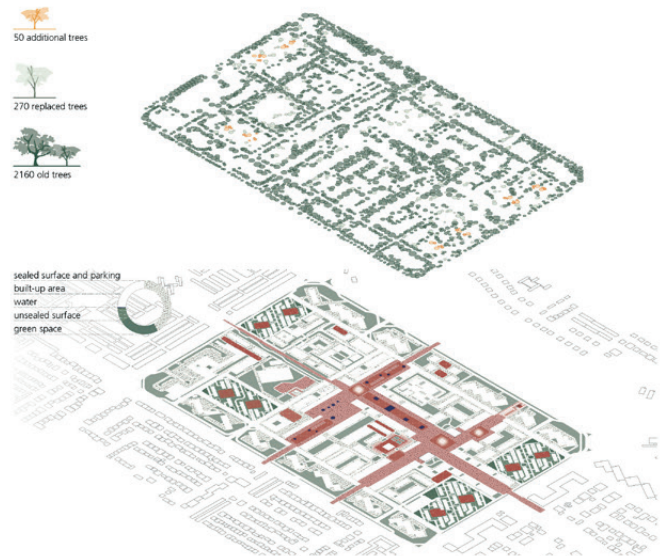
office and housing types. In terms of figures, the impact of our design is reflected as follows: the floor area ratio has increased from 0.16 to 0.25, while the gross floor area has doubled. The main part of this, approximately 25 percent, is residential, and of course the car parks have been added. Despite the redensification, there are still many open spaces and the open, spacious character of the urban space is retained.



## OPEN SPACE

The existing old and diverse tree population will be supplemented by a few new trees and preserved as far as possible. The flat roofs are ideal for solar panels and green roofs.

The green spaces connected to the pedestrian zone and the many private gardens contribute to a better quality of life. Many unsealed areas serve as retention areas.

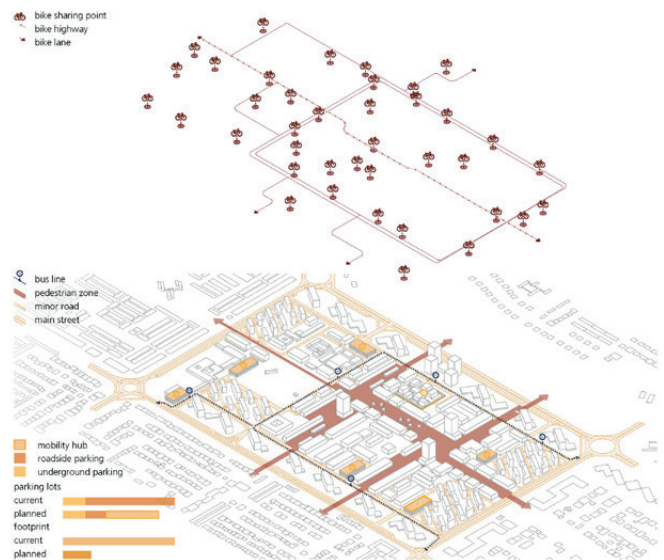


Open Space

## MOBILITY

The reduction in traffic in Sector 17 and better organised parking will lead to less traffic and noise pollution and enhance the livability of the city center.

The new bicycle and public transport networks offer alternatives to the car.

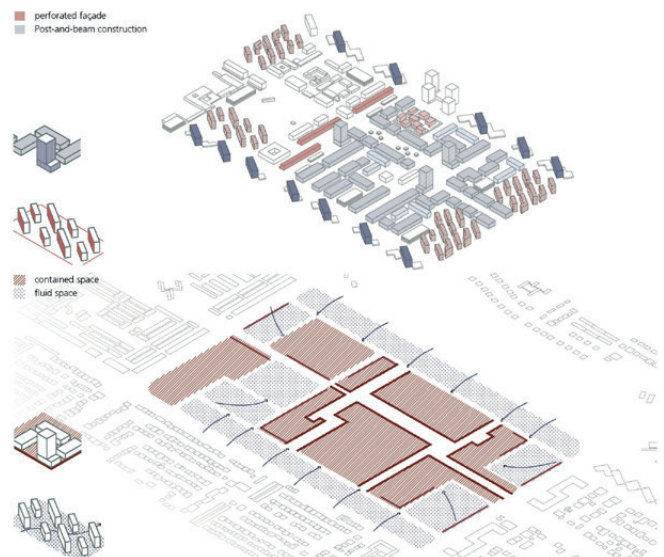


Mobility

## URBAN DESIGN

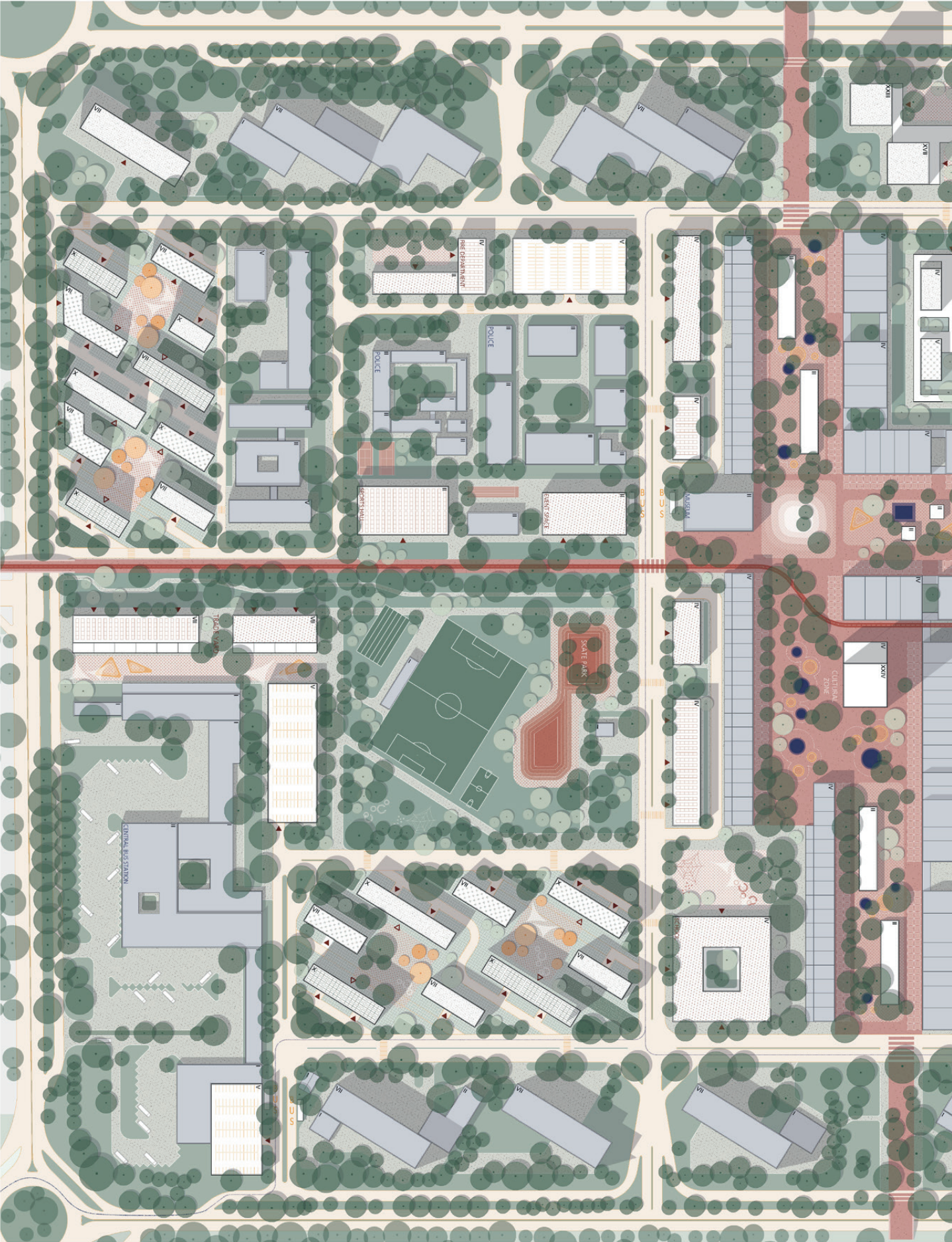
The façade design and urban planning of the new buildings are based not only on the master plan ideas but also on climatic conditions. Together with the mix of uses, this creates a sustainable city centre.

Clear spatial boundaries frame the pedestrian zone and form a city centre. The adjacent residential areas with their flowing spatial design create a smooth transition to the other sectors. High-rise buildings serve as an urban landmark.



Urban Design

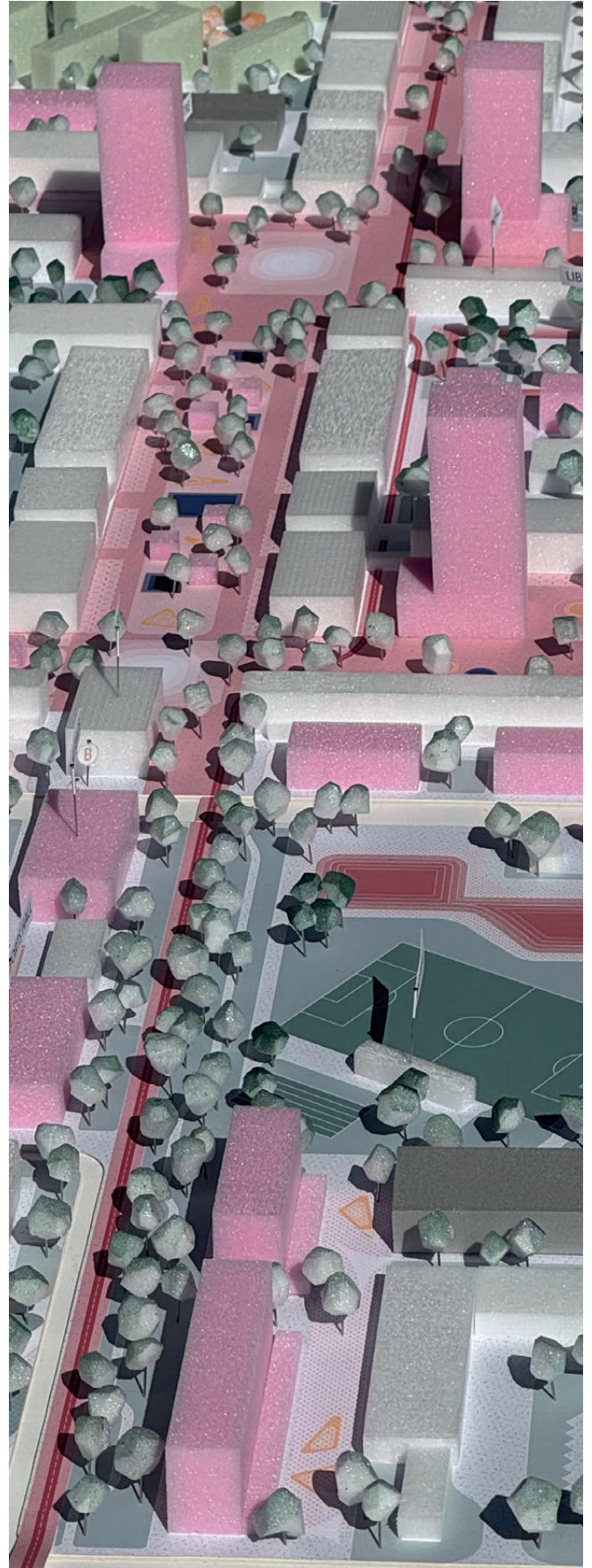
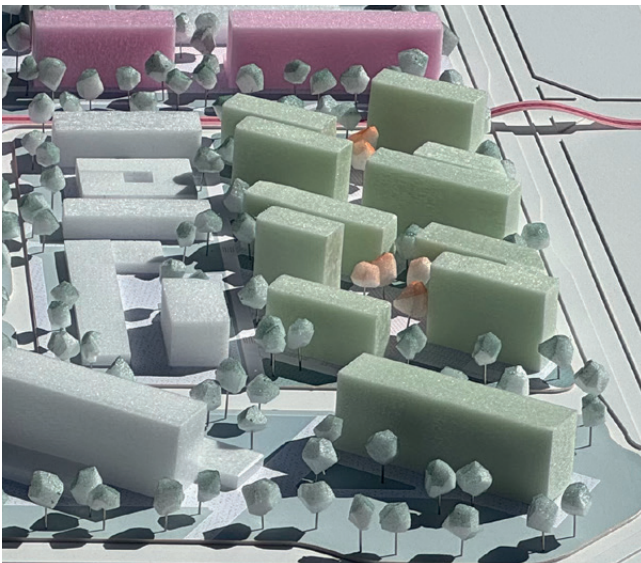
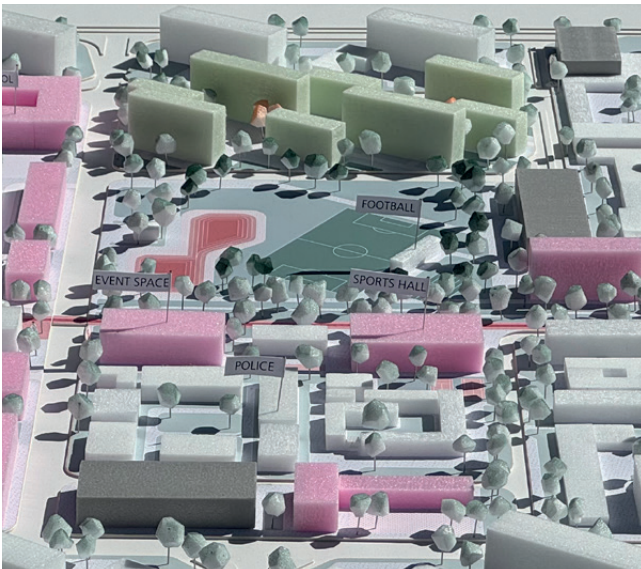
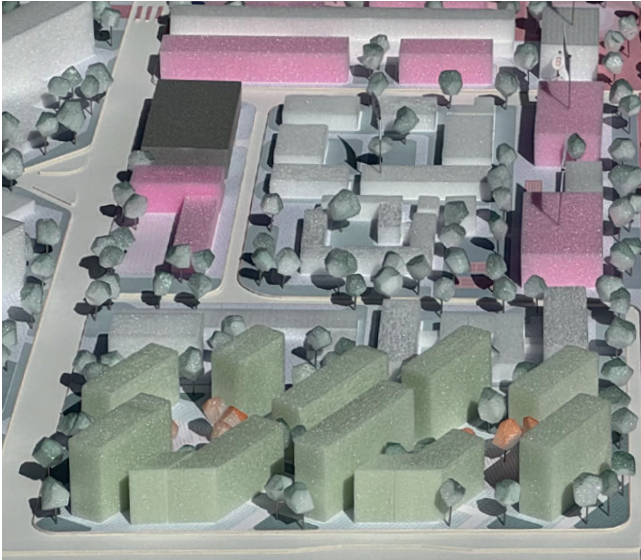




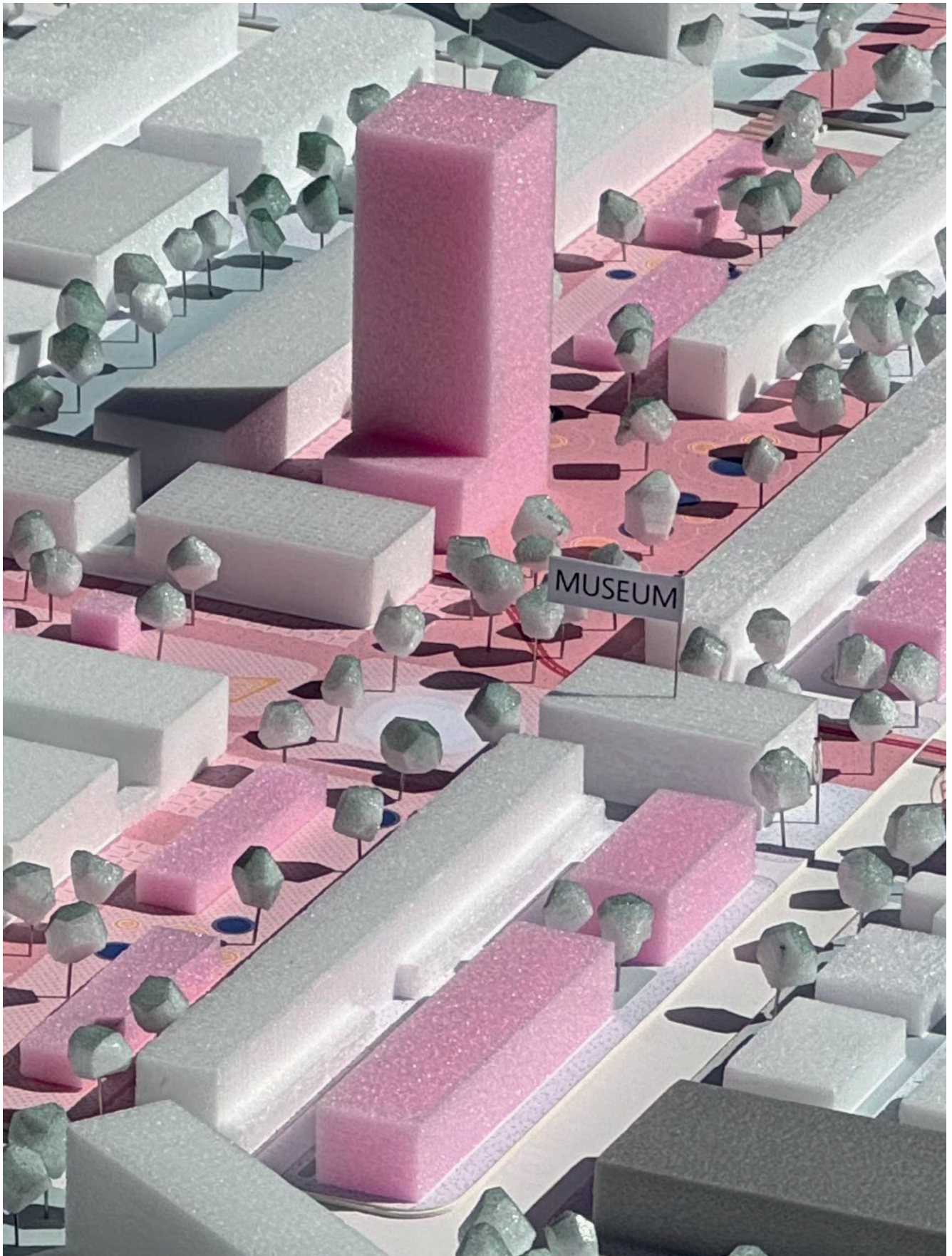














# Zoom-In City Center

City Center



Visualization Neelam Cinema

## PEDESTRIAN ZONE

As can be seen in the site plan, we are adding several building types to the pedestrian zone, which are illustrated here in the visualization. The smaller pavilion buildings, together with various street furniture and shading elements, serve to better define and utilize the huge open space. The smaller pavilion structures, directly embedded in the pedestrian zone, function as fine-grained architectural interventions within the otherwise large-scale urban design. Together with the street furniture, shading elements, and water fountains, they emphasize the human scale. In doing so, the vast open space, which previously risked appearing

residual and undefined, is reframed into a series of spatial episodes that invite appropriation, lingering, and social interaction. On the larger scale, three new high-rise buildings and the various new office buildings follow the ideas of the master plan and complete the existing structure. Together with the residential towers, the new office high-rises establish Chandigarh's contemporary skyline and also serve as landmarks in the city centre.





## NEELAM CINEMA

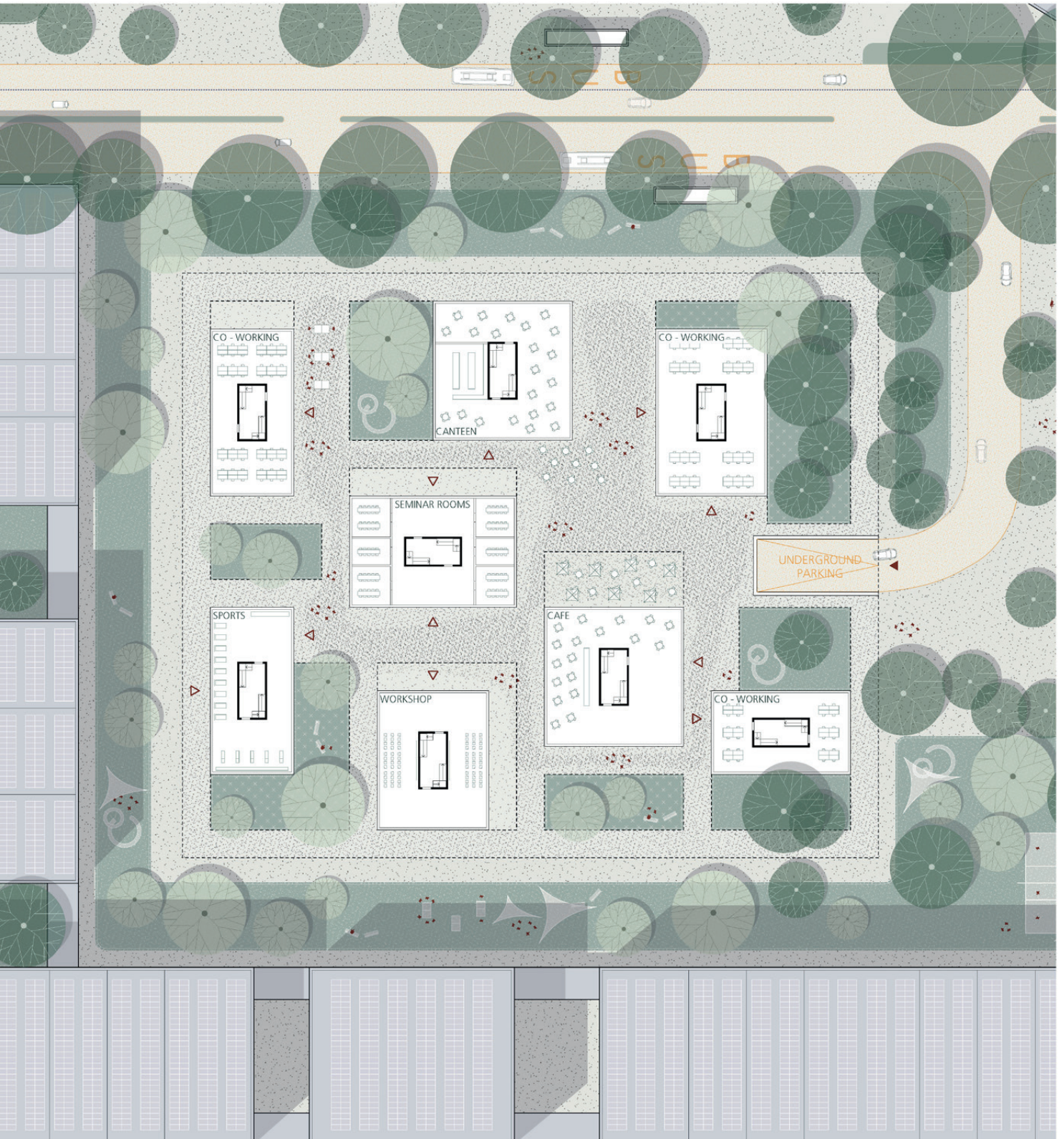
During our design process, one building in particular caught our attention. The Neelam Cinema is one of three cinemas built in Chandigarh in accordance with the master plan. The cinema was built shortly after India's independence in the early 1950s and is located at the southern end of the pedestrian zone in Sector 17. Designed by architect Aditya Prakash, the building still stands in its original form and is used as a cinema. The iconic building represents Chandigarh's unique architectural heritage and the beauty of the city's design, but at the same time, the building also highlights the problems of reconciling the city's architecture with the demands of the 21st century.

Our design for Sector 17 envisages using the building temporarily for exhibitions on the city's history, art and architecture, thus enabling the building to be preserved in its original form and drawing attention to the city's unique history. The building is intended to strengthen people's identification with their neighbourhood and the city, particularly due to its special location at the end of the pedestrian zone.



# Zoom-In Student Housing

Student Housing



Floor Plan Student Housing





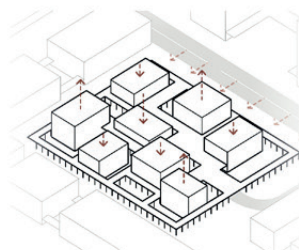
Visualization Platform

## STUDENT HOUSING

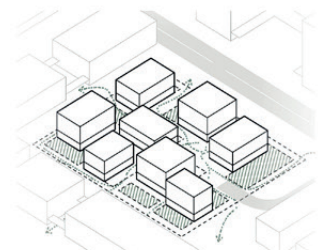
In order to build over the already sealed area of the existing underground car park, we opted for this special area in the middle of the city centre, surrounded by striking existing buildings, for student housing. The building complex consists of several residential buildings that vary in size.

The buildings are all enclosed by a plateau, which offers a spacious open area on the ground floor for various public uses. The elevated platform itself can then serve as a semi-public open space for students. The ground floors are used for various purposes, such as a café, study rooms or a canteen, while the upper floors contain small flats and rooms for students.

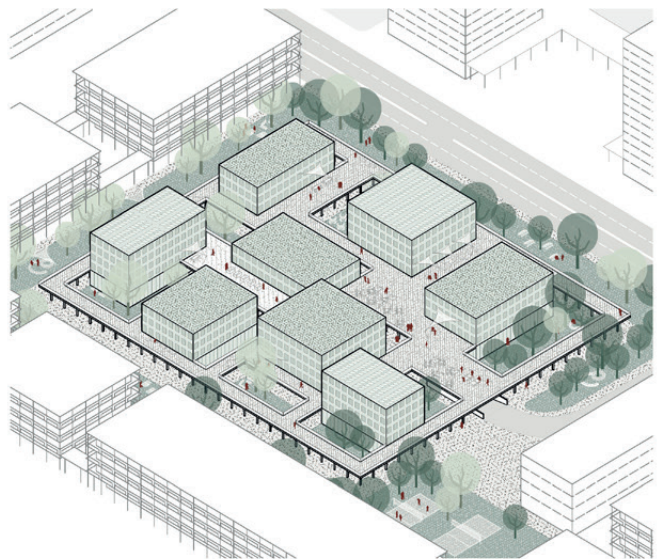
The design attempts to respond appropriately to the special situation of the area framed by the existing buildings without imitating them.



Building Placement



Connectivity



Isometry Student Housing



# Zoom-In Housing Quarter

Housing Quarter

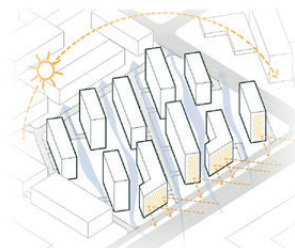


Visualization Neighborhood Square

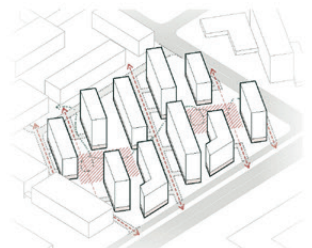
## HOUSING QUARTER

The new residential typology aims to create abundant living space near the city center to address Chandigarh's housing shortage while maintaining small neighborhood principles and local recreation areas. Buildings are oriented north-south for optimal east-west apartment exposure, ensuring good natural lighting without harsh sun exposure. This arrangement creates defined passage zones and quick city center connections. Each group of four buildings centers around a neighborhood square for community gatherings and various activities.

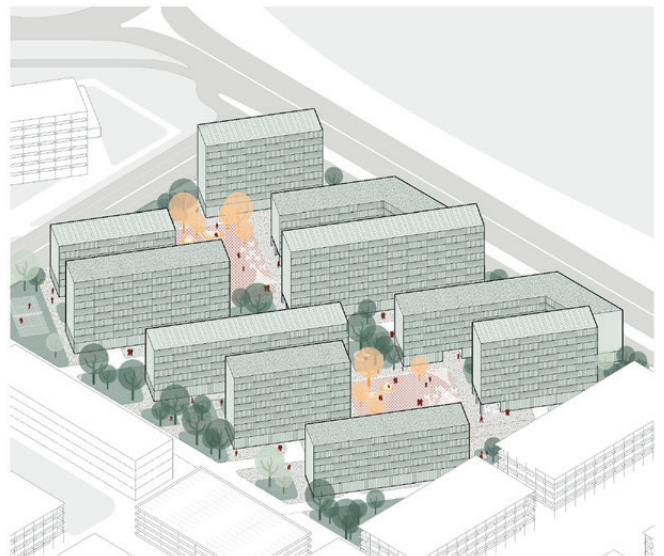
The seven- and ten-story buildings maximize living space while preserving open areas for recreation, play facilities, sports, urban gardening, and ventilation. Buildings curve away from busy roads to create more enclosed spaces. Ground floors feature open-plan designs for residential-related public uses. Areas facing neighborhood squares house cafés, kindergartens, pharmacies, and small grocery stores, while other ground floor spaces serve residential functions like bicycle storage and laundry rooms.



Sun, Ventilation, Noise

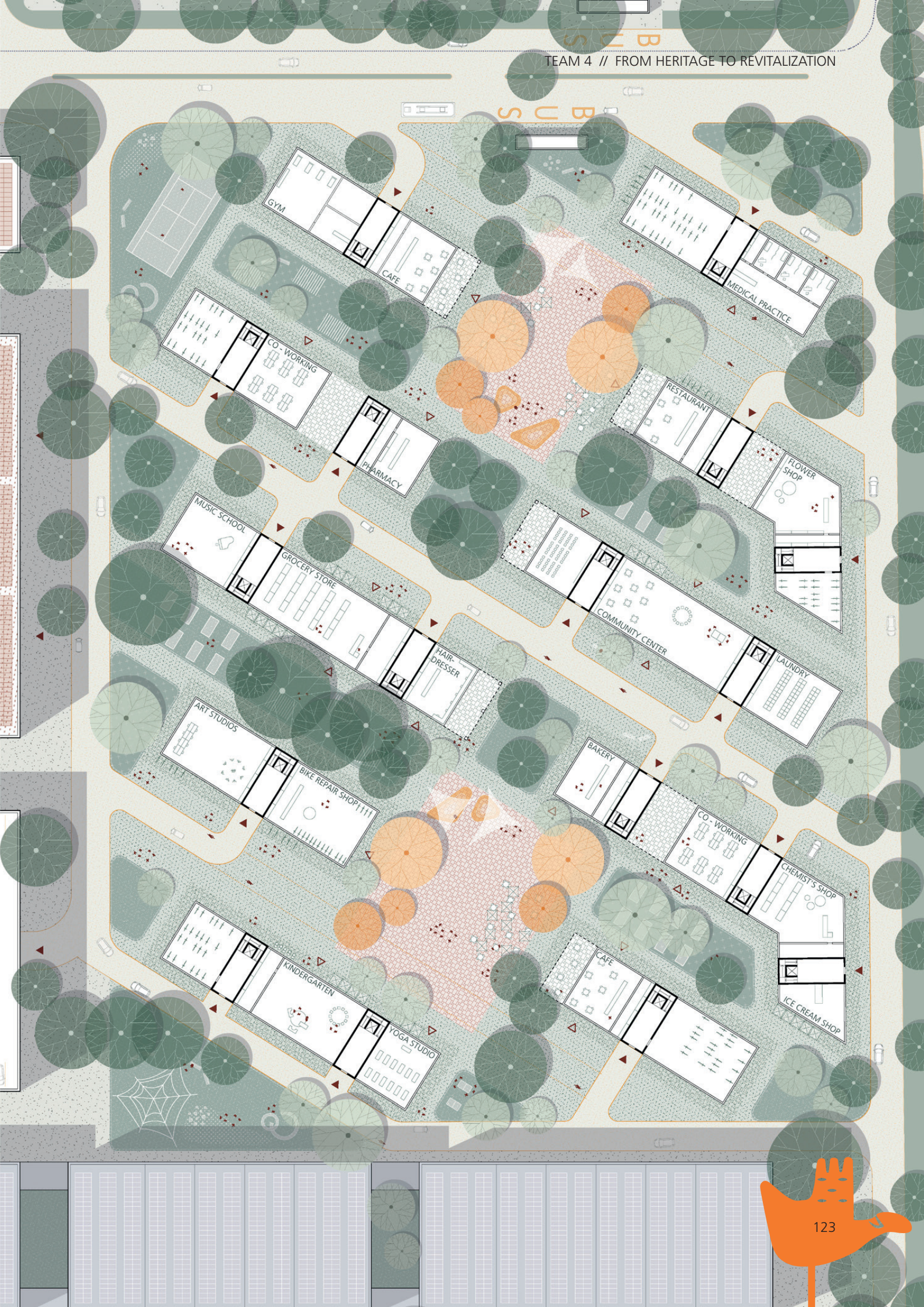


Connectivity



Isometry Housing Quarter

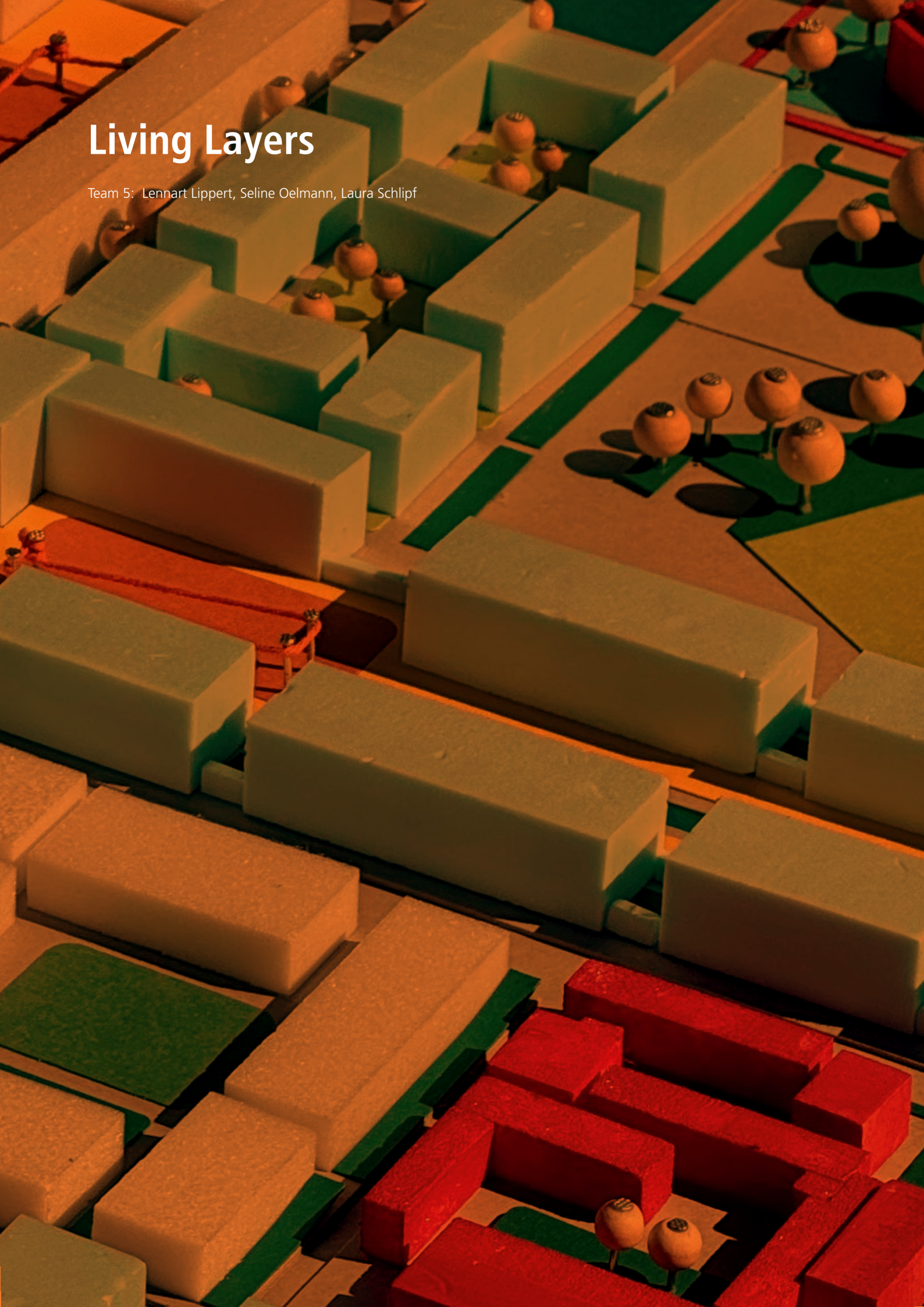




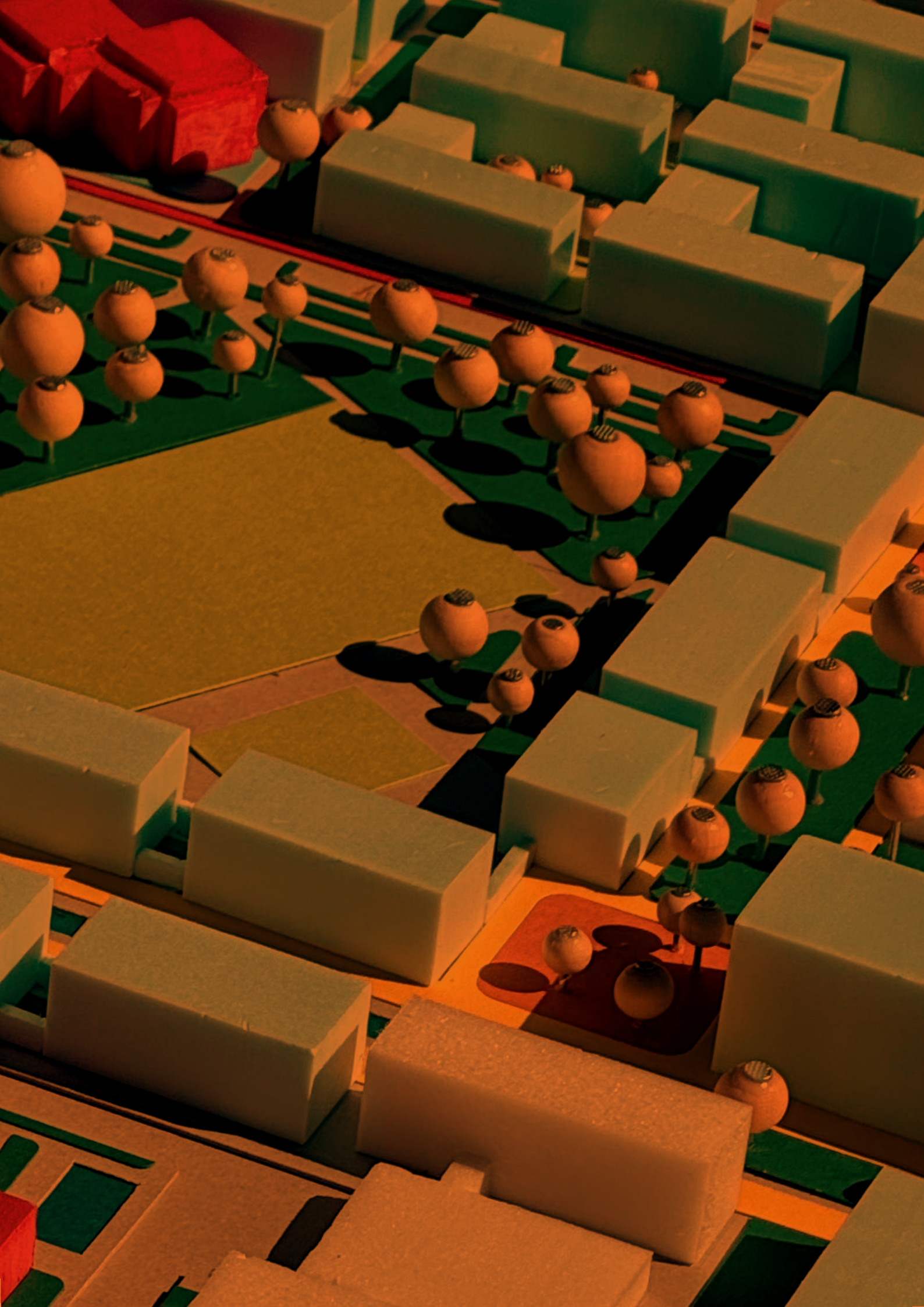


# Living Layers

Team 5: Lennart Lippert, Seline Oelmann, Laura Schlipf



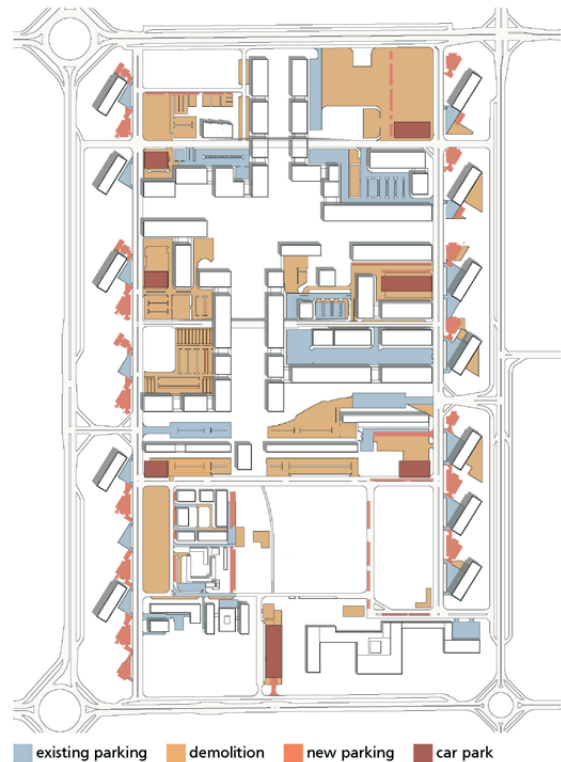
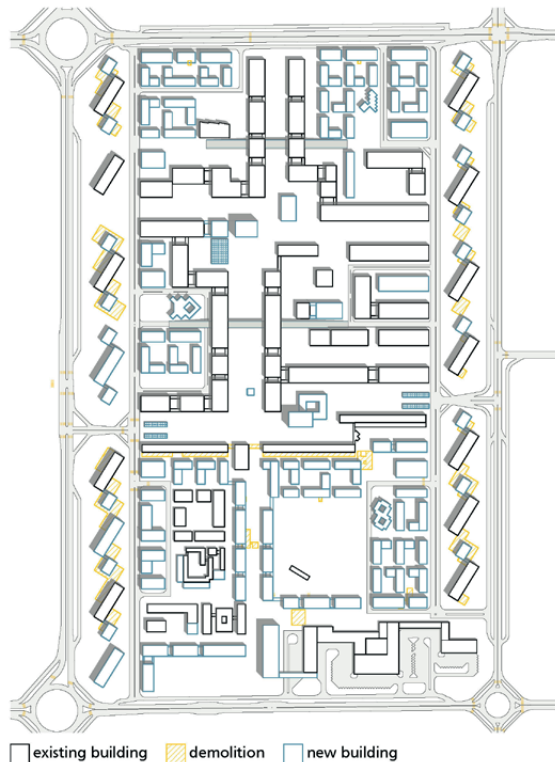






# Spatial Analysis

## Living Layers



## Morphology Layer

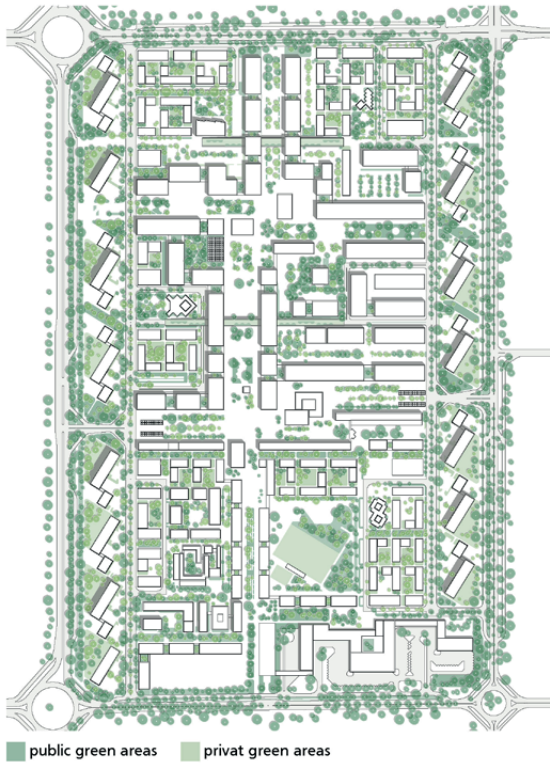
### ANALYSIS AND OBJECTIVE

At the beginning of our design process, we carried out a comprehensive analysis of Chandigarh, and specifically of Sector 17. We examined both Le Corbusier's planning principles and today's challenges. From this, we identified key deficits: monofunctional land use, car-centered infrastructure, fragmented open spaces, low quality of stay, and a lack of social diversity. For each, we formulated design goals that guided our process.

Chandigarh, conceived by Le Corbusier as a modern city with a clear grid, sector logic, and functional separation, still demonstrates high architectural quality. Yet it now faces the challenges of rapid urbanization. Sector 17,

once a lively civic center, has become outdated, underused, and oversized. Our aim is to rediscover its original qualities, address current issues, and unlock its latent potential. We translated these findings into eighteen conceptual objectives that promote human-centered mobility, climate-adapted building, and cultural identity. The analysis not only revealed shortcomings but also laid the foundation for a resilient, future-oriented strategy. The guiding question remained: What is worth preserving, and where lies the true potential for transformation? This balance between conservation and renewal underpins our design concept.





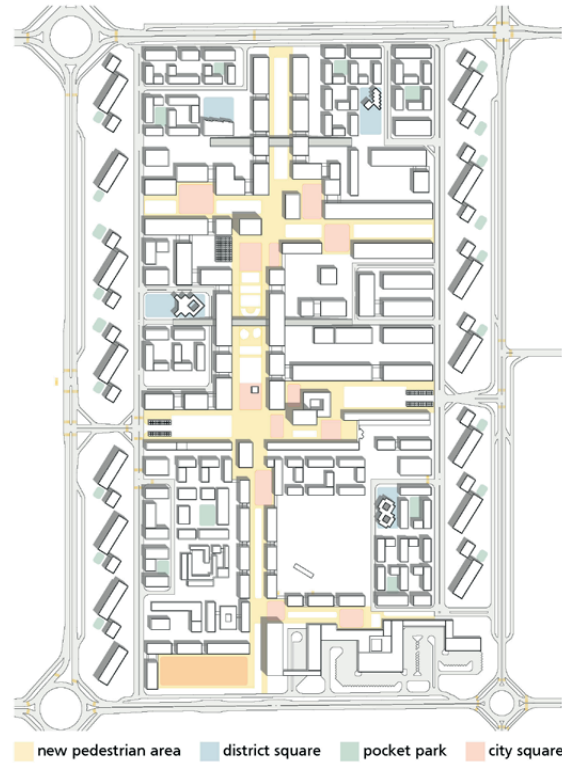
public green areas    private green areas



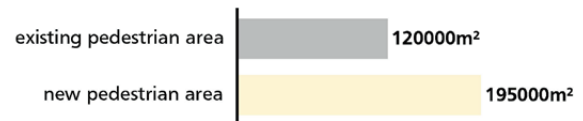
Green Area Layer

## DESIGN STRATEGY: LIVING LAYERS

Our design-concept pursues three main overarching goals: the preservation and further development of existing structures, the reduction of motorized traffic in favor of sustainable mobility, and densification and functional mix combined with an enhancement of public space. We aim to transform Sector 17, which has so far been strongly characterized by institutions and retail, into a mixed urban neighborhood with new residential uses, cultural offerings, and green infrastructure. To achieve this transformation, surface parking areas are dismantled and streets are converted into green corridors, while car traffic is shifted to outer rings.



new pedestrian area    district square    pocket park    city square



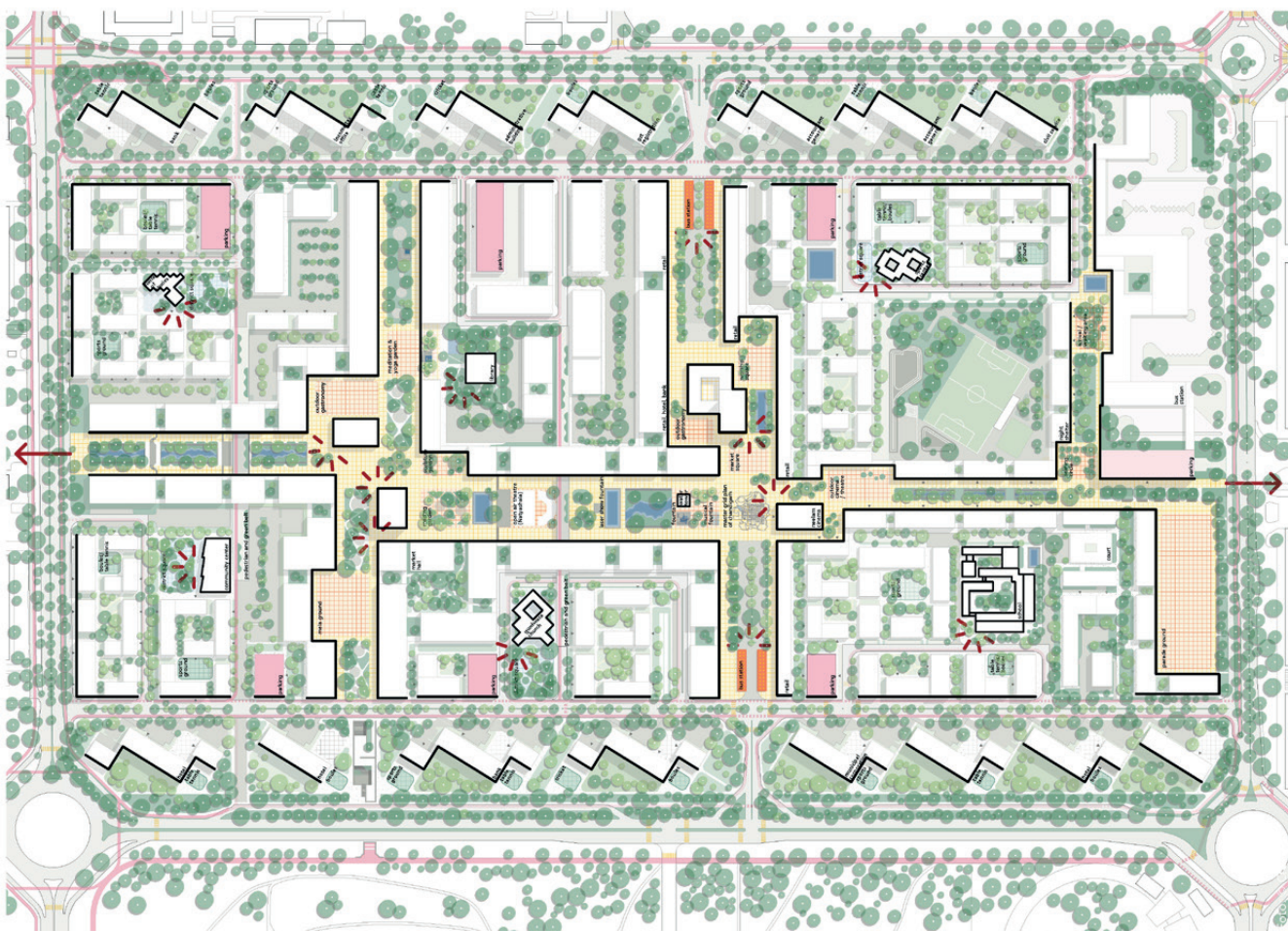
Pedestrian Layer

## THE LIVING LAYERS APPROACH

This redesign generates the Salamander, a pedestrian-oriented band with public functions and clear orientation. With our concept Living Layers: The Salamander Approach, we envision Sector 17 as a dynamic and adaptable urban system. The salamander serves as a symbolic reference: its adaptability, regenerative capacity, and discreet endurance translate into flexible structures attuned to local context, resilient forms that embrace reuse and renovation, and subtle interventions that respect existing identity. By linking natural and built environments, these qualities guide a future-oriented model of urban development.



# Concept and Objectives



Framework plan

## CONCEPTUAL RESPONSES

To address the identified deficits, our design introduces targeted measures: monofunctional areas are balanced with new housing and cultural programs, fragmented public spaces are linked into continuous, active areas, and the car-centered structure is reshaped through street reduction and traffic relocation. Green infrastructure is strengthened with new parks, green roofs, and permeable surfaces, while architectural stagnation is tackled with updated building types that respect the existing fabric. Our strategy also responds to the unfinished master plan and the declining role of Sector 17. The civic grid is complete, the retail core revitalized, and the city's heart

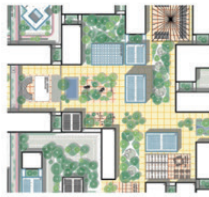
reactivated with mixed-use spaces and clear urban edges. Public anchors—markets, libraries, cinemas, and cultural venues—are enriched by new attractions such as reading gardens and open-air theatres, forming a network of lively civic destinations.

Architectural innovation is fostered through new building types that respect Chandigarh's modernist character, while key public anchors are strengthened to support community identity. Surface parking is reduced and consolidated, new green corridors and pedestrian paths transform public space, and mobility hubs connect buses, rickshaws, and walking networks.





01 Unfinished Master Plan



02 Lack of Mixed-Use Vitality



03 Decline of Economic Function & Urban Vibrancy



04 Fragmented Open Spaces



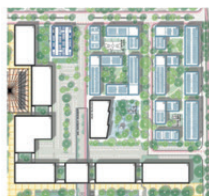
05 Car-Oriented Urbanity



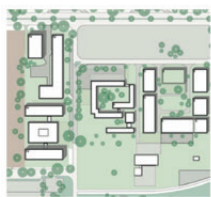
06 Inadequate Mobility



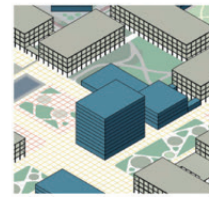
07 Insufficient Green & Blue Infrastructure



08 Architectural Stagnation



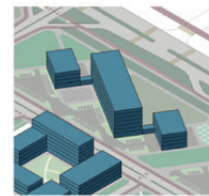
Redensification



Completion of Masterplan



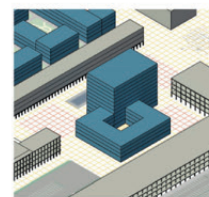
Mixed-Use Urban Fabric



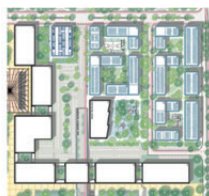
Integrate retail, housing and culture  
Repetitive structures



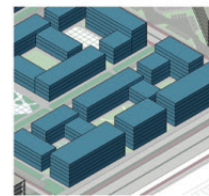
Revitalization Economic Core



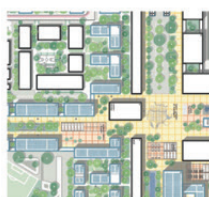
Revitalize „Heart“ of Chandigarh  
Introduce mixed-use spaces



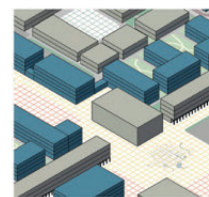
Integration & Activation Public Spaces



Creation of urban edges  
Framing and bundling



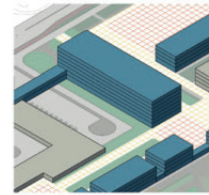
Reclaim Space from Cars for Public Use



Reduce surface parking  
Bundle parking in car parks



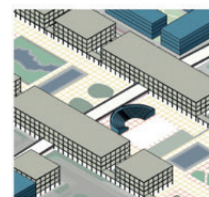
Improvement of Mobility & Public Transport Integration



Create multimodal hubs  
Link bus, rickshaw and walking networks



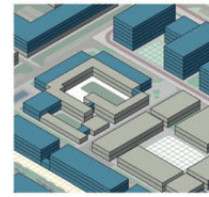
Integration & Activation Of Public Spaces



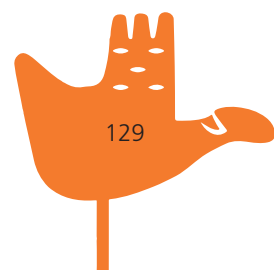
Conversion of high lines to green belt  
Trees, bioswales, green roofs



Foster Architectural Innovation with Cultural Sensitivity



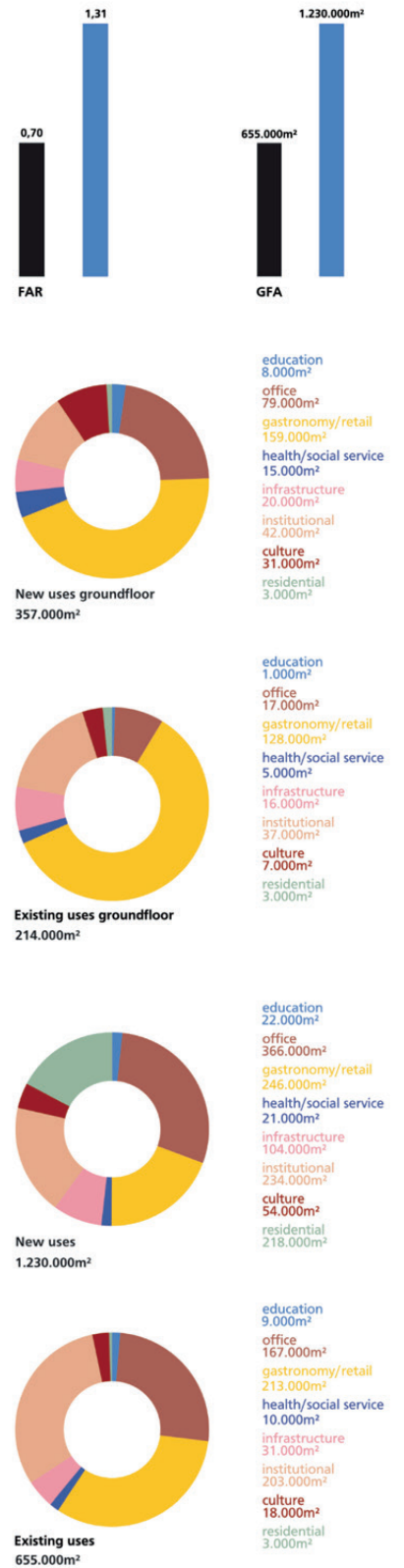
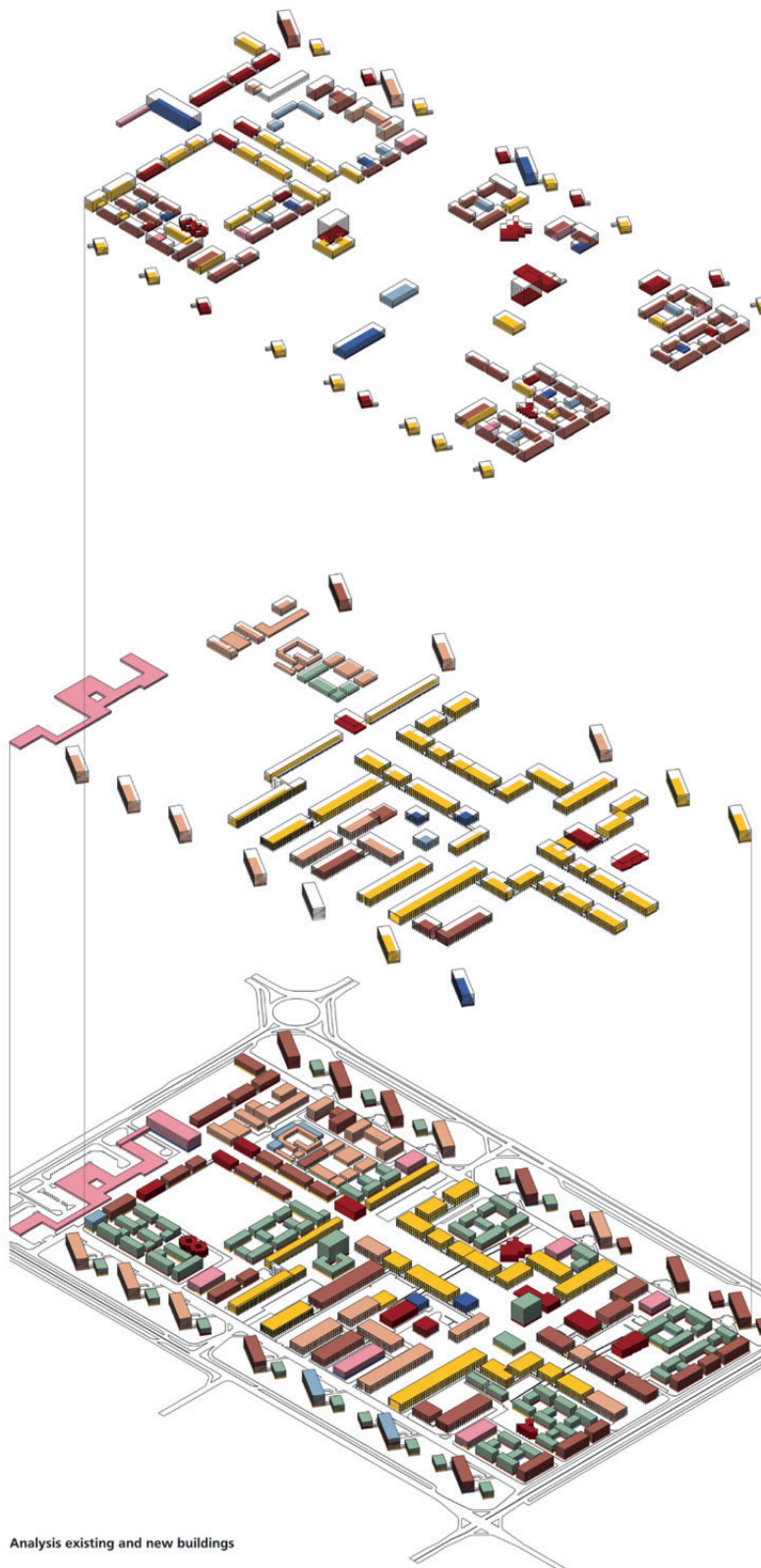
Preservation of genius loci  
Update typologies





# Distribution of Functions

Isometric Representation of Existing and Proposed Ground-Floor and Total Uses





## URBAN STRUCTURE & PUBLIC FUNCTIONS

Sector 17 is structured into seven neighborhoods, each organized around a central public building or “attractor.” These include an interreligious prayer space, a sports center, a school in a former police building, and a pavilion for reflection and dialogue. Existing buildings, such as the state library and a former shopping center, are reused as cultural hubs. This approach builds on Chandigarh’s sectoral logic, where each sector has key public functions, and develops it further by giving each neighborhood a clear identity through a defining place. These attractors act as social and cultural anchors, creating focal points for community life. Four new sub-districts are introduced along looped streets, each offering small-scale social infrastructure: local shops (f.e. Kirana Shop), daycares, medical facilities, postal services, playgrounds, shared amenities, and community workshops. These interventions are designed to encourage daily interaction, accessibility, and social cohesion within the sector.

A central element of the design is the “Salamander,” a continuous, car-free spine linking major destinations such as the bus terminal, parade square, markets, parks, and cultural buildings. Along this corridor, new market halls, public squares, arcaded passages, and vertical landmarks improve orientation and create new public spaces. Motorized traffic is redirected to outer loops, while inner streets are downsized or repurposed. Overpasses are greened and converted into pedestrian and cycling routes, and surface parking is replaced with underground garages beneath new buildings. A linear park connects neighborhoods, providing both functional and climatic links while integrating green infrastructure. The mobility strategy promotes sustainable, multimodal transport: buses, rickshaws, bicycles, and pedestrian paths form a continuous network that improves access and reduces car traffic. Bicycle paths expand by 70% to 56,000 m<sup>2</sup>. Parking is consolidated underground and complemented by new mobility hubs. The total site area grows from 655,000 m<sup>2</sup> to 1,230,000 m<sup>2</sup>, and ground-floor usage increases from 214,000 m<sup>2</sup> to 357,000 m<sup>2</sup>.

New residential areas are socially mixed and integrated, supporting a variety of users, activities, and daily rhythms—laying the foundation for a resilient and lively urban environment.

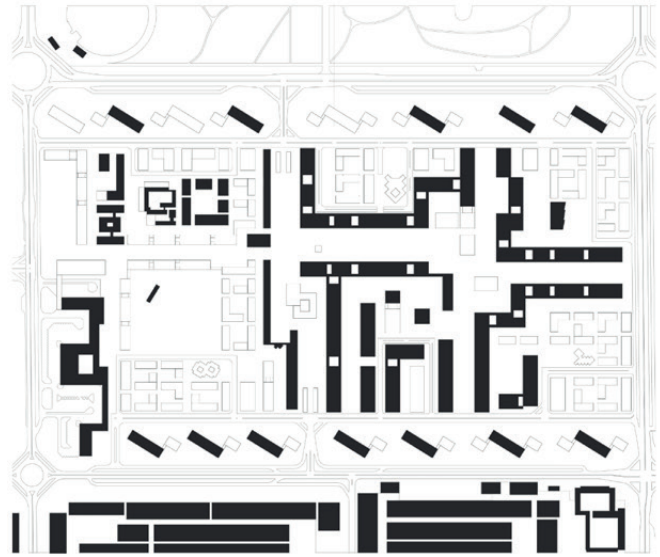
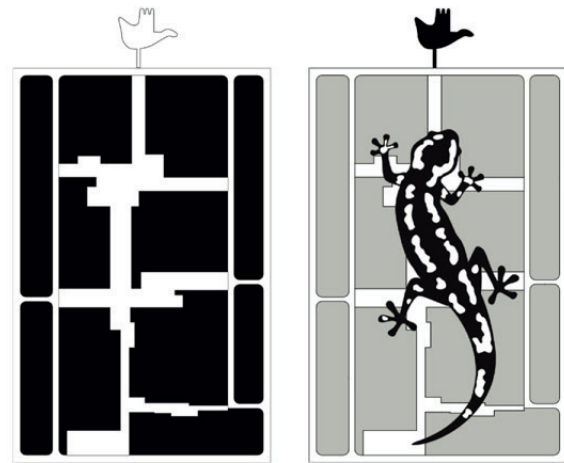


Figure ground plan

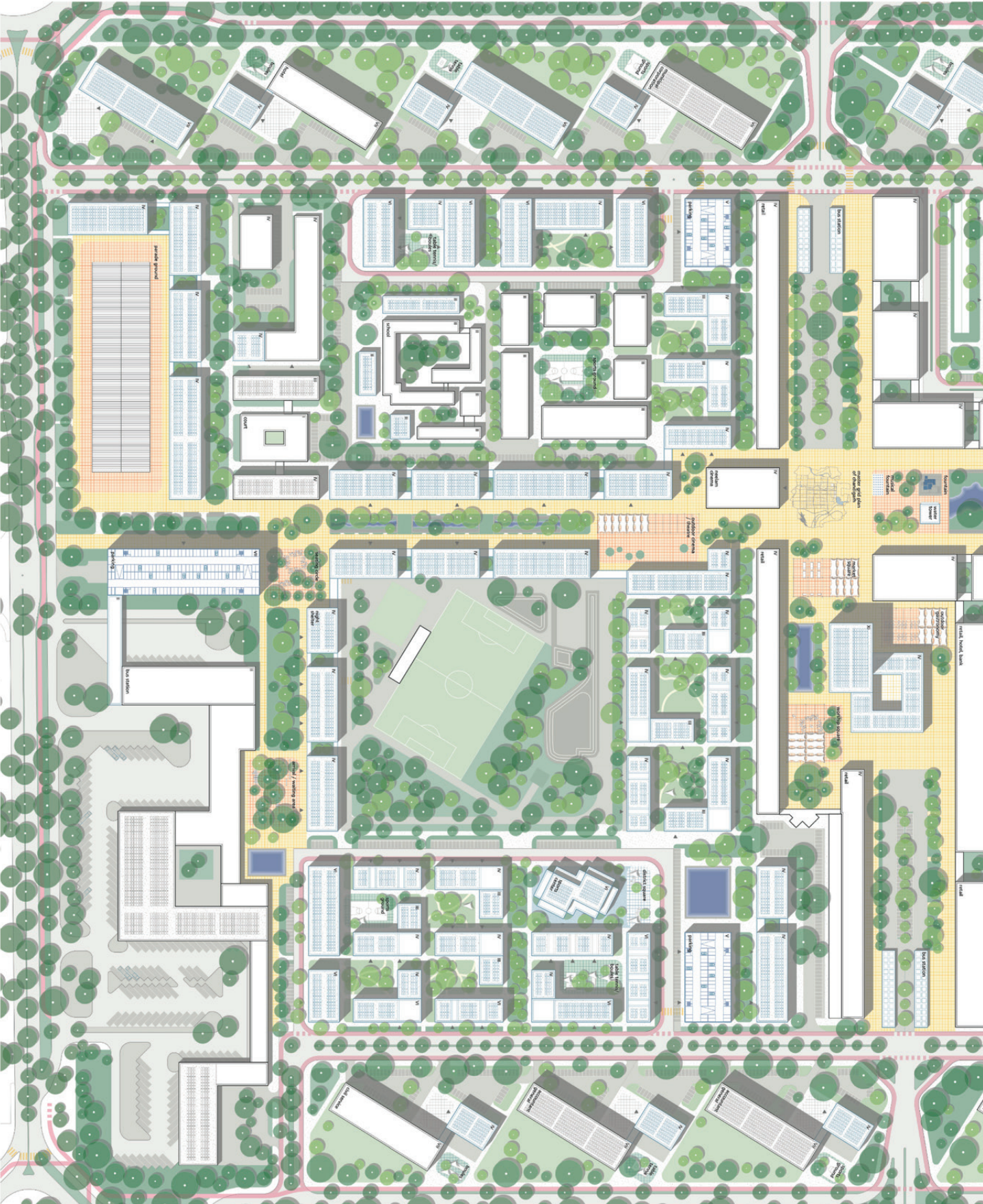


Concept drawing: neighborhood division and salamander connector



Analysis plan: surrounding sectoral attractor buildings





Site plan

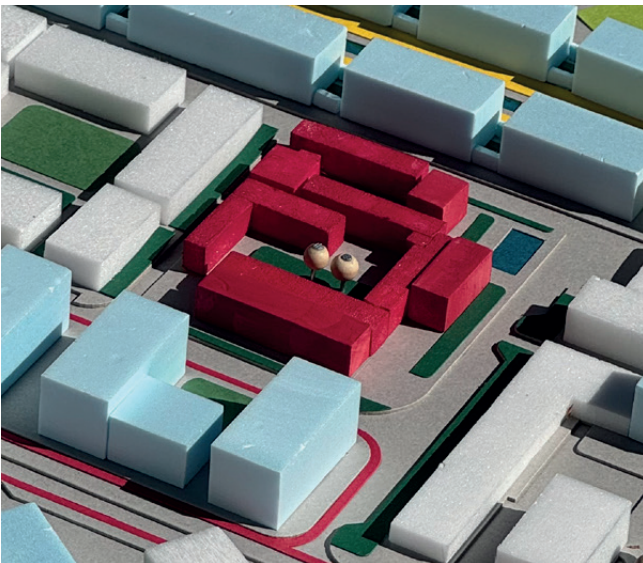
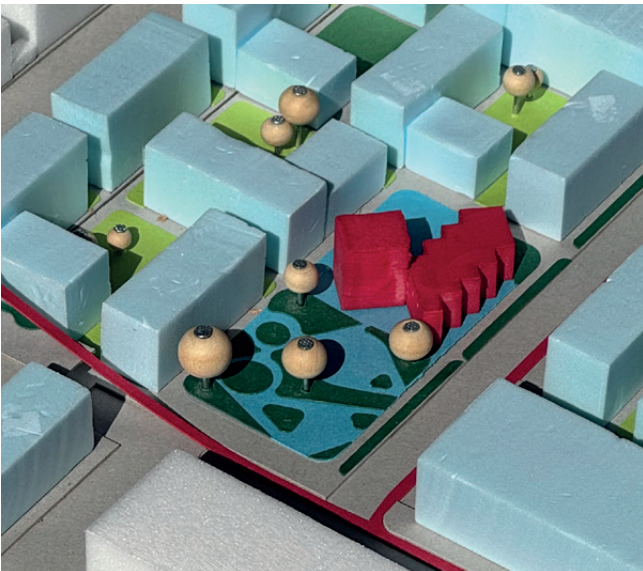








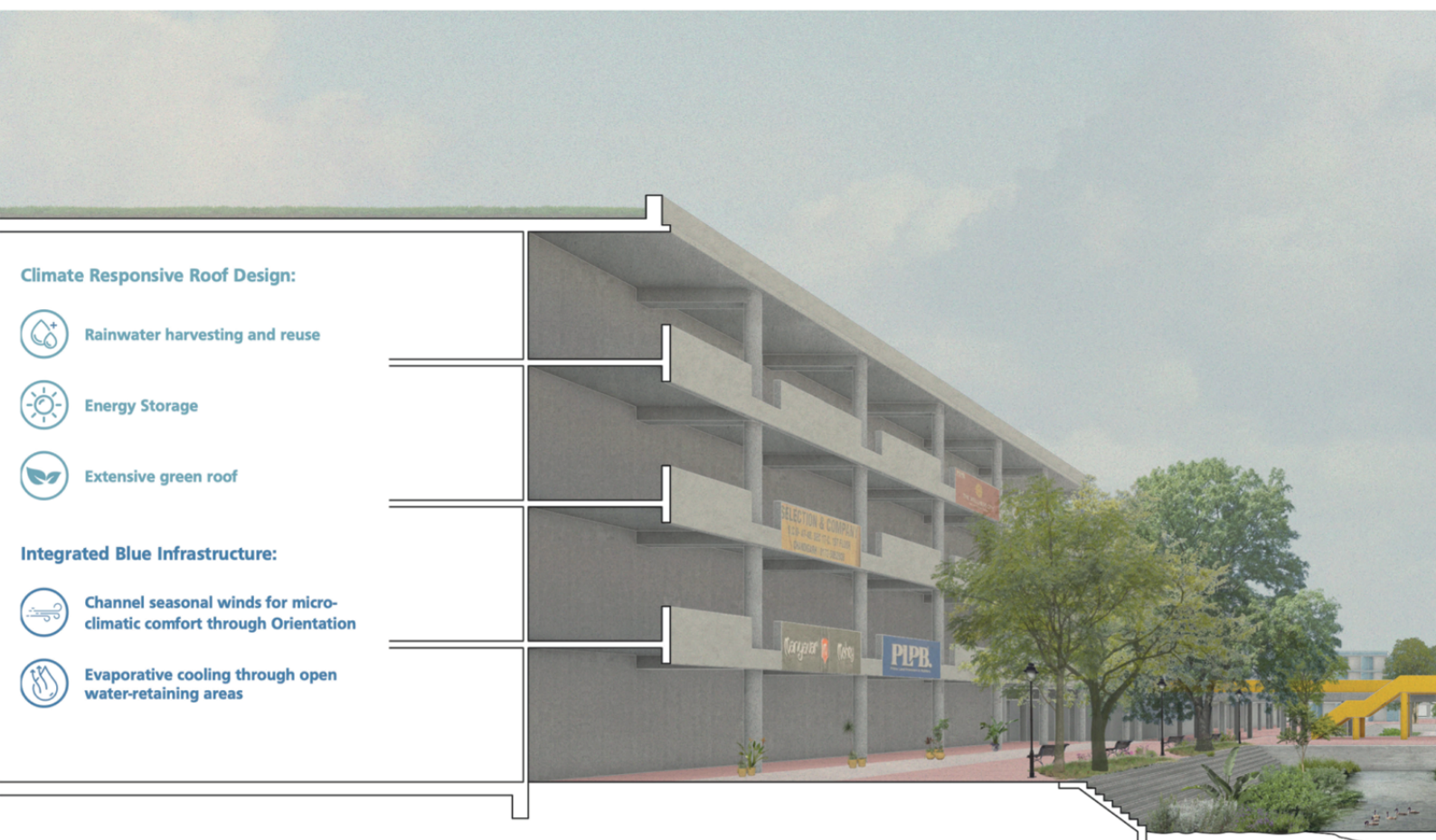






# Zoom-In Central Spine

Transformation of the Pedestrian Area



Perspective Section through the Salamander

## CLIMATE RESPONSIVE DESIGN

A main focus of the design is to strengthen the climate resilience of Sector 17 while at the same time improving the quality and accessibility of public space.

The Salamander, a continuous pedestrian spine, acts not only as a connector between key civic destinations but also as a backbone for climate-adaptive infrastructure. Streets are reduced or transformed into green corridors, surface parking is removed, and green roofs are introduced on both new and existing buildings. These roofs store rainwater, support evaporative cooling, and provide habitats for biodiversity. Water elements are openly integrated to improve microclimate and comfort, while shading devices

over squares and open areas reduce heat stress and create pleasant social spaces. The design also builds on layered ecological strategies:

trees, bioswales, and green belts are integrated into the Salamander and the surrounding streets to manage stormwater, capture carbon, and enhance biodiversity. Open water-retaining areas and light-colored, permeable paving strengthen heat mitigation and infiltration. Together, these measures transform former car-dominated and impermeable surfaces into climate-resilient and socially vibrant public spaces. Ecological and social aspects merge, making resilience a shared quality of the urban realm.





## PUBLIC SPACE RESILIENCE

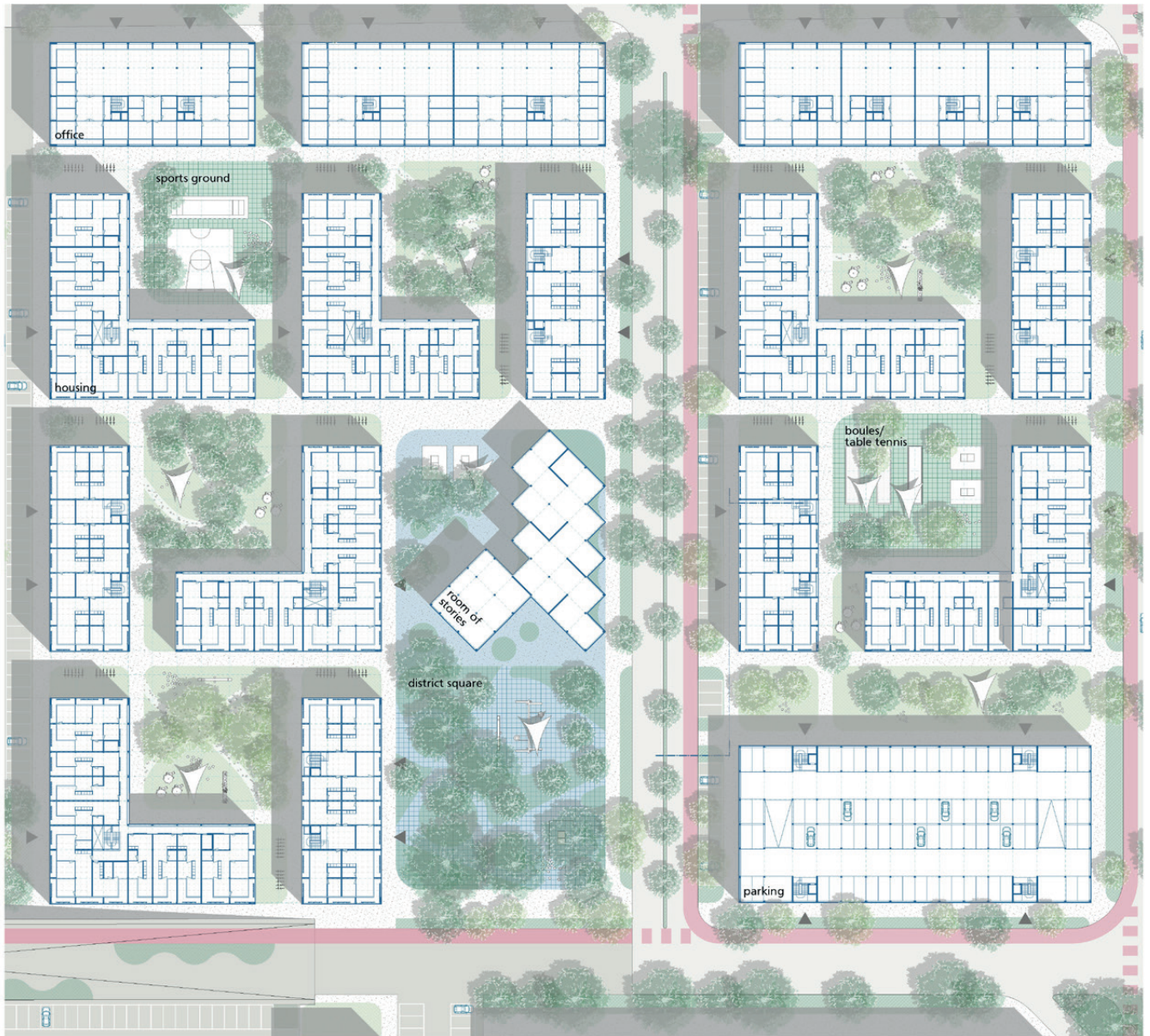
The transformation of underused streets and highways into linear parks improves connectivity between neighborhoods and creates new opportunities for recreation, reinforcing Sector 17's role as the lively urban heart of Chandigarh. Architectural and landscape interventions preserve the sector's modernist character while introducing new layers of innovation. Key public anchors are strengthened, and building typologies are updated to contemporary needs, ensuring continuity with the city's identity. The Salamander acts as a backbone linking mobility, public life, and new economic activity. Streets are downsized, and the new pedestrian areas expand from 120,000 m<sup>2</sup> to

195,000 m<sup>2</sup>, while ground-floor usage increases from 214,000 m<sup>2</sup> to 357,000 m<sup>2</sup>. This expansion supports retail, markets, and cultural uses, revitalizing the sector's economic core and attracting diverse activities. Overpasses and a linear park are greened and transformed into pedestrian and cycling routes, connecting neighborhoods and providing functional and climatic links. In total, over 115,000 m<sup>2</sup> of new, mostly public green space is introduced, enhancing the quality of public life, encouraging social interaction, and improving microclimatic comfort. Layered interventions transform Sector 17 into a resilient, vibrant, and economically active urban hub for Chandigarh.

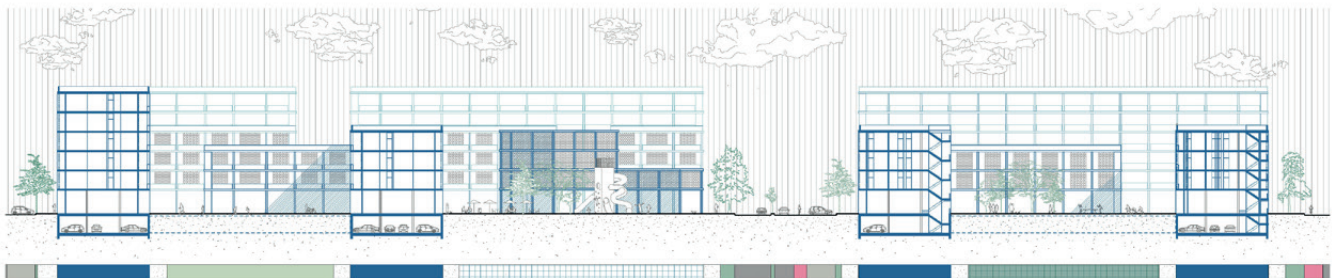


# Zoom-In Residential Zone

Design and Implementation of Neighborhoods in Sector 17

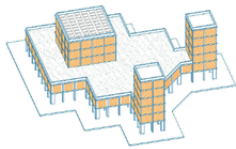
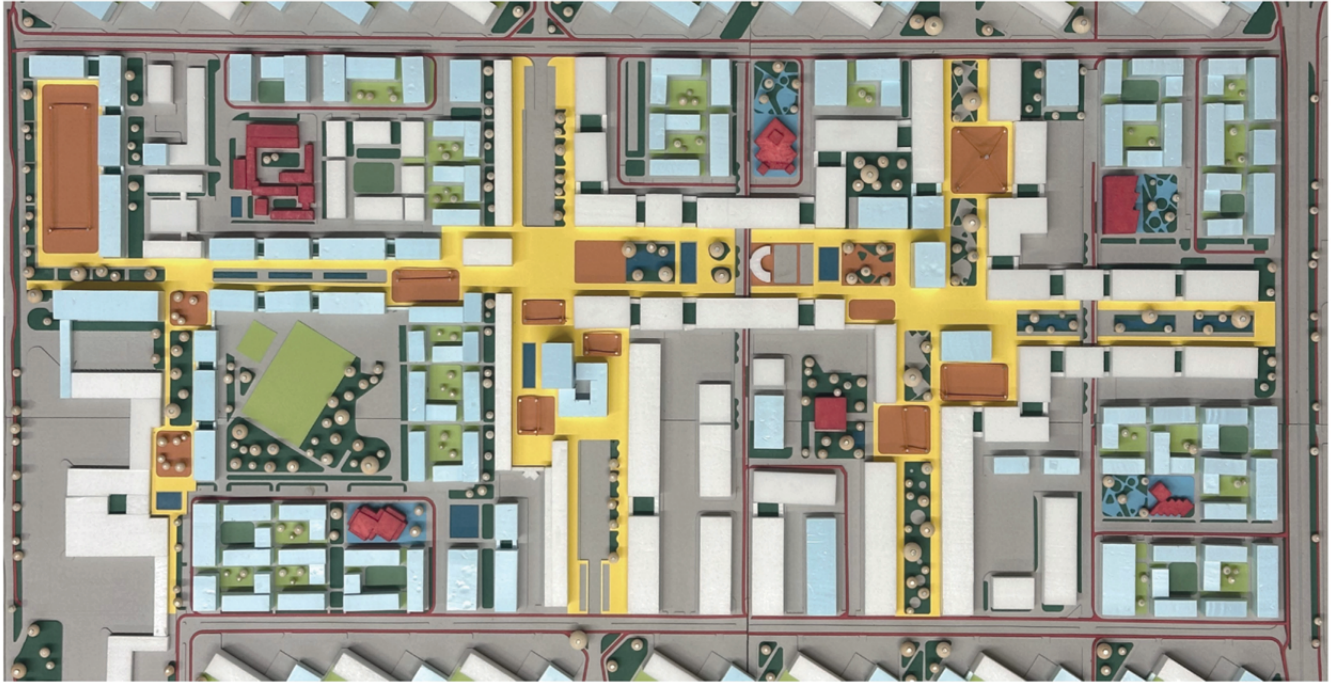


Floor Plan District

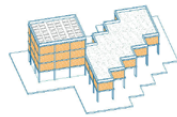


Section District

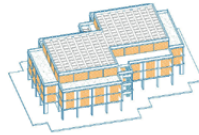




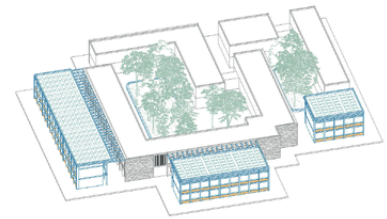
**Gurudwara Church**  
→ Interfaith space for gathering, care & rituals  
Ground floor: shared prayer hall, larger kitchen  
Surroundings: garden, district square, community room



**Room of Stories**  
→ Narrative Pavilion: collective Memory & quiet reflection  
Ground floor: open storytelling walls, exhibition room  
Includes: poetry display, discussion area



**Community Sports Center**  
→ Inclusive recreation and active urban edge  
Ground floor: indoor, fitness, cafe  
Upper floors: youth spaces, multipurpose rooms, terrace



**Neighborhood Learning Cluster**  
→ Adaptive Reuse of existing police station into school  
Ground floor: class rooms, maker space, courtyard  
Upper floor: flexible learning studios, open workshops

#### Attractor Typologies

## DENSIFICATION AND TYPOLOGY

Our approach to the existing building stock follows a strategic categorization: structures with architectural or cultural value are preserved, while others are selectively demolished or replaced with new typologies. This densification creates additional housing and increases functional diversity, raising the residential share to about 20% of the total floor area. The goal is a mixed-use neighborhood with a strong identity, combining everyday life, work, and leisure. Architectural stagnation is addressed through innovative building types that respect the modernist character and local context, preserving the genius loci while updating to contemporary needs.

Building on Chandigarh's principle that each sector contains central public functions, our concept assigns a defining, identity-giving place to every neighborhood. New community-oriented attractors reinforce identity and provide social infrastructure: an interfaith space with a Gurudwara and shared kitchens; a "Room of Stories" for memory, exhibitions, and installations; a sports center offering low-threshold access to activity and interaction; and a learning cluster reusing the former police station for open education. Together, these attractors form a network of civic and social spaces that connect neighborhoods and foster daily interaction.



# Design Manual

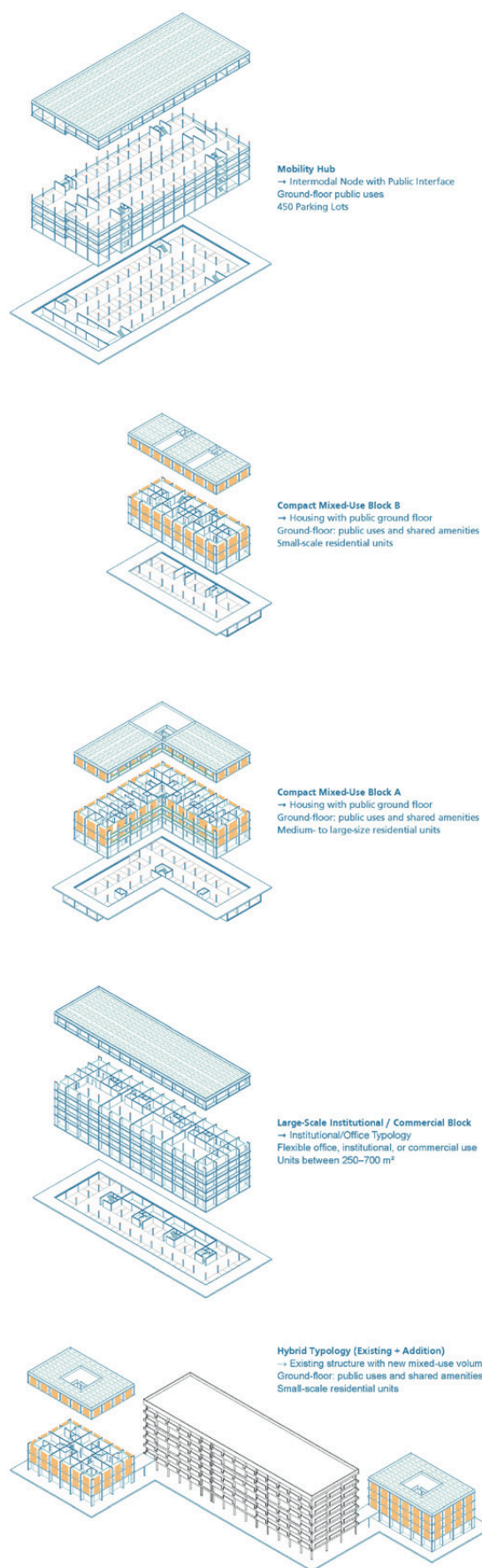
Contextual Design: Harmonizing Modern Architecture with Historic Fabric

## DESIGN GUIDELINES AND TYPOLOGIES

The Salamander and key attractors are illustrated within their urban context, showing how public spaces connect buildings and neighborhoods.

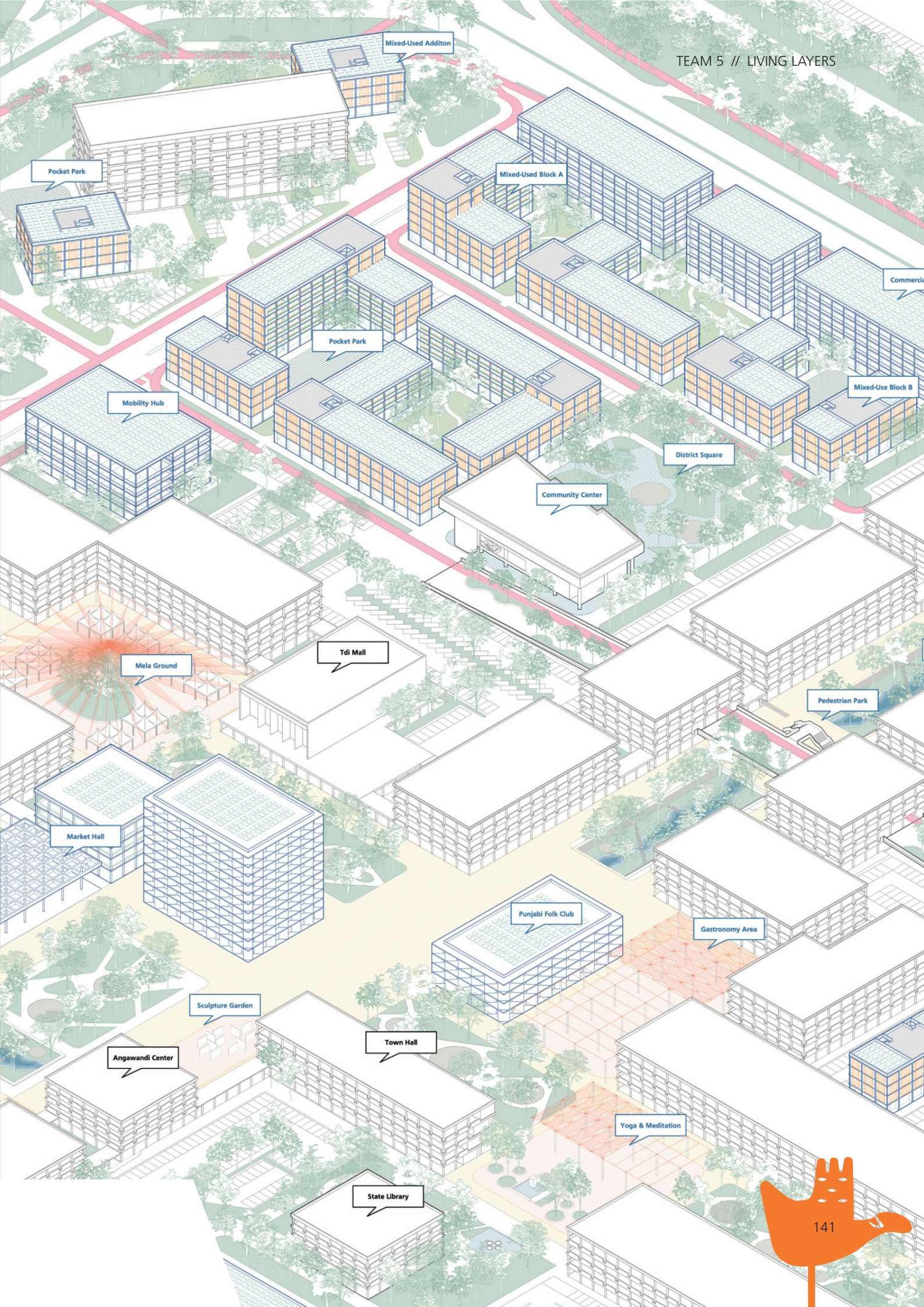
The ground-floor emphasizes public use as a unifying principle, while sections highlight height variations, transitions, and the integration of old and new structures. New building typologies are designed to respond to contemporary needs while respecting the existing fabric. Hybrid typologies allow for extensions within the existing stock, incorporating public ground-floor functions. Compact mixed-use blocks A and B offer small-scale, diverse housing, while institutional typologies feature flexible layouts suitable for cultural or economic uses. All new buildings include underground parking and are linked to multimodal mobility hubs, each accommodating at least 450 vehicles and activating the ground floor with public space. The four new sub-districts, that are introduced along looped streets, each equipped with local amenities and social infrastructure. These areas support everyday life, foster community interaction, and contribute to vibrant, well-connected neighborhoods within the sector.

The Salamander is complemented by a network of new public spaces, designed at varying scales to create a lively urban environment. These range from shaded plazas to larger civic areas hosting cultural, recreational, and commercial activities. Key highlights include an open-air auditorium integrated into the transformed overpass, which provides a venue for performances while enhancing pedestrian circulation and visual connectivity. A new arts and cultural center, surrounded by interconnected squares and arcaded passages, serves as a hub for exhibitions, workshops, and community events. Vibrant market areas, plazas, and commercial-cultural clusters- including the relocated Mela Grounds near the TDI Mall- activate the streetscape while combining daily commerce, social interaction, and programmed activities, reinforcing Sector 17's identity as a lively urban heart.



District Typologies





Mixed-Used Addition

Pocket Park

Mixed-Used Block A

Commercial

Mixed-Use Block B

Mobility Hub

Pocket Park

District Square

Community Center

Mela Ground

Tdi Mall

Pedestrian Park

Market Hall

Punjabi Folk Club

Gastronomy Area

Sculpture Garden

Town Hall

Yoga & Meditation

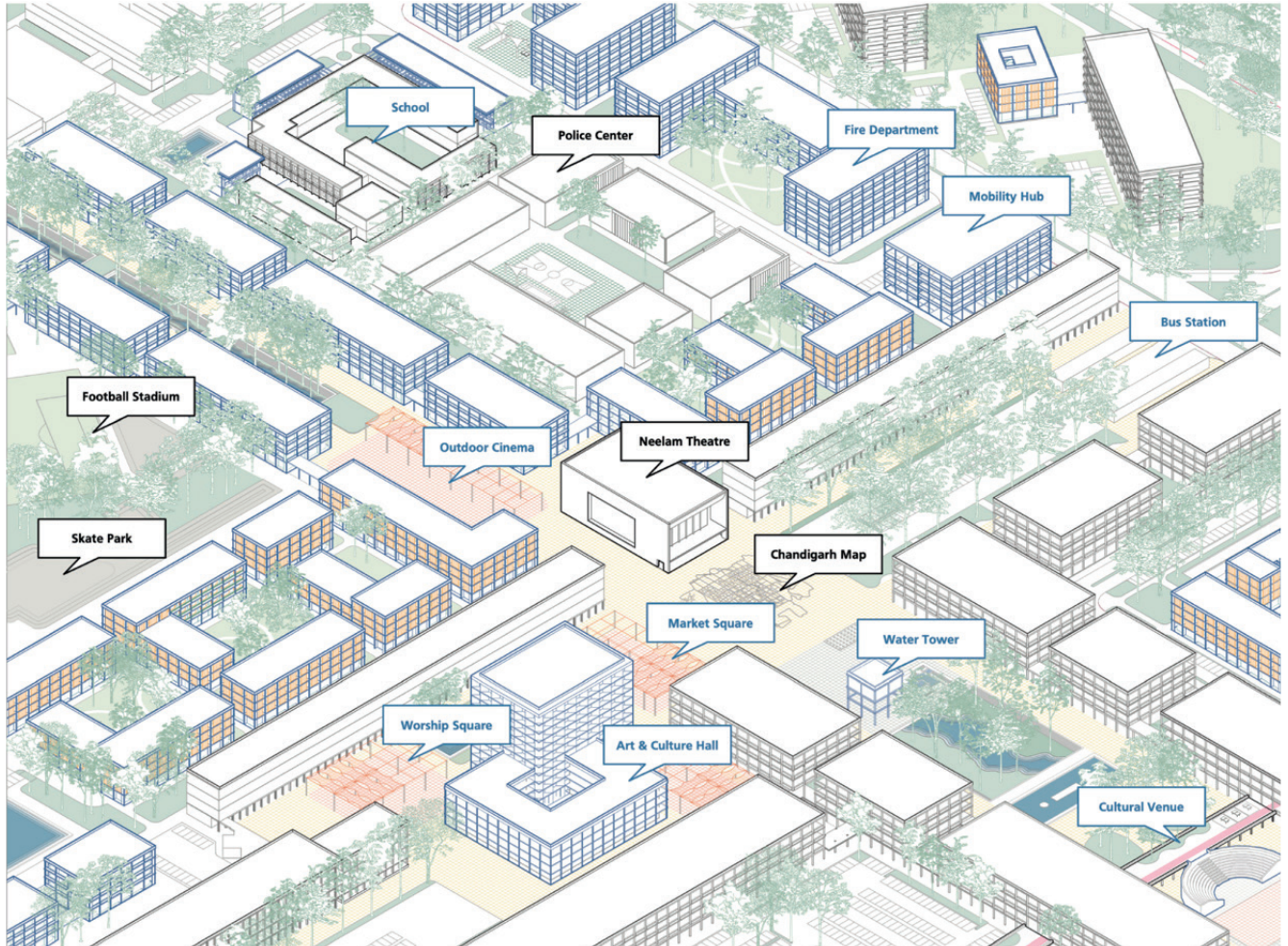
Angawandi Center

State Library



# Design Manual

Revitalizing Sector 17: From a Modernist Grid towards a Human-Centered and Resilient Urban Core



## PEDESTRIAN URBANISM & MIXED-USE FABRIC

The Salamander demonstrates how a pedestrian-oriented framework can transform Sector 17 into a more connected and socially active environment. Key interventions extend the potential of the existing fabric while preserving its character. Streets are narrowed and car traffic redirected to the outer loops, eliminating through-traffic and prioritizing walking and cycling. New bus stops along Himalaya Marg and Jan Marg V3, integrated with underground mobility hubs and ground-floor uses, create a seamless multimodal system that supports sustainable mobility. At the same time, oversized urban dimensions and plazas are redefined through urban edges and framing, generating a

more human-centered sequence of public spaces that are accessible and adaptable. Mixed-use structures combining retail, housing, and culture replace repetitive patterns, strengthening local identity and restoring Sector 17 as the civic and economic heart of Chandigarh. Targeted redensification completes the unfinished master plan, diversifying programs, and ensuring the district once again thrives as a vibrant, resilient, and inclusive center for the city. Together, these measures establish a flexible urban framework that can adapt to changing needs over time.



## URBAN STRUCTURE & PUBLIC FUNCTIONS

The visualizations illustrate the spatial and functional transformation of Sector 17, making the design interventions and their effects visible. They show how existing high-quality buildings can be adapted with carefully placed additions, such as the former police station transformed into a neighborhood school, creating new uses while respecting the original urban fabric. Structured spaces like a new market hall organize and consolidate previously informal street vending areas, establishing clear attractors that prevent neglect and contribute to the sector's activation.

Pocket parks within the newly defined neighborhoods provide localized gathering points, where residents can meet, socialize, and engage in everyday activities, reflecting the unique character and amenities of each quarter. These interventions highlight how careful framing, bundling of uses, and small-scale public spaces can enhance social interaction while maintaining the legibility and cohesion of the urban environment.

Sector 17 was originally designed as a vibrant civic center, but today it faces underuse, oversized open spaces, and mismatched functions relative to contemporary needs. Our design proposal identifies these challenges and builds on the sector's inherent qualities, introducing targeted interventions to reconnect neighborhoods, diversify uses, and strengthen accessibility.

The project shows how a high densification, mixed-use programming, and carefully framed public spaces can transform underutilized areas into more coherent and functional urban quarters, while preserving the architectural and spatial character of the sector. Together, the measures of our proposal integrate social, economic, and ecological strategies, showing how targeted, sensitive interventions can adapt the original modernist framework to contemporary urban needs.

Our project ultimately illustrates a stepwise approach to urban regeneration, combining preservation and innovation, activating public life, strengthening local identity, and providing a framework for sustainable and inclusive urban development that can inform future projects beyond Sector 17.



The new, main central market space in between the Salamander and a park



Pocket Park within a neighborhood, surrounded by mixed-used housing

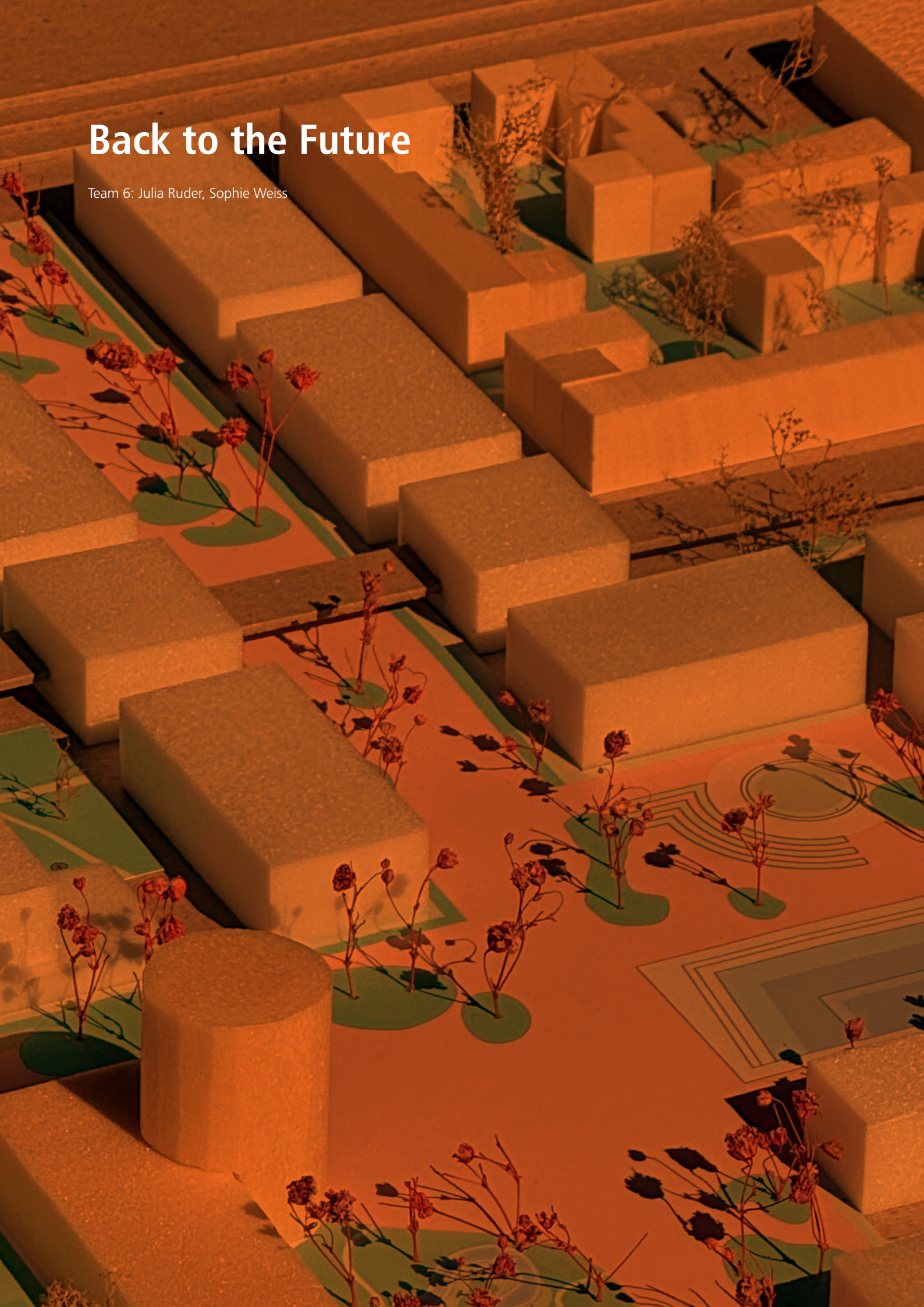


Transformation of the existing police station with a new addition into a school

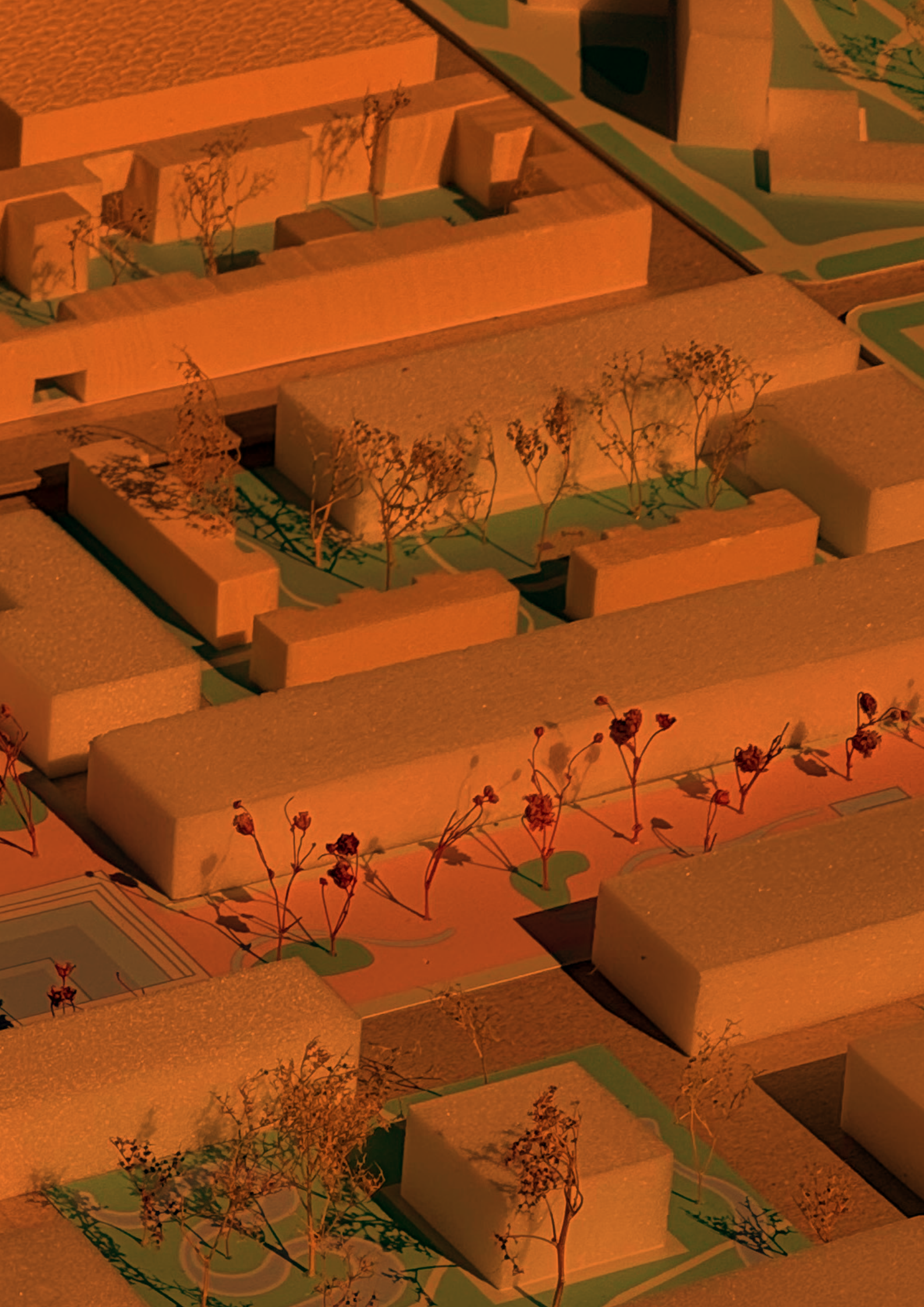


# Back to the Future

Team 6: Julia Ruder, Sophie Weiss

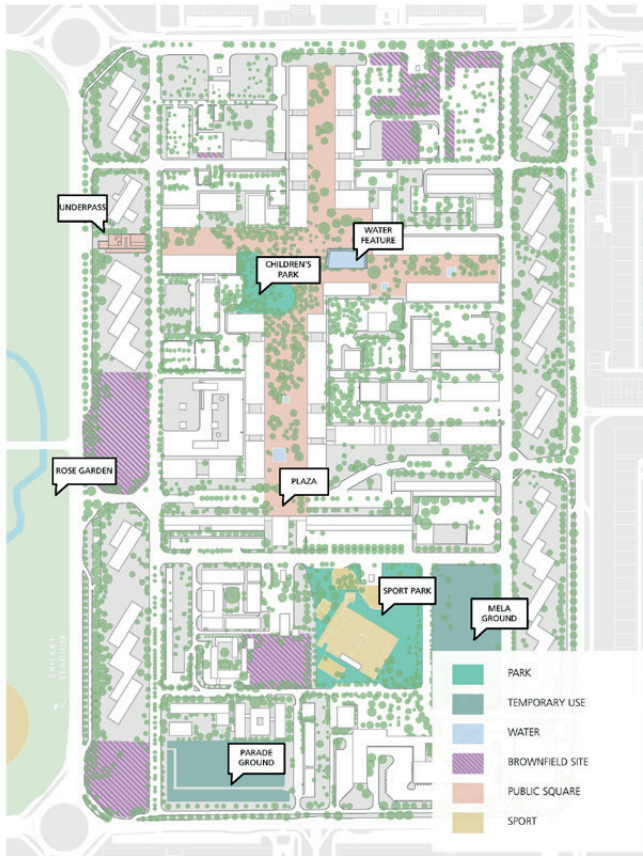








# Spatial Analysis



Open space structure



Functional analysis

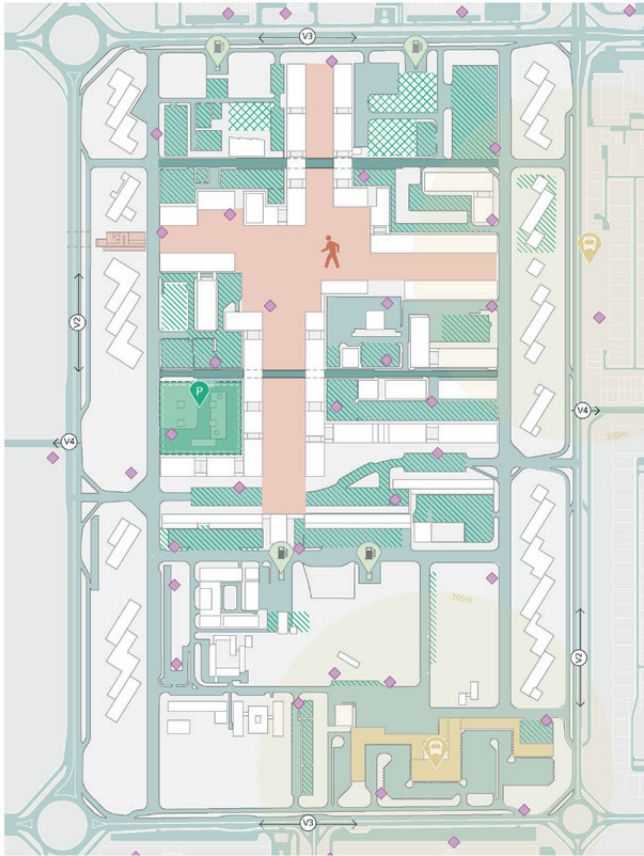
Sector 17 was planned as the commercial center of Chandigarh and is today dominated by retail stores, office buildings, hotels, and a few leisure facilities. This results from the principle of functional separation in modern urban planning. The rather limited mix of functions means that Sector 17 is active only during certain times of the day. Because of the uniform appearance of the buildings, orientation within the sector is difficult. Nevertheless, each building has access to large open areas, where community life and urban activity were originally intended to come together according to Chandigarh's founding vision.

Open space planning in Chandigarh was conceived as a key element to ensure access to nature for all social classes. In Sector 17, however, many of the spaces are oversized and

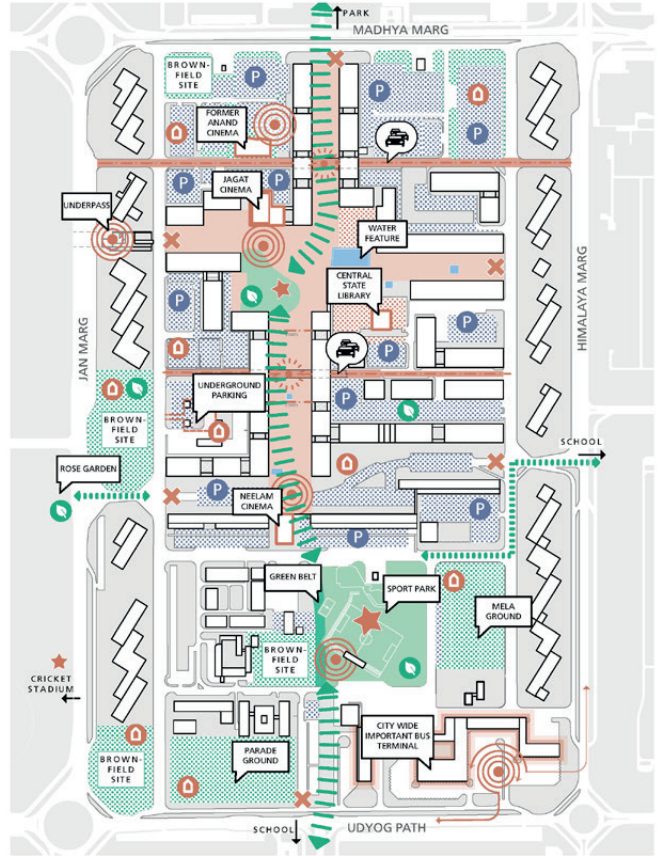
sealed, which reduces their ecological and social quality. The mostly monotonous design offers little variety of use and therefore creates a lack of identity, both within the sector itself and in the overall cityscape.

Sector 17 is mainly accessed through the surrounding roads by car, scooter, or bus. The car is the dominant mode of transport, both a cause and a consequence of the many formal and informal parking areas. Although there is a bus terminal in the southern part of the sector that functions as an important hub for the city, public transport within the sector is insufficient, with only a few bus stops limiting accessibility. While there are several bike rental stations, there are no bicycle lanes in or around the sector, making cycling unsafe. Pedestrians, like cyclists, often share space with





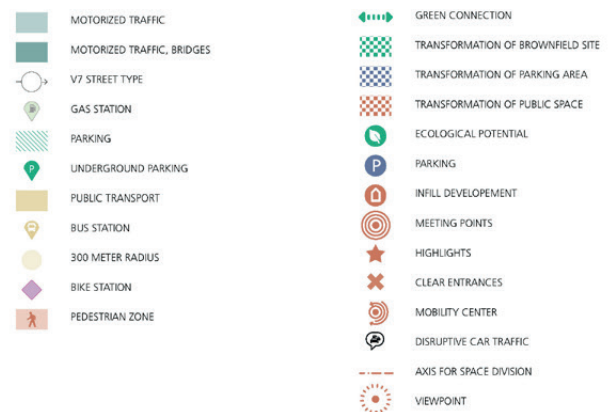
Mobility and transport infrastructure



Potentials and challenges

motorized traffic, with only the central pedestrian zone fully free of cars.

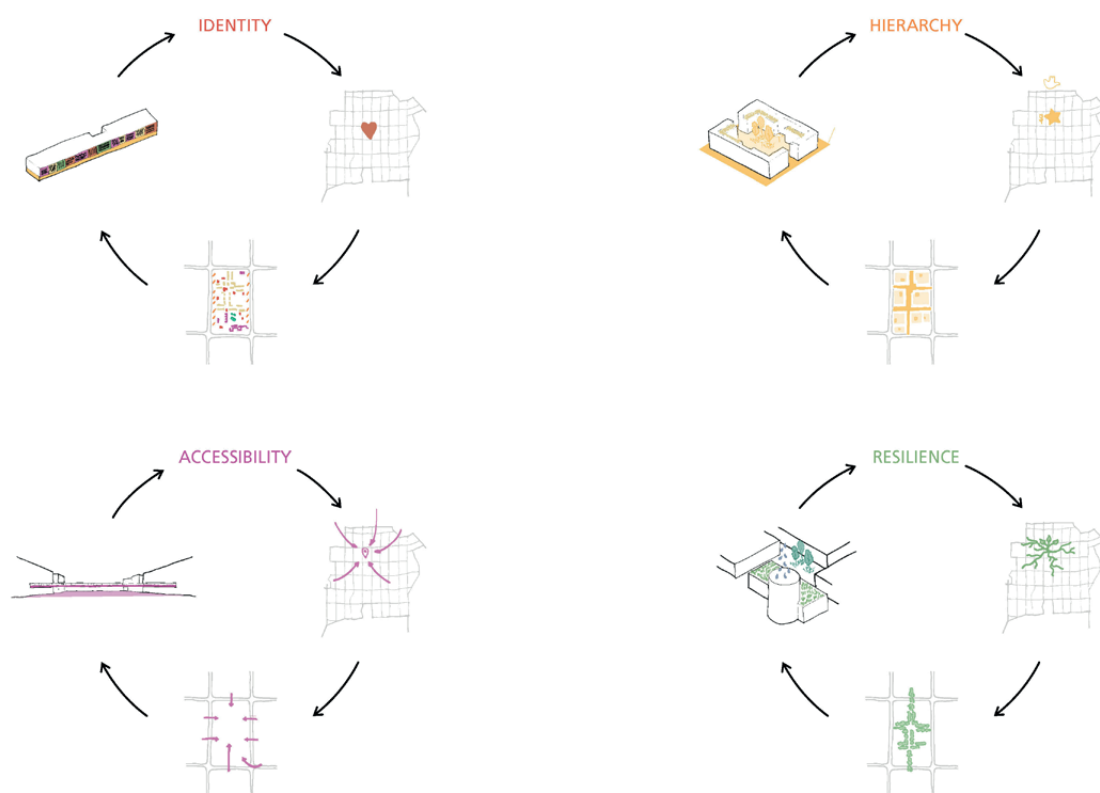
From these observations, several potentials and challenges can be identified. The large open areas, many of which are unused or serve as parking, offer opportunities for densification, new green spaces, and social meeting points. Existing facilities such as the Sport Park, the Neelam Cinema, and the State Library already serve as cultural anchors and should be reinforced in future design. The unbuilt areas of the original master plan provide guidance on how the subdivision of public spaces could be reconsidered. At the same time, the broad pedestrian zone and existing vegetation offer the potential to create a green axis connecting Sector 17 with surrounding sectors.



Legend for mobility (left) and potentials and challenges (right)



# Concept and Objectives



Concept goals

## FRAMEWORK DEVELOPMENT PLAN

In our framework plan, we first established fundamental principles that serve as overarching goal definitions. Large open areas are to be better utilized, while selected zones are identified for residential densification. At the same time, open spaces within neighborhoods are to be preserved to create not only public but also private zones. New uses such as educational infrastructure, including kindergartens and schools, are also envisioned to make the neighborhoods more attractive for families. The pedestrian zone should retain its current form and function but be strengthened and complemented with new uses to make it attractive to a broad range of users. To improve access to these areas, traffic reorganization measures are planned to reduce motorized traffic in the district. Clear entrances and new landmarks within the sector are important to enhance orientation and help structure the public space, leading to a diverse range of public areas.

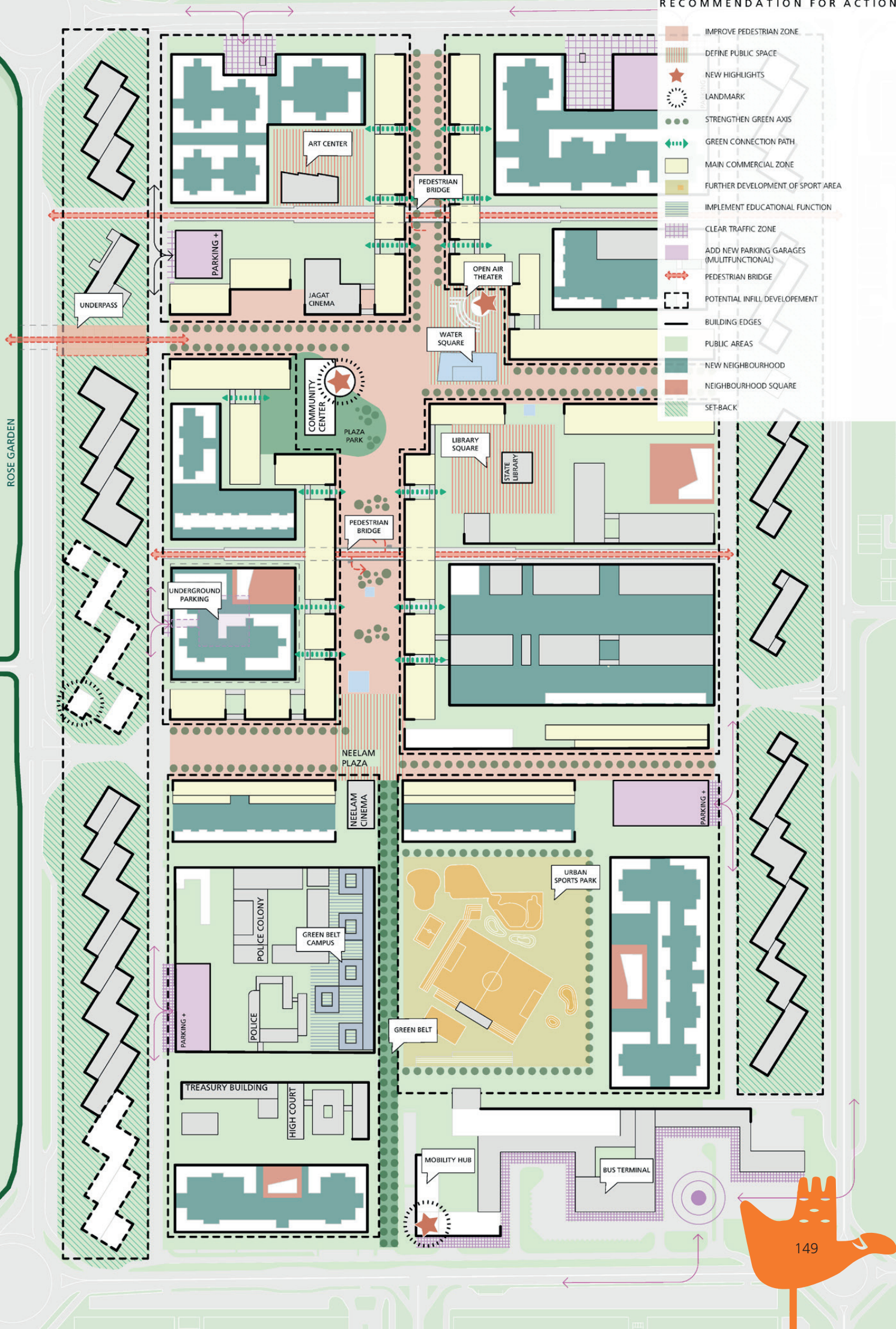
## CONCEPT GOALS

Our overarching goal for Sector 17 is to envision it as a central, vibrant urban district characterized by public life and once again becoming a citywide attraction and identity feature. The design goals apply to Sector 17 at the citywide scale, to its connection with surrounding sectors, and to the design within the sector itself. Objectives include strengthening the identity by adding several new functions including non-commercial areas, to enable continuous neighborhood activation. Establishing a hierarchy of public spaces is essential, as existing spaces must be zoned to adapt to the functional mix and provide a variety of areas for social interaction, which goes hand in hand with accessibility. Public space accessibility must be increased for new residential areas and the city as a whole, enabling diverse populations to move within the sector. Enhancing resilience through mobility changes, functional diversity, and open space re-design will strengthen social and ecological functions.



- IMPROVE PEDESTRIAN ZONE
- DEFINE PUBLIC SPACE
- NEW HIGHLIGHTS
- LANDMARK
- STRENGTHEN GREEN AXIS
- GREEN CONNECTION PATH
- MAIN COMMERCIAL ZONE
- FURTHER DEVELOPMENT OF SPORT AREA
- IMPLEMENT EDUCATIONAL FUNCTION
- CLEAR TRAFFIC ZONE
- ADD NEW PARKING GARAGES (MULTIFUNCTIONAL)
- PEDESTRIAN BRIDGE
- POTENTIAL INFILL DEVELOPMENT
- BUILDING EDGES
- PUBLIC AREAS
- NEW NEIGHBOURHOOD
- NEIGHBOURHOOD SQUARE
- SET-BACK

ROSE GARDEN



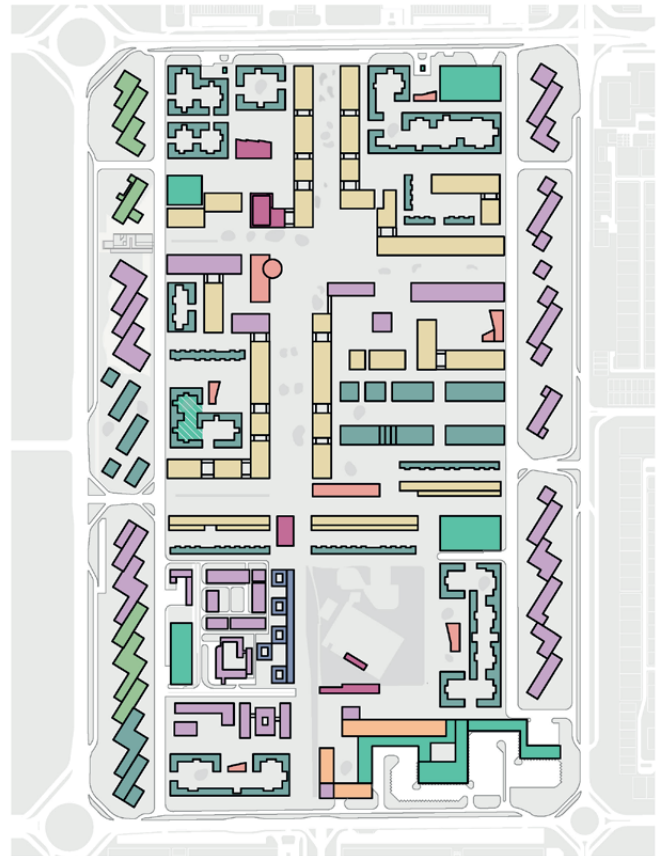


# Sectoral Topics

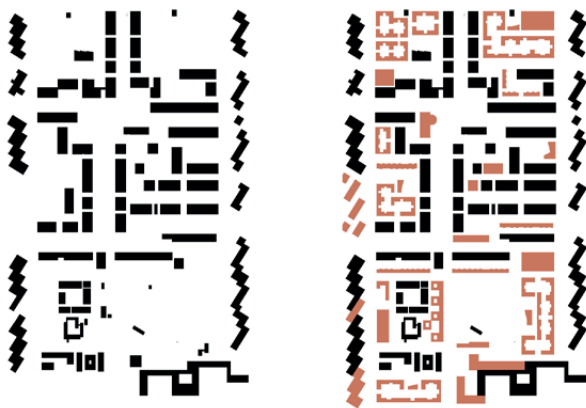
## CONCEPT LAYERS

An important part of the project is infill development, with Sector 17 mainly complemented by new residential neighborhoods. Some existing buildings will be converted for housing, while most will retain their commercial use, maintaining the sector's economic functions. Parking garages are introduced as a new building type, located near residential areas to organize parking and reduce informal parking. Each neighborhood will also include a building serving the community and supporting local interaction. The new residential building typologies are designed to integrate with the existing urban fabric while offering diverse housing options.

Public open spaces will be preserved and enhanced to ensure accessible and high-quality outdoor areas. The hierarchy of open spaces ranges from public green areas to more private courtyards within housing blocks, structuring the neighborhood and supporting social interaction. A green axis connects Sector 17 with surrounding sectors, linking public squares with smaller spaces around community facilities and integrating private courtyards. Existing facilities such as the sports park, the library, and cultural centers already act as important anchors and will be maintained and



Functional mix

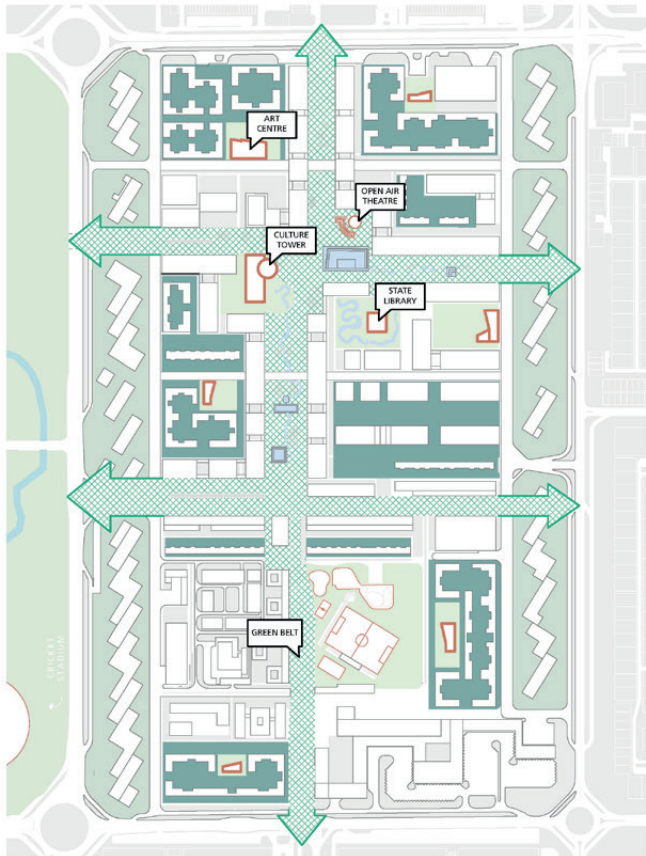


Comparison of built up area before (left) and after (right), existing buildings in black, new buildings in red

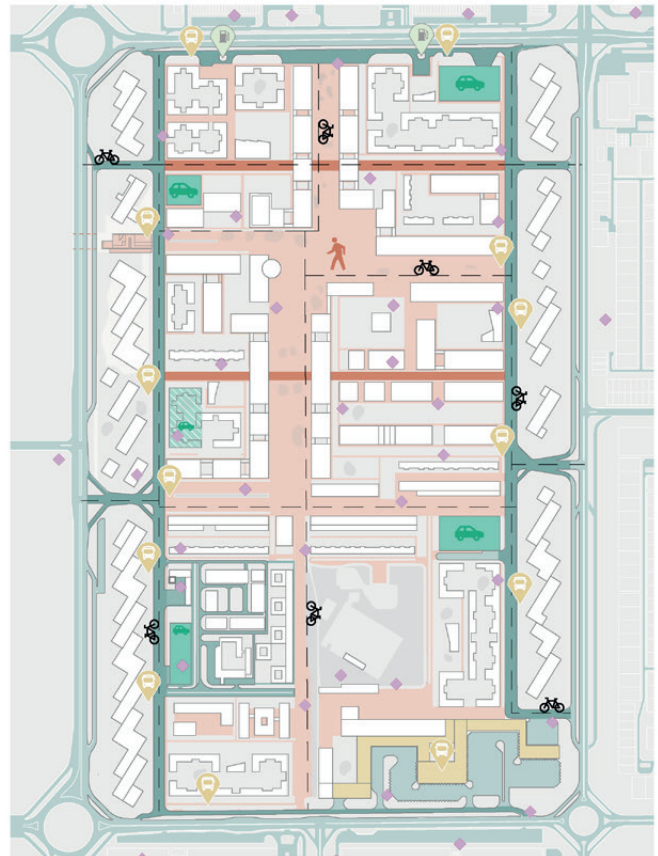
reinforced to strengthen social cohesion and the sector's identity.

The new structure is accompanied by a mobility concept that prioritizes pedestrians and cyclists. Bridges within the sector will be open exclusively to non-motorized traffic, and new bike paths will connect residential areas, community facilities, and the pedestrian zone. Motorized traffic is directed to the outer areas of the sector, reducing congestion in central spaces. Bus transport will be strengthened with new stops to improve accessibility and connections to the wider city. The combination of organized parking, pedestrian routes, and cycling infrastructure ensures a balanced and sustainable mobility system.





Green Connections



Modal shift

## SITE PLAN

The site plan shows the implementation of the framework plan and highlights key measures to achieve its goals. The central pedestrian axis is divided into smaller areas, including a market square and a new open-air theater. A new high-rise building defines the central square, with a community center that provides spaces for information, meetings, and learning. Additional shading elements along the squares are planned to improve comfort and encourage longer stays. Overall, the plan integrates residential, commercial, and public functions into a cohesive and vibrant district that balances accessibility, social interaction, and urban identity.

### GREEN CONNECTIONS

-  GREEN AXIS
-  RESIDENTIAL GREEN AREAS
-  PUBLIC GREEN AREAS
-  COMMUNITY FACILITIES
-  GREEN BUFFER OF SECTOR 17
-  WATER

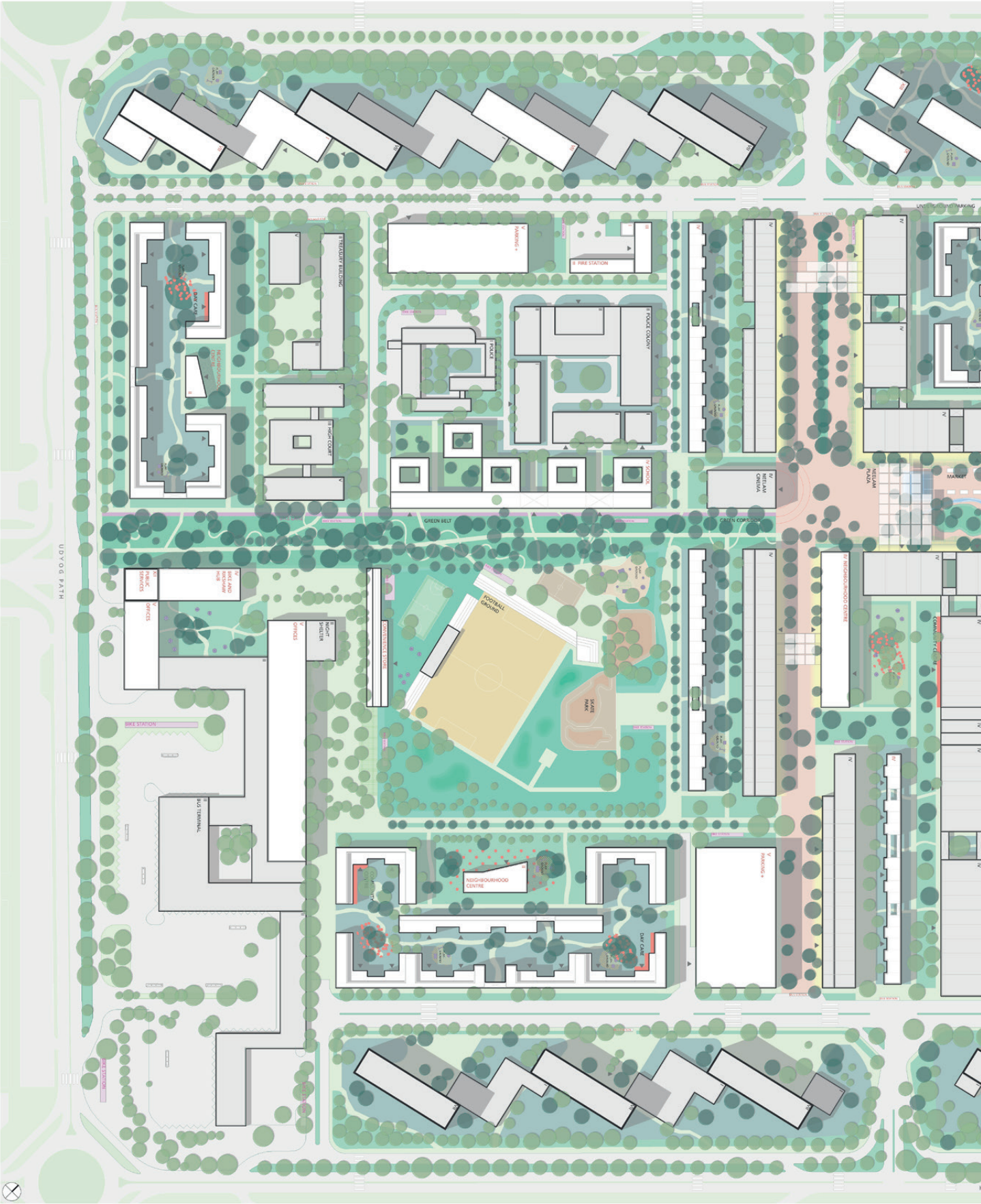
### FUNCTIONAL MIX

-  RESIDENTIAL
-  COMMUNITY FACILITIES
-  COMMERCIAL, MIXED-USE
-  LEISURE
-  PUBLIC SERVICE
-  EDUCATION
-  OFFICE
-  HOTEL
-  INFRASTRUCTURE
-  UNDERGROUND PARKING

### MODAL SHIFT

-  MOTORIZED TRAFFIC
-  MOTORIZED TRAFFIC WITHIN SECTOR 17
-  GAS STATION
-  PARKING GARAGE
-  UNDERGROUND PARKING
-  PUBLIC TRANSPORT
-  BUS STATION
-  BIKE STATION
-  BIKE PATH WITHIN SECTOR 17
-  PEDESTRIAN ZONE
-  PEDESTRIAN ZONE, BRIDGES





Site Plan







# Public Space



Central square

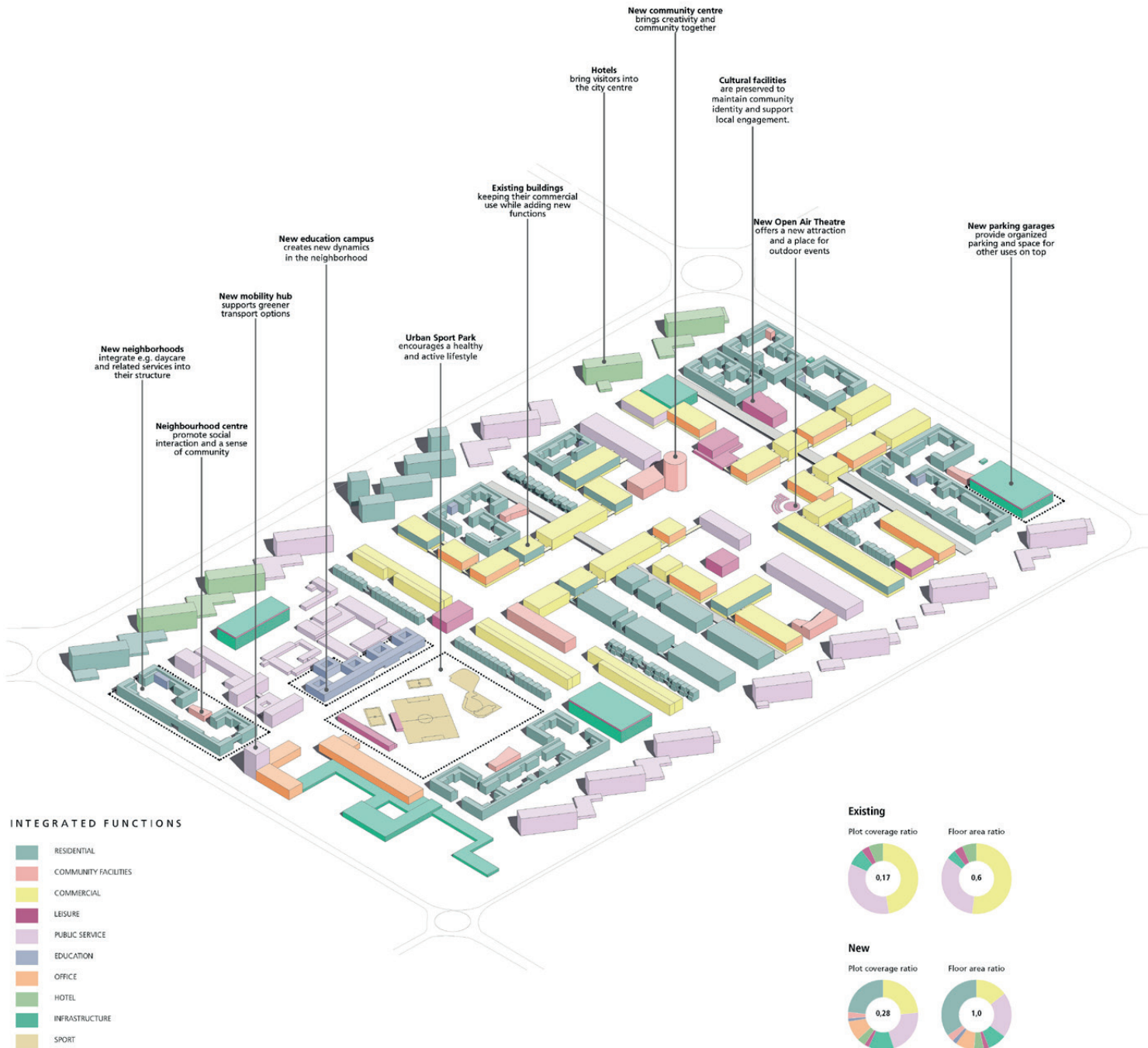
The vision for Sector 17 focuses on the revitalization of the central pedestrian zone as the key public space of the district. The main square is to be reactivated through new development along the axis, strengthening its role as a civic center and restoring its importance as a lively place of encounter and activity.

Building on this vision, the functions within the sector will be expanded along the main axis, including an educational campus located opposite the Urban Park. Behind this axis, new residential quarters will be developed in a block structure, creating more private green spaces in contrast to the wide public areas along the central zone. Three new landmarks further define the sector: a tower on the central square with a community center for information, meetings,

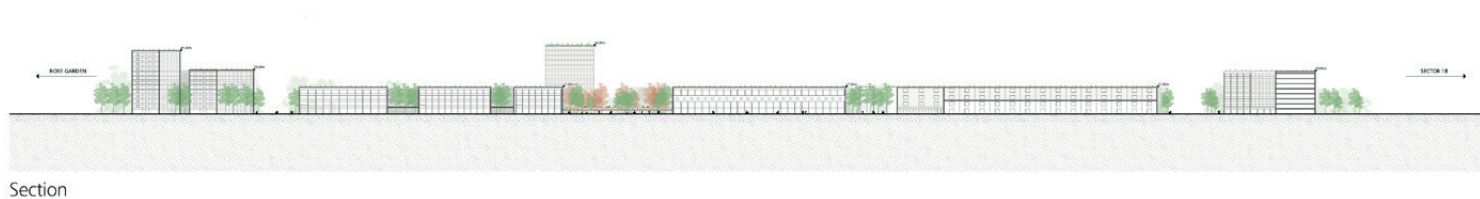
and learning; a residential high-rise near the Rosengarten; and another high-rise at the southern entrance close to the bus terminal, which integrates a mobility hub. These buildings serve as orientation points and contribute to shaping the identity of the area. Additional new uses within the sector ensure a diverse functional mix and support an active neighborhood throughout the day.

The section through the sector illustrates the height development. While the new residential quarters follow the scale of the existing buildings, the central square and the transition to the Rosengarten can be highlighted with high-rise buildings. This creates a clear hierarchy in the urban form, reinforcing both the character of the public spaces and the new landmarks that structure the district.





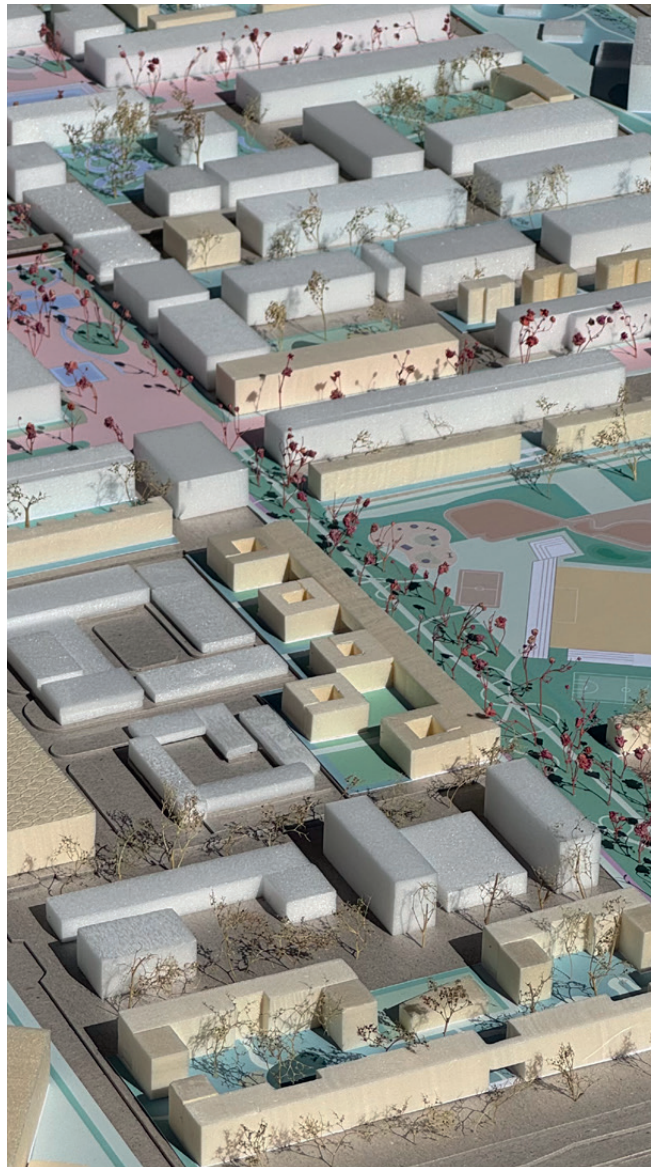
Axonometric view of functional mix













# Residential Quarters



Residential courtyard

One of the main challenges addressed by the design is how to extend the existing urban structure while maintaining the status of Sector 17 as a public commercial center. At the same time, the introduction of residential use must satisfy new requirements, including privacy, a sense of neighborhood at a smaller scale, and connections to shared green spaces. The new residential quarters are positioned behind the main public axis and are integrated into the urban fabric to create a gradual transition from the highly public areas to quieter, private spaces. Green buffer zones and clearly defined boundaries, as established through the building layout and typologies, guide the shift from public to semi-private and private realms, allowing residents to experience privacy without isolating the neighborhoods from the surrounding city. Inner courtyards and the arrangement of

buildings create subtle separations while maintaining visual and spatial connections that encourage interaction among neighbors. Roof terraces and green roofs extend the usable space, offering areas for collective use, leisure, and community activities, while also functioning as environmental buffers and linking to existing structures. Public functions on the ground floor and semi-public intermediate spaces provide additional opportunities for social encounters and shared experiences. The arrangement of pathways, courtyards, and landscaped areas organizes a gradual transition from the main axis to intimate, family-friendly spaces within the neighborhoods, reinforcing the legibility, accessibility, and cohesion of the sector. Together, these strategies ensure that the residential quarters retain their distinct identity while contributing to an inclusive urban environment.





From public to private spaces



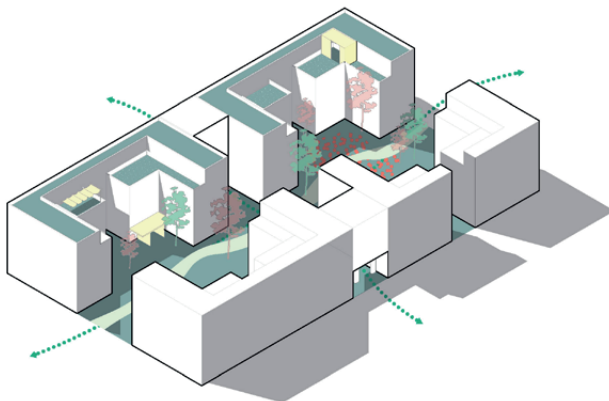
# Residential Quarters

The new residential quarters defined in the master plan will be developed in line with the overall design goals. Their structure is based on the hierarchization of open spaces, shaped by building placement and housing typologies. Drawing on elements of regional architecture, the neighborhoods combine identity with adaptability and create a zoning of shared and private areas through architectural setbacks.

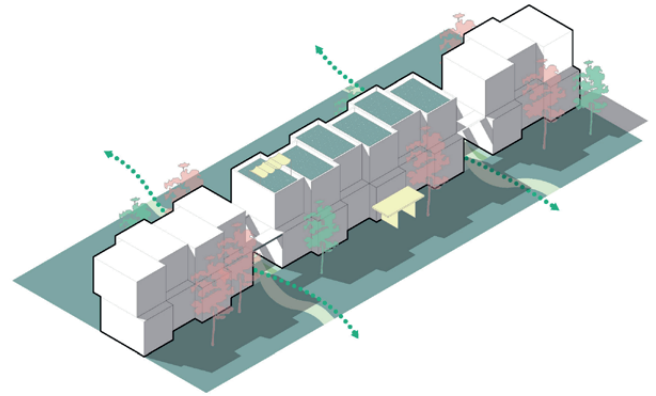
## COURTYARD TYPOLOGY

Within this framework, courtyard houses represent one of the main housing typologies. They create a varied and dynamic courtyard structure, with central open spaces serving as shared areas for residents while the surrounding buildings define clear edges and transitions.

The terraced design of the buildings provides accessible rooftop spaces for residents, extending the range of collective spaces beyond the ground level. A gateway element marks the transition between public and private areas, allowing for a gradual shift that encourages informal use and different levels of privacy. The architecture allows for personal appropriation: setbacks, terraces, and shared spaces are flexible so that residents can adapt them to their needs and strengthen their connection to the living environment.



Courtyard typology



Row house typology

Integrated community functions, such as daycare or social spaces, are included within the building, supporting interaction and everyday neighborhood life. The combination of spatial hierarchy, flexibility, and programmatic diversity makes the courtyard typology a central component of the residential quarters.

## ROW HOUSE TYPOLOGY

As a complementary typology, row houses offer an alternative residential form that combines density with privacy. They are arranged to provide individual entrances and private outdoor areas, giving residents greater autonomy compared to typical apartment buildings. At the same time, the compact layout allows for efficient use of space and creates collective open areas between the rows.

Shared gardens, courtyards, and small playgrounds emerge within these spaces, fostering social interaction and neighborly connections. In this way, row houses combine the qualities of single-family homes with those of multi-unit buildings, balancing individual privacy with communal life. The arrangement of entrances and façades activates the street space, while the orientation of buildings establishes clear front and rear zones that structure circulation and frame neighborhood squares.



Each cluster includes at least one larger public square and a series of smaller green spaces for recreation, play, or gardening. This variety of spaces accommodates different types of use and contributes to a cohesive and livable neighborhood.

## CRITICAL REGIONALISM

The design of the new residential neighborhoods follows the principles of critical regionalism, combining local architectural traditions with contemporary forms to create a distinctive and context-sensitive identity.

The typologies are part of a broader strategy inspired by regional architectural references. Setbacks, shaded walkways, and open-air transitions reflect local building traditions while being interpreted in a contemporary way. The housing types are designed to be adaptable: temporary structures can extend the base buildings and provide space for seasonal or community uses, allowing residents to shape their environment. This flexibility accommodates changing patterns of use and reinforces a sense of ownership and connection to the place. By combining built form with cultural references and opportunities for appropriation, the neighborhoods establish a strong identity rooted in both tradition and contemporary living.

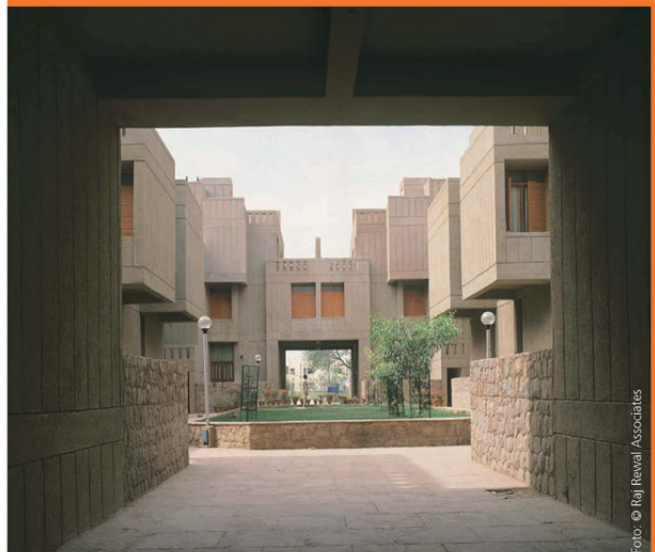
Together, these elements create neighborhoods that are diverse in character and use. The combination of courtyard and row typologies, along with supporting facilities such as schools and kindergartens, forms the foundation of a resilient and inclusive urban fabric. Larger public squares are complemented by smaller, more intimate green spaces, meeting a range of social needs and providing residents with both retreat and gathering areas. The interaction between building types, open space hierarchy, and community facilities reflects the goals of the master plan and envisions Sector 17 as a vibrant, diverse, and forward-looking urban district.



House Type 9, E. Maxwell Fry, Chandigarh Sector 22



Tara Group Housing, New Delhi

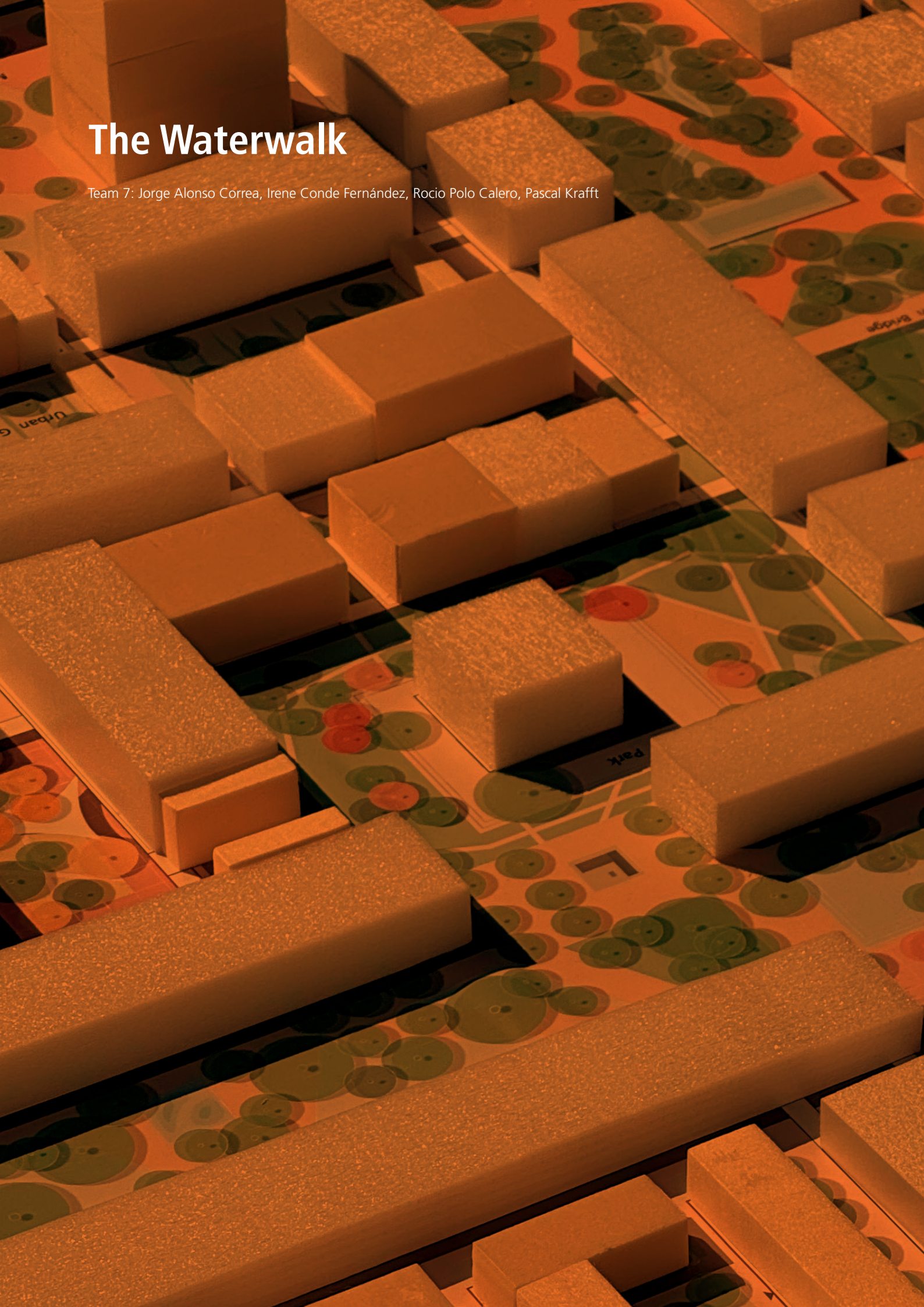


Asian Games Village, New Delhi

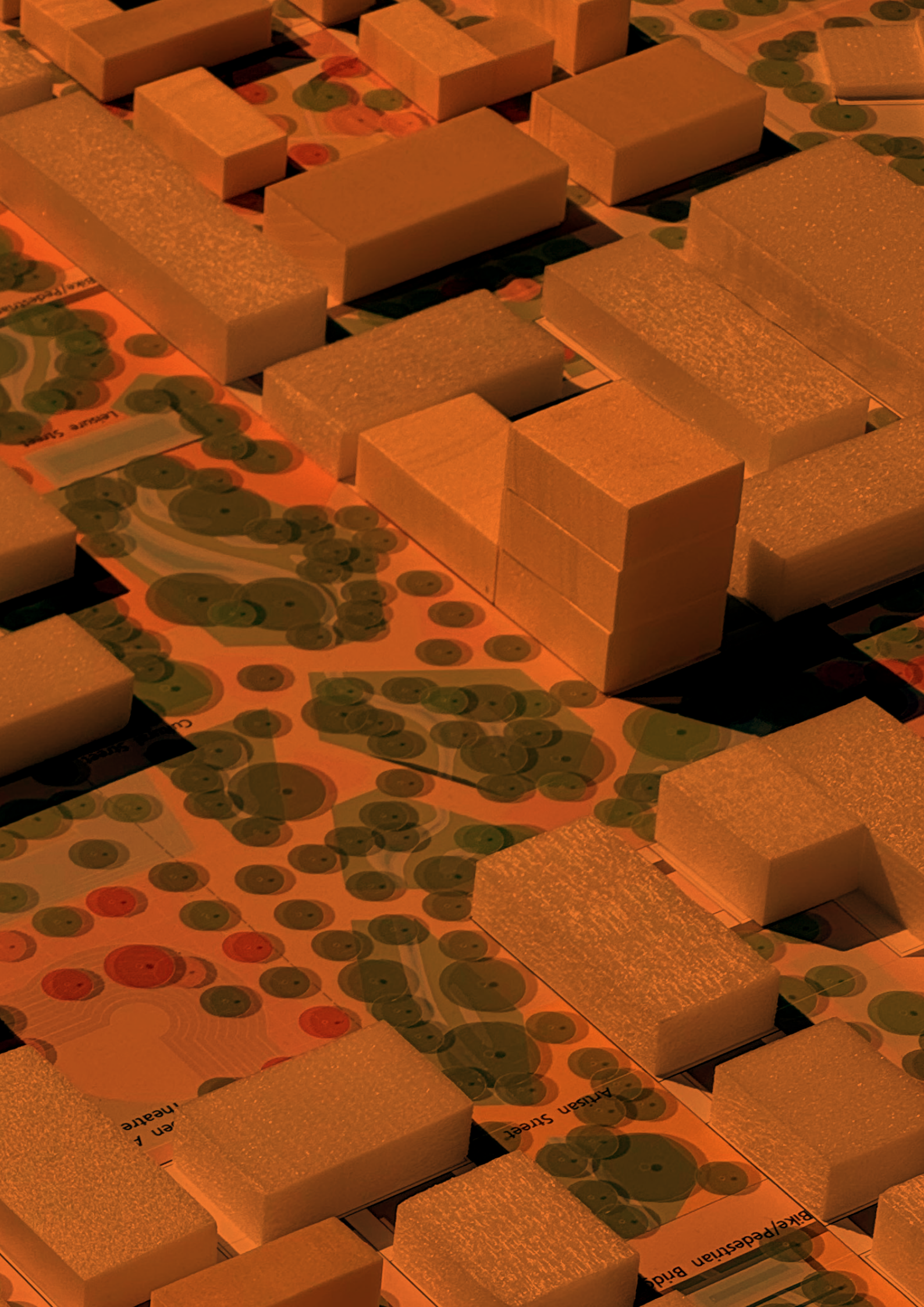


# The Waterwalk

Team 7: Jorge Alonso Correa, Irene Conde Fernández, Rocio Polo Calero, Pascal Krafft



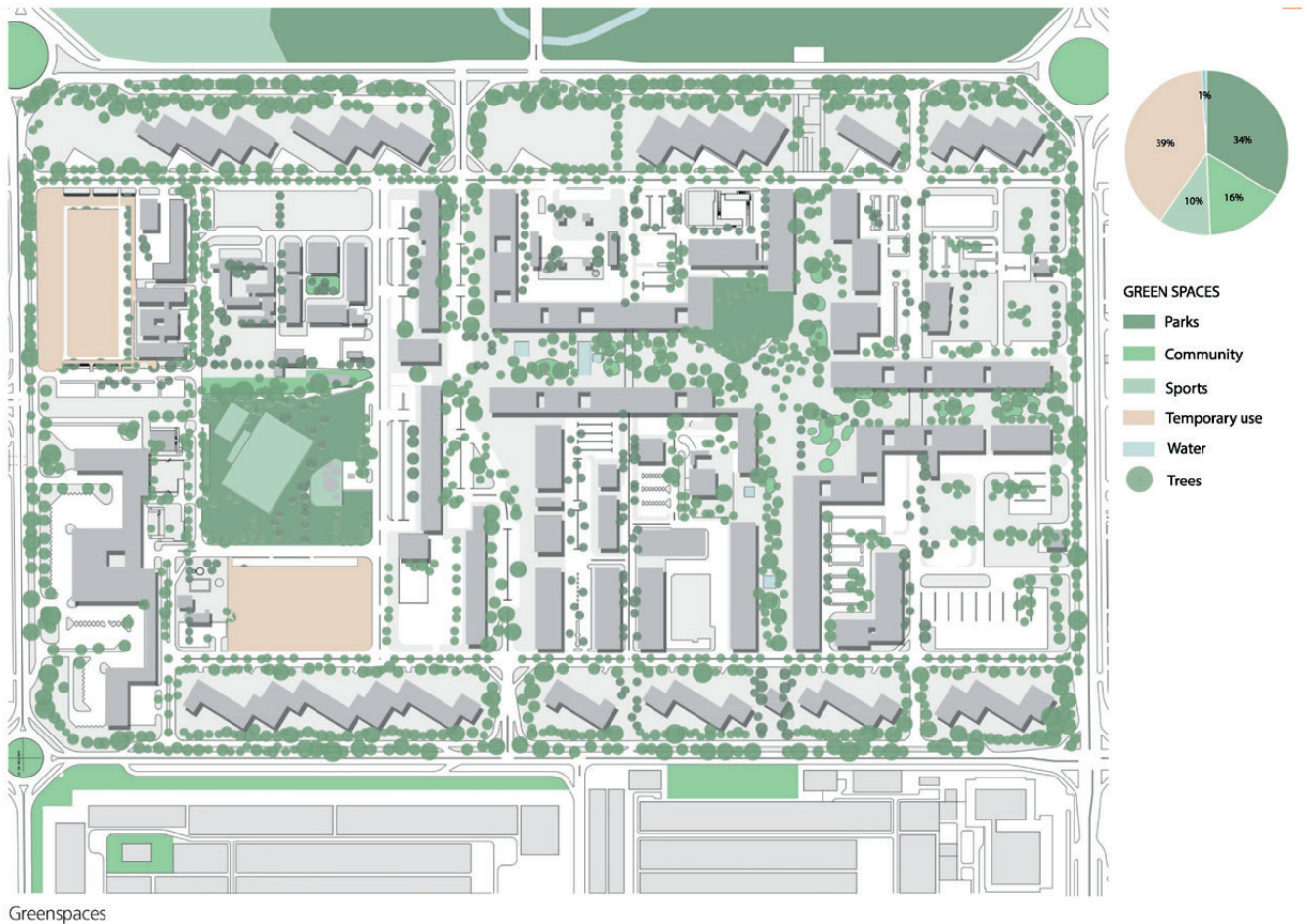






# Spatial Analysis

Sector 17



## GREENSPACES

Regarding open spaces, it became apparent, that although the sector has many, they often lack purpose and are poorly maintained.

Large areas remain underutilised and could either be transformed into engaging public spaces or used to increase density in a thoughtful way. We also found that the sector is oftentimes disconnected in this regard, presenting a strong opportunity to improve spatial connections.

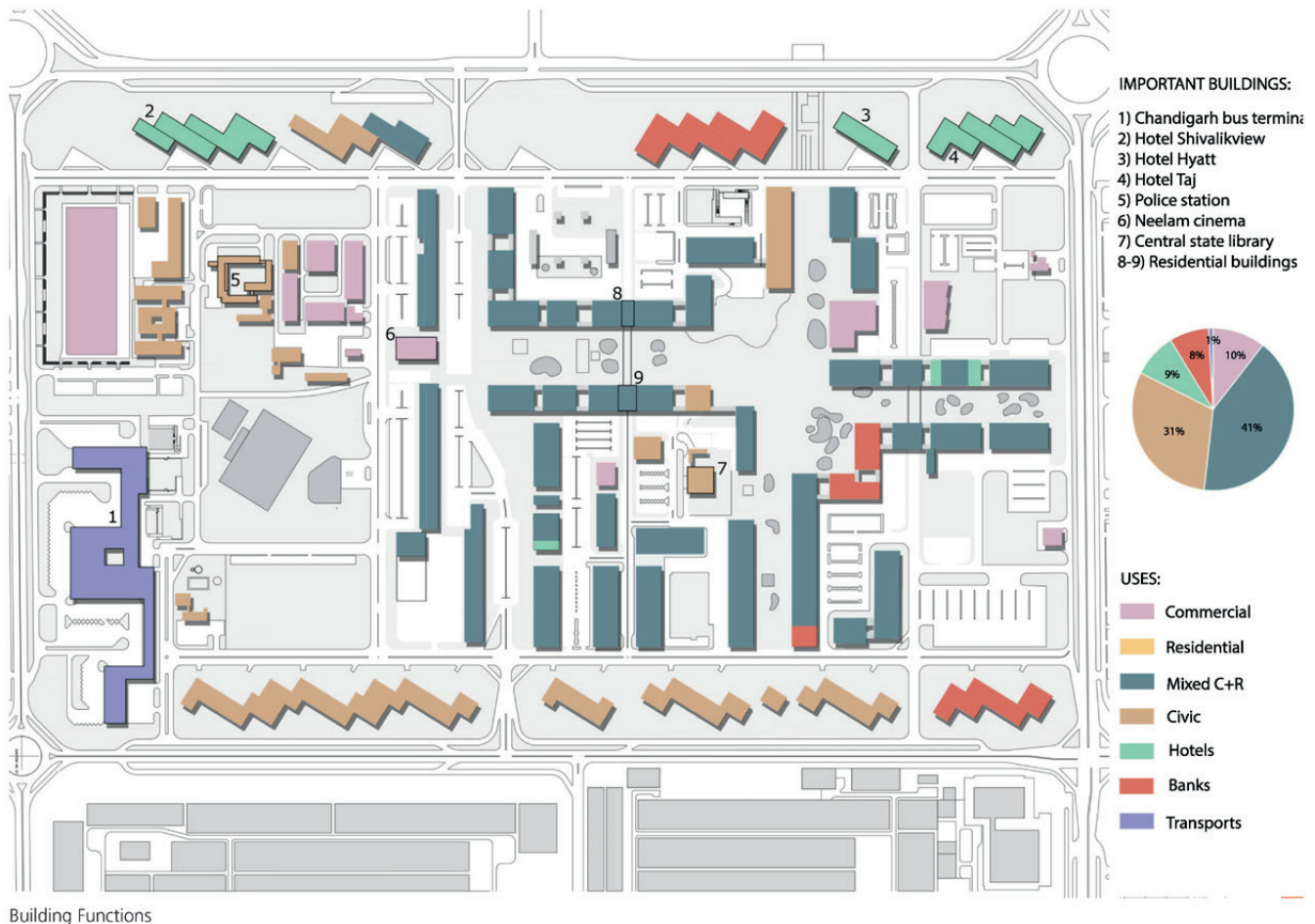
There are large new sporting facilities present in the south of the Sector which find great use as well as the so called

“Childrens Park” in the north of the sector. Many park and green areas however also fell victim to Wild Parking. A direct connection to the Rose Garden is also present, which however draws away much traffic from parks in Sector 17.

A lot of fellow land particularly in the North of the Sector is also present, however not much healthy greenery can be found in these areas due to heat and car parking.

The Tree population however, is numerous, old and healthy providing great opportunities.





## BUILDING FUNCTIONS

From a functional perspective, the sector demonstrates limited diversity. Most buildings are primarily commercial, with no real residential use. This is according to the modernistic design principles the Sector follows.

There is also a prominent band of administrative buildings, along which some hotels are also located. The Southern part of the Sector houses additional Civic and administrative buildings which are however relatively separated from the north of the Sector.

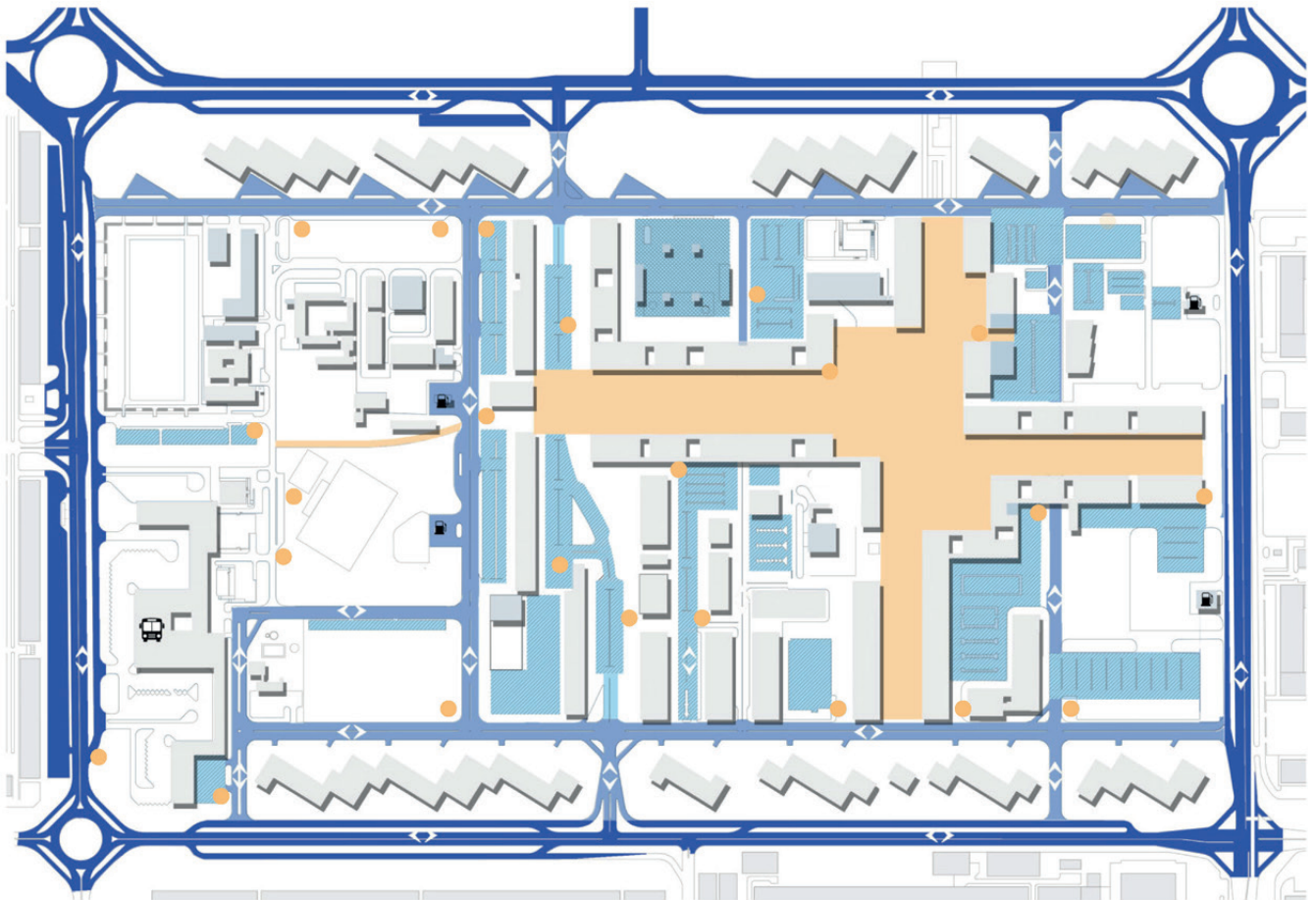
Several Maintenance Buildings like electrical substations are also present. In addition, the sector contains several significant landmarks, such as several cinemas, the Central Bus Terminal, the High Court, Police Station, Town-hall and State Library are present forming a good civic and cultural core of the sector.

Yet many of these are either not used anymore, some even demolished or used for different purposes like the Jagat Cinema.



# Spatial Analysis

Sector 17



Mobility and Transport Infrastructure

## MOBILITY AND TRANSPORTATION

In terms of mobility, we observed significant issues related to traffic congestion, particularly around parking zones. A considerable portion of the sector is dedicated to parking, yet it is poorly optimised.

“Wild parking” is also a rampant situation in the sector but despite vast amounts of space allocated to parking, it still remains a problem.

Additionally, some roads contribute little to the overall flow and functionality of the area. One of our main objectives, therefore, was to address and improve the parking system.

The Central Bus Terminal offers great connections to the inner,- and inter-city bus network, yet additional bus stations are sparse. 4 Gas Stations are also present.

There are a number of rental bike stands spread through the sector, yet the bike infrastructure is not fully maintained and connected, the same applies to pedestrian infrastructure.



**MOBILITY**

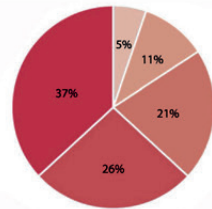
- Street V2/V3
- Street in sector
- Parking
- Underground parking
- Pedestrian zone
- Bike points
- Bus station
- Gas station

Parking Area: 119235,361 m<sup>2</sup>  
 1 parking area : 25m<sup>2</sup>  
 Parking places: 4769

Pedestrian zone Area: 125681 m<sup>2</sup>

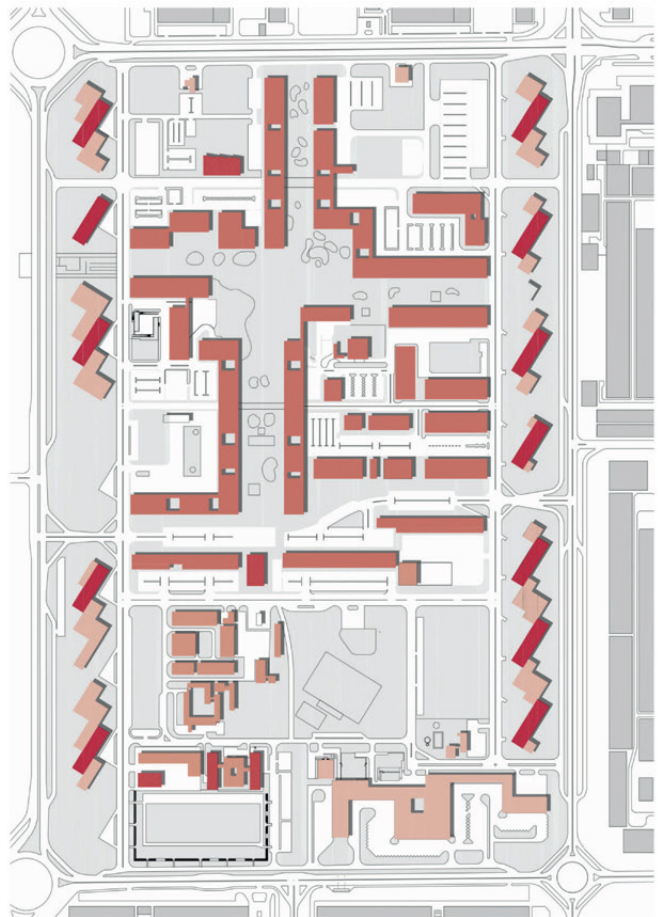
**HEIGHTS**

- 4m
- 8m
- 16m
- 20m
- 28m

**3. ORGANIZATION BY ROAD TYPE (Urban hierarchy)**

- V4 (Active commercial streets) → Amaltas, Smunder phall, Kadam
- V5-V6 (residential streets) → Combinations of Chukrasia, Amaltas, Kachnar, Cassias; on the sides, smaller trees like Bottle Brush and Tecoma
- Sector 17 plaza → Native trees to soften the hardscape, planted in cut-outs within the sandy pavement

Mobility Numbers and Building Heights



Building Heights

**BUILDING HEIGHTS AND NUMBERS**

The average height of the existing structures is 4 stories, and around 16 meters. The Sector is framed by a series of considerably taller structures, while the south has rather nonuniform additional structures ranging between 1 and 5 stories.

The bus terminal while having the largest footprint has almost no height impact as it is only 1-2 stories tall. There are no other mobility infrastructure buildings, like multi-storey car parks.

Plans for a 11-story tall building were never realised.

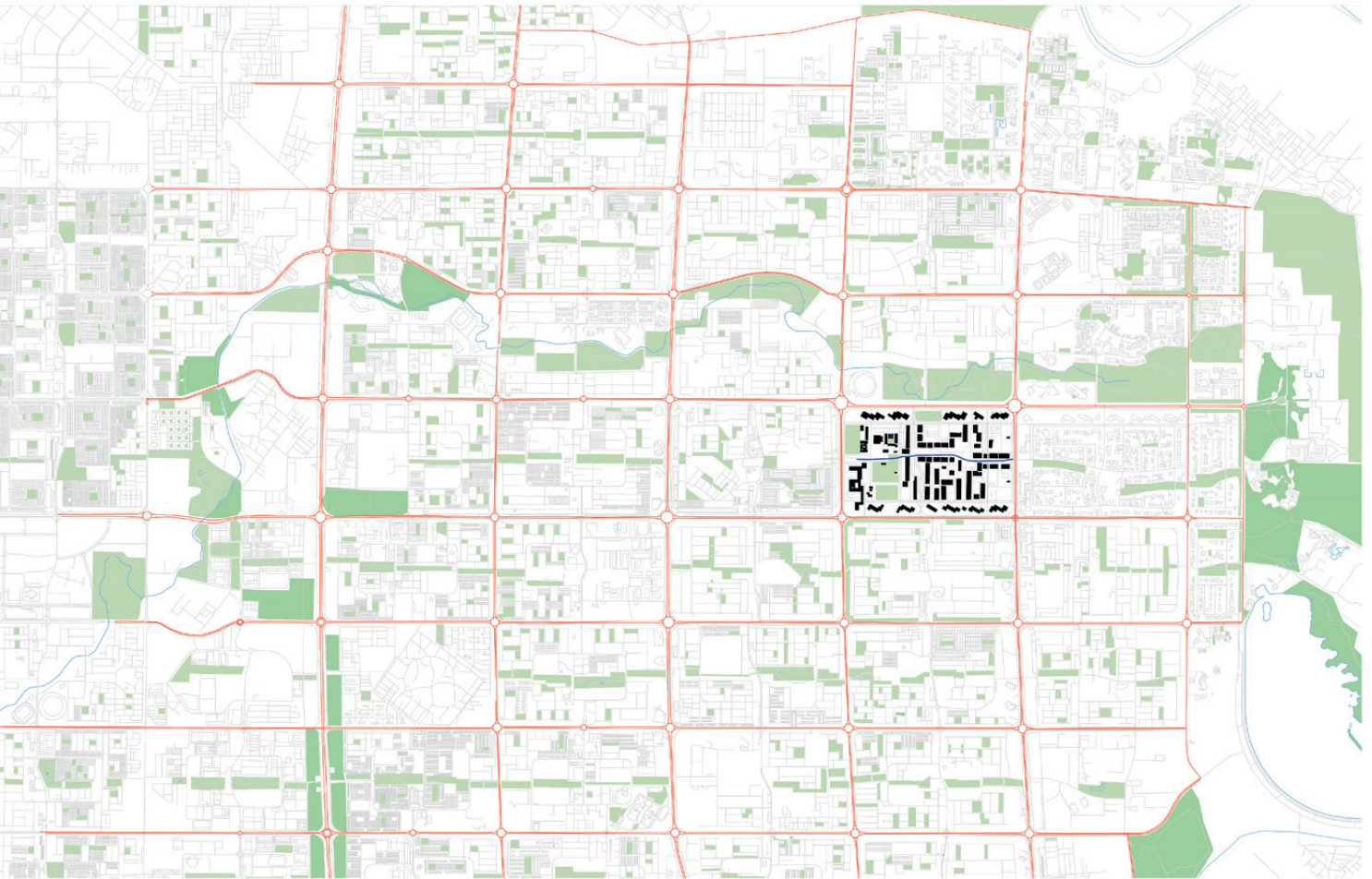
In terms of typology, most buildings adopt the characteristic elevated-on-pilotis form, generally reaching four stories.

This typology has become a defining feature of Sector 17, giving coherence and a distinctive urban identity. Alongside these, taller administrative buildings stand out as vertical accents, offering contrast in scale and emphasising the civic role of the area. The coexistence of these different forms creates a recognisable yet varied architectural landscape.



# Sectoral Analysis

Challenges, potentials and site context as a result of the Spatial Analysis



Site Context Plan ©

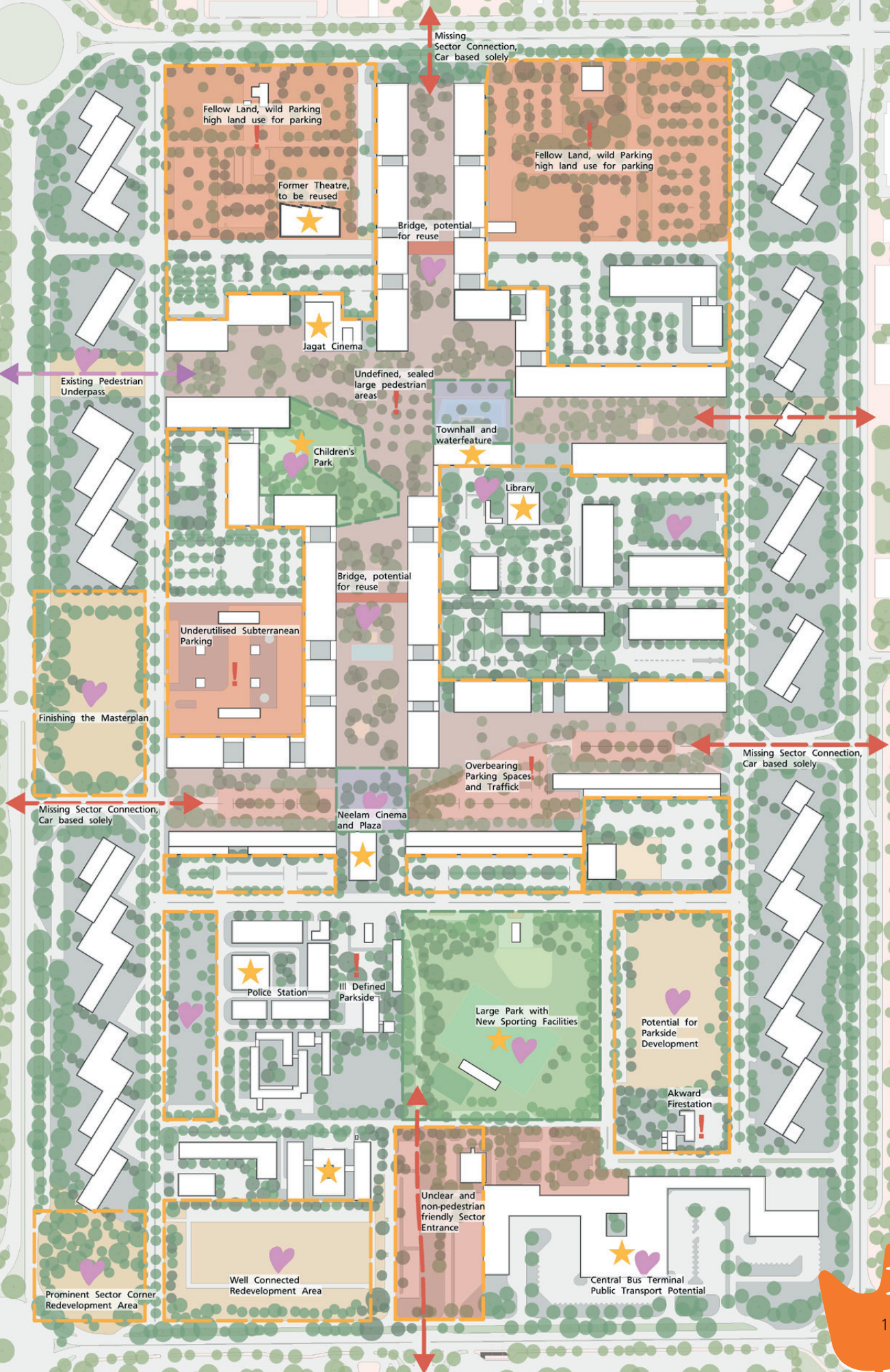
## ANALYSIS CONCLUSION

When analysing the current state of Sector 17, we identified several challenges that, if addressed carefully, could become opportunities for meaningful transformation. Rather than considering them only as problems, we approached them as potentials for improvement.

One of the main issues is the large amount of underutilised open space. This includes extensive areas used for parking, overly wide streets, and temporary spaces that lack efficiency. Although difficult to tackle, these conditions present the chance to densify and optimise the sector. With thoughtful interventions, such spaces could be turned into

a more engaging urban environment, creating a richer and more continuous pedestrian experience for both residents and visitors. Another key challenge is the sector's limited connectivity to its surroundings. The major roads that border Sector 17 act as barriers, making it difficult to link seamlessly with the adjacent sectors. Addressing these disconnections is essential in order to strengthen accessibility and integration. At the same time, Sector 17 already benefits from several strong urban anchors, such as the theatre, the bus station, and the library. These existing landmarks provide valuable reference points around which a renewed vision for the sector can be developed.







# Concept and Objectives

## Concept and Framework Plan



Figure Ground Plan ©

## THE CONCEPT

By the challenges and potentials, the framework within the plan needs to work is established. These serve as a guiding idea together with the original master plan towards a revitalisation of the Heart of Chandigarh

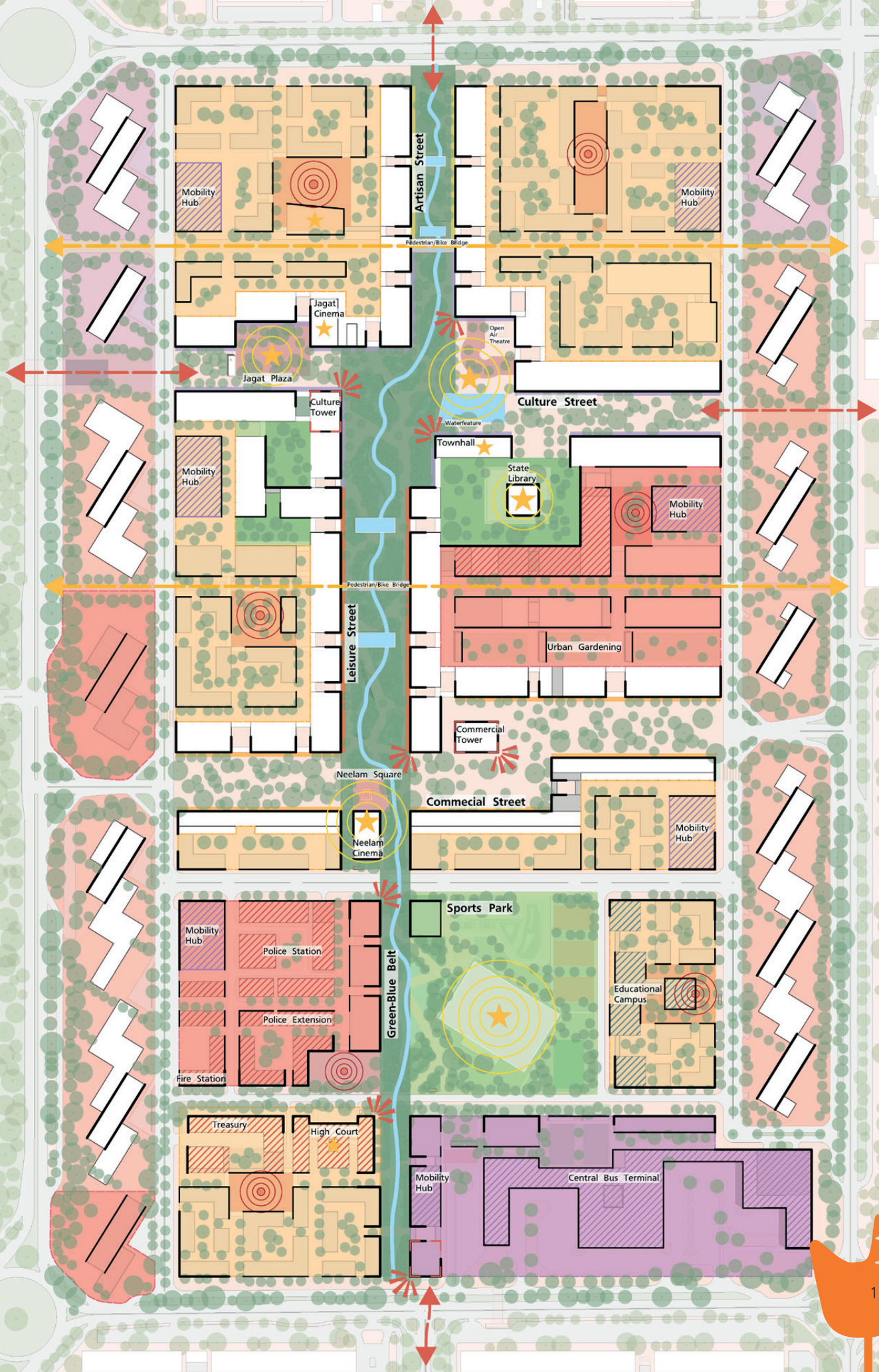
The first goal is to strengthen the sector's connection with its surroundings. To achieve this, the creation of a Green-Blue pedestrian band is envisioned, continuing the idea of the green walk envisioned by Le Corbusier.

Residential zones and re-densification would play a vital role for the sectors economic and social viability. To do this we grouped the spaces of the sector into "blocks", which

would have their own uses and feature residential services and central squares. Additionally, we had to rethink the traffic circulation within the sector. Walkability and the removal of a over-reliance of cars and overbearing parking spaces would be central to this ideal.

Vehicular access would remain, but controlled through the use of mobility hubs and designated roads, while simultaneously increasing public transport and pedestrian connectives. Pedestrian areas are similarly grouped into "blocks" called "streets" to be assigned different uses. A major water-collection and retention system supports micro-climate, greenery and provides points of interest.

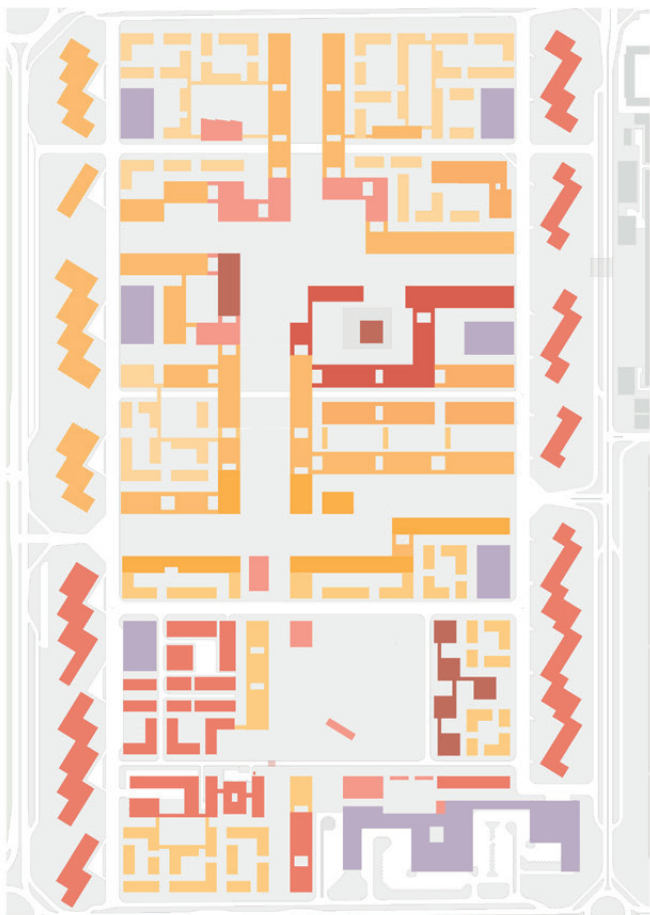




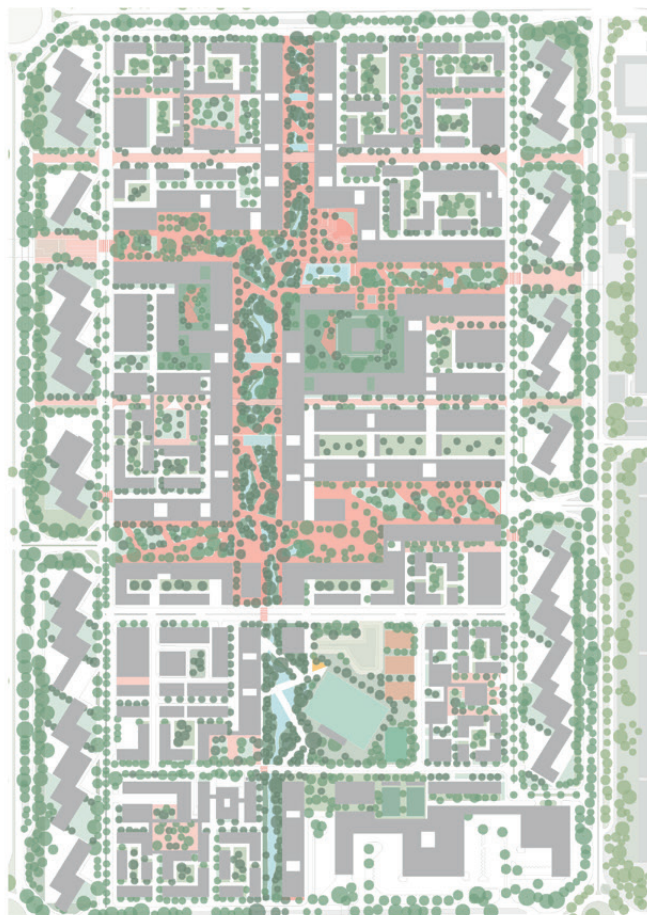


# Concept Layers

Mobility, Freespaces, Building-Uses, Water



Building Uses



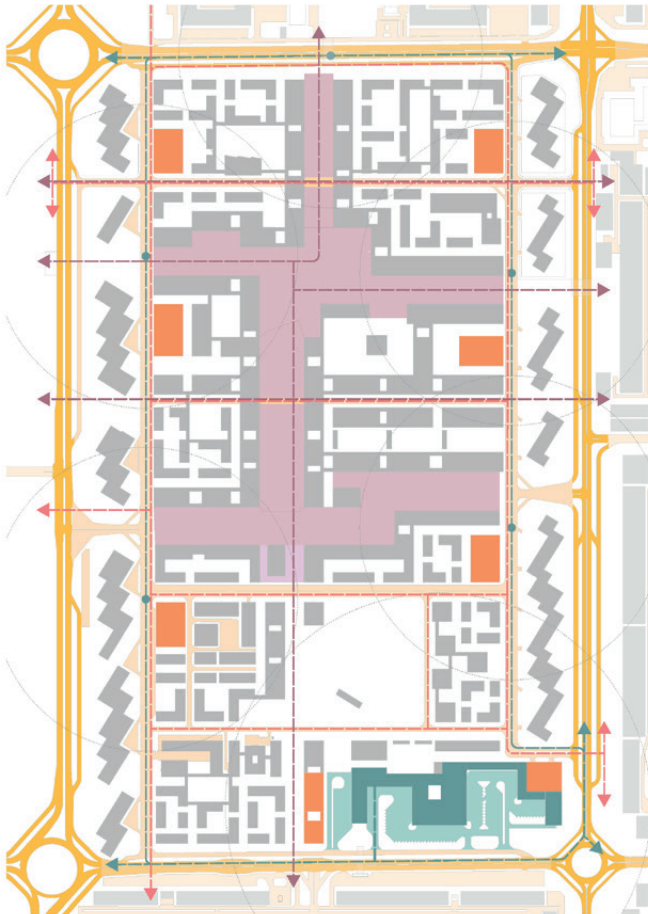
Freespaces

## SPACE-AND LAND USE

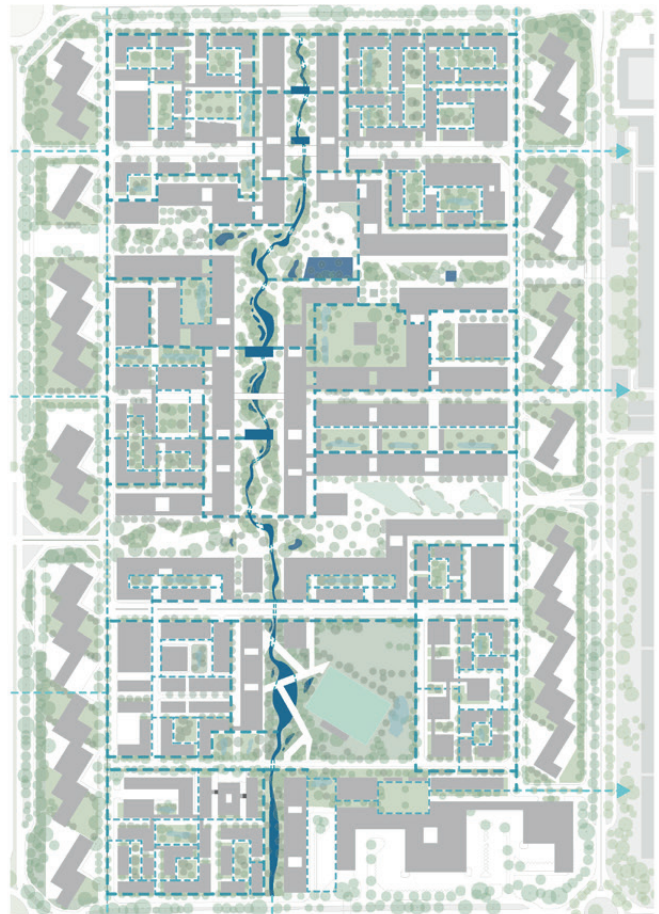
Our approach to the sector design can be divided into two main aspects: built structures and open spaces. In terms of the built environment, our goal was to densify the sector and introduce greater diversity, while preserving its predominantly commercial character. To achieve this, we retained the main commercial buildings and developed mixed-use neighbourhoods within their interior, combining residential housing with commercial functions to create a more vibrant and active urban environment. For administrative uses, we maintained the two primary administrative lines framing the sector and reinforced the area surrounding the police station, relocating key facilities to this zone. Furthermore, we

established an educational area designed to complement the existing sports facilities, promoting a broader range of activities and services for residents. Regarding open spaces, the design is centred on a primary blue-green axis that traverses the sector, connecting different areas and improving overall accessibility. In addition to this main route, more intimate spaces were created for residents, including neighbourhood squares and courtyards. These spaces provide accessible, shared areas that encourage social interaction while maintaining strong connections with surrounding buildings. Together, these strategies aim to create a more dynamic, cohesive, and user-friendly Sector 17.





Mobility and Transportation



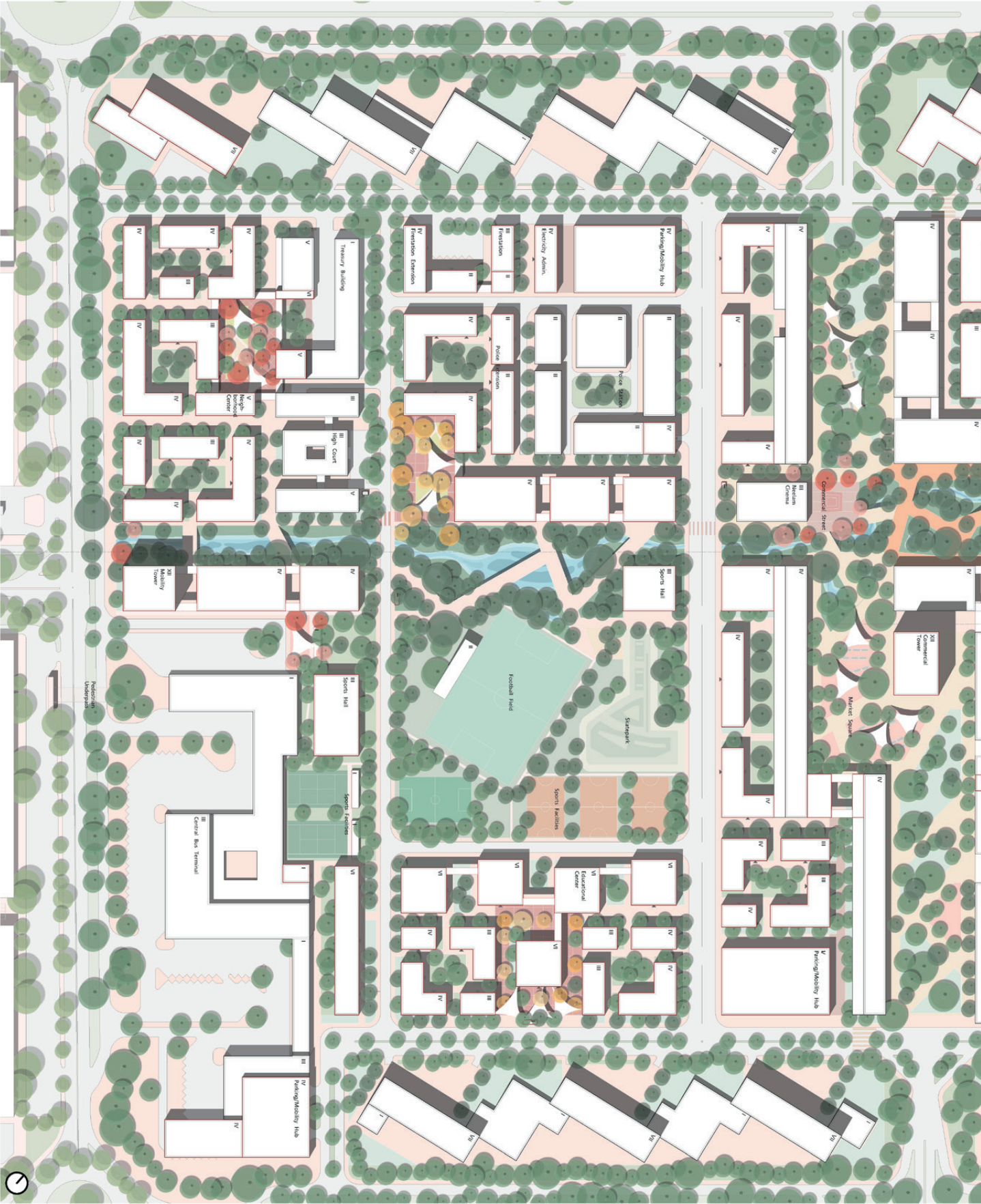
Water Infrastructure

## MOBILITY AND INFRASTRUCTURE

Traffic in the sector can be divided into vehicular traffic and pedestrian circulation. Given the challenges posed by heavy road traffic, our strategy focused not only on improving vehicular flow but also on reducing it, promoting a safer and more pleasant pedestrian environment within the sector. For vehicular circulation, we retained only the perimeter roads, ensuring they provide access to administrative areas and the existing bus station. By restricting cars to the outer edges, the interior of the sector becomes a pedestrian-priority zone, enhancing safety and accessibility while reducing congestion. To further improve the walkability, we introduced blue Infrastructure. This system enhances the micro-

climate, and provides effective management of rainfall, making the sector more resilient to seasonal weather. In addition, it encourages residents and visitors to walk through the sector, connecting them with commercial areas and social spaces. The water features are integrated not only along the main blue-green axis but also within smaller neighbourhood squares and courtyards. This ensures that all public spaces, regardless of scale, are equally enjoyable, accessible, and comfortable. By combining careful vehicular management with enhanced pedestrian amenities, the sector is transformed into a safer, more vibrant, and environmentally responsive urban environment.





Site Plan

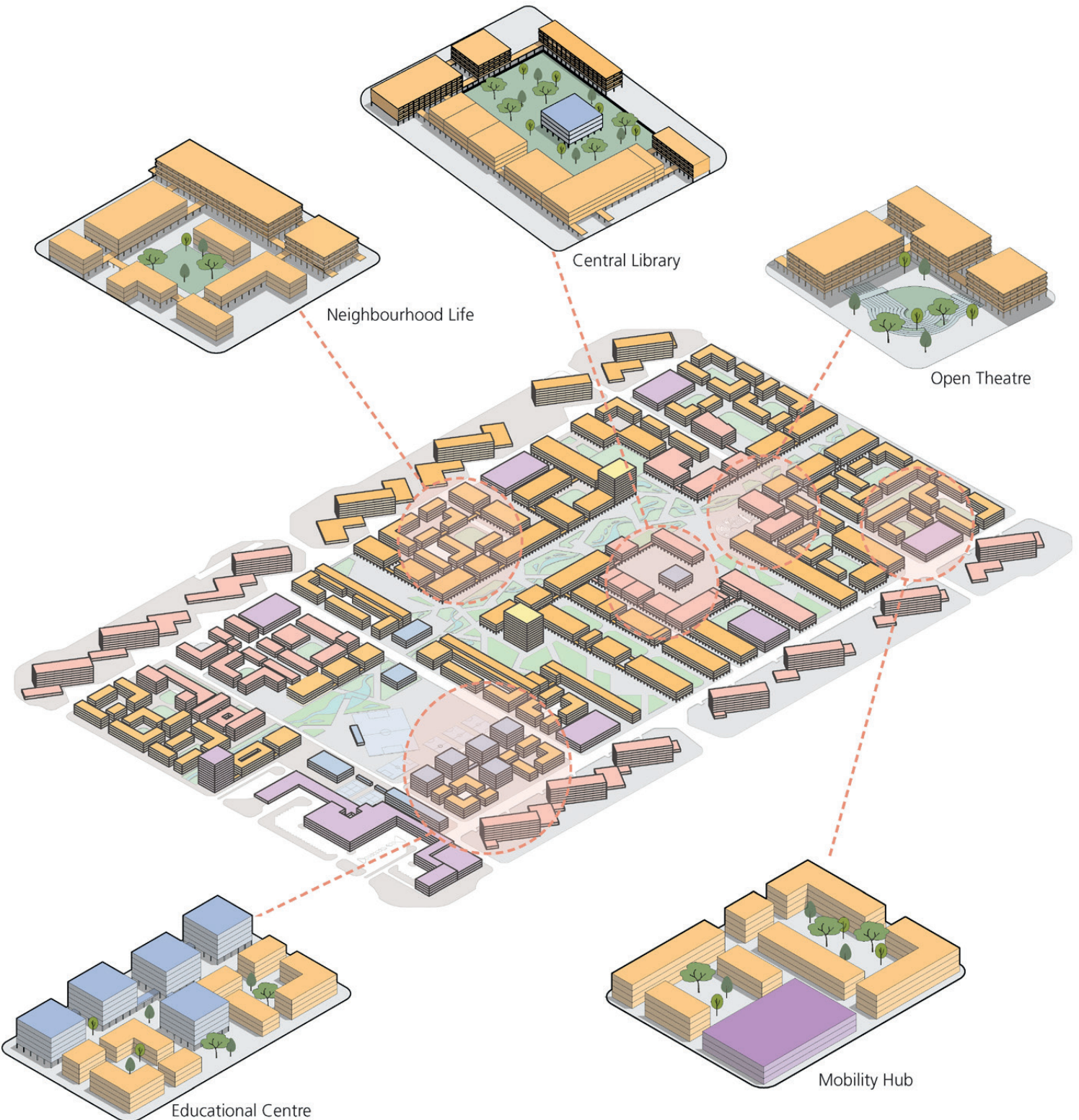






# Zoom-In View

Including axonometric Overview



3D axonometrical Overview





Zoom-In Plan

## ZOOM-IN PLAN

The Zoom-In plan shows one of the central Square along the Town hall in the bottom left and our newly envisioned Cultural Tower in the top left. Additionally in the top right a typical Community Plaza can be seen within one of the neighbourhoods.

To designate different types of spaces, different surface materials would be used with specific paving and green areas. Existing trees would be kept and further supplemented. Various public and cultural uses would be within the vast pedestrian zones encapsulated by the existing 4-story building typologies, like the existing water-feature besides the town hall, a newly envisioned open Air theatre, while the

formerly vast paved area is now broken up into multiple sub-squares by the green Shards which are part of the Blue-Green band. These sub-squares offering seating arrangements, meetup points and shading.

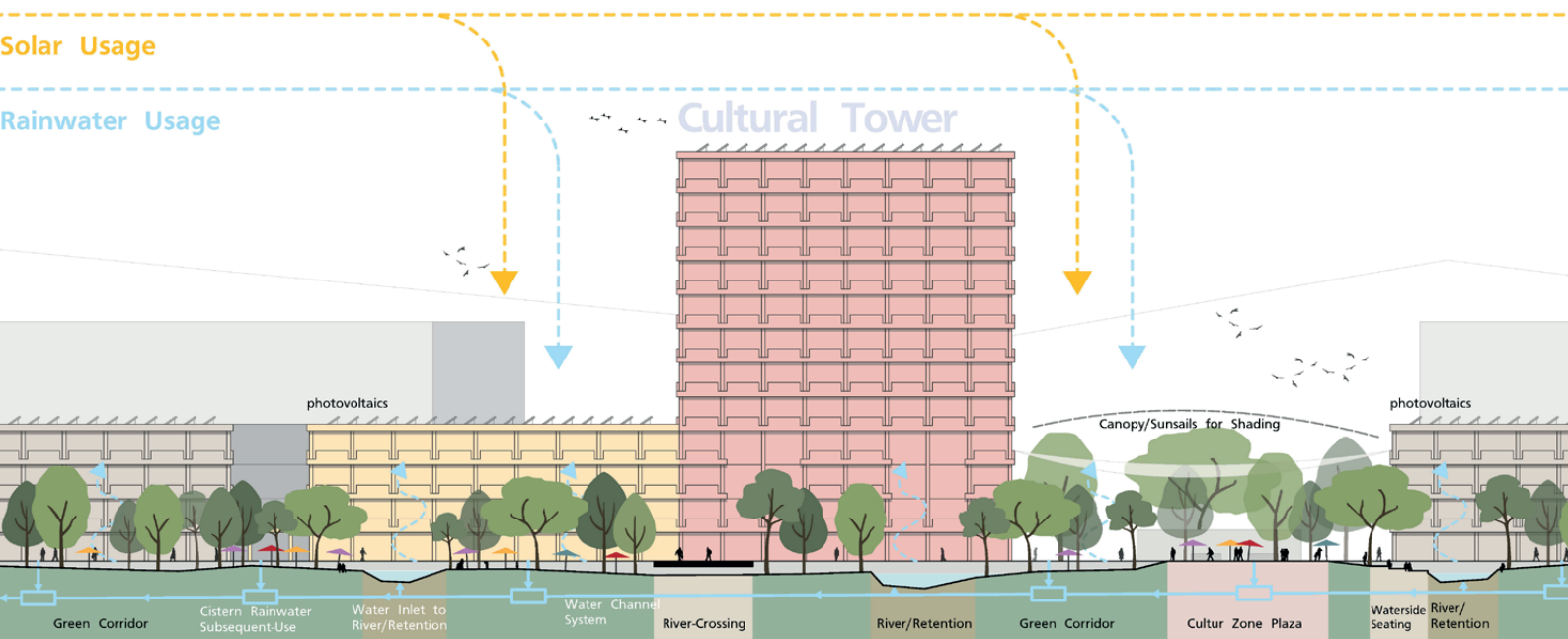
The Green shards are used as retention areas and are built to house the river and water collection, retention and overflow system.

The Neighbourhoods are further supplemented by green spaces alongside the buildings and central squares, offering semi-private greenery alongside residential housing. Existing Green structures would be kept if possible, the Children's park would be moved, a library park created.



# Zoom-In Section

Sectional View and circulation Concept



Zoom-In Section

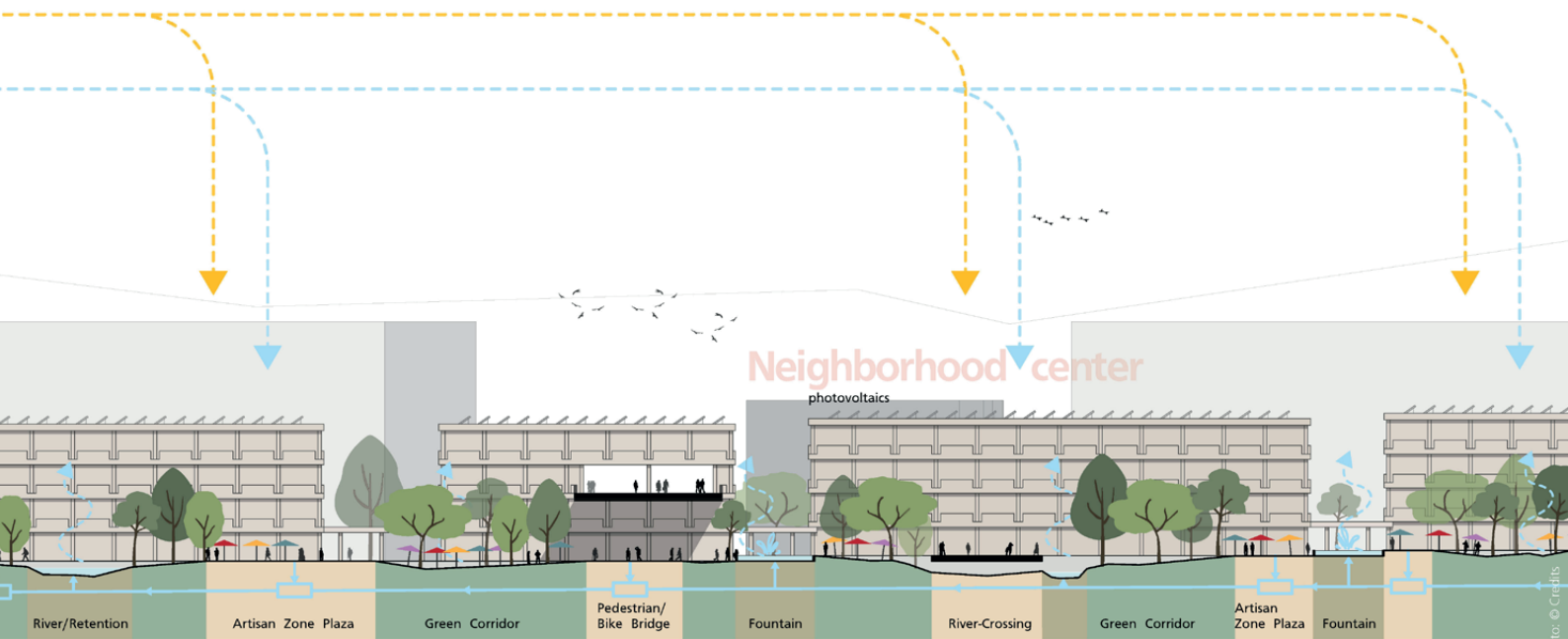
## THE GREEN-BLUE BELT SECTION

The Section runs through the centre of the Zoom-In plan, showing the main square of the cultural street together with the connecting zones to the southwest and northeast. The characteristic existing buildings can be seen in the background and are supplemented by new structures which do follow the existing building code, shown in yellow and red. Here these are the cultural tower and an extending centre of culture at the location of the Children's Park. The building heights as can be seen are kept close to the envisioned master-plan, following the 4 stories, while in the background the taller framing structures are shown in a reduced grey. The Cultural tower breaks up this structure and

serves as a deliberate high point. 2 more of these towers are placed along the Green-Blue axis at similar important strategic positions, leading pedestrians through the sector. The Whole Sector would have the Blue Infrastructure running through alongside the Green Belt, along this axis, rain-water and building runoff is collected and used in a landscaped series of water features, the symbolic circulation can be seen here.

Furthermore where possible, solar power would be employed. A thick canopy would provide shade and interact and supplement the water infrastructure.





## CIRCULATION AND INFRASTRUCTURE

This circulation of natural resources would form the basis upon which the Green-Blue Infrastructure would work and would help the economic and social sustainability of the Sector.

Rainwater is collected, filtered and allocated to places where needed, retained if possible and then given back either to plants, the people through its cooling effect or the ground where it can be used in times of drought.

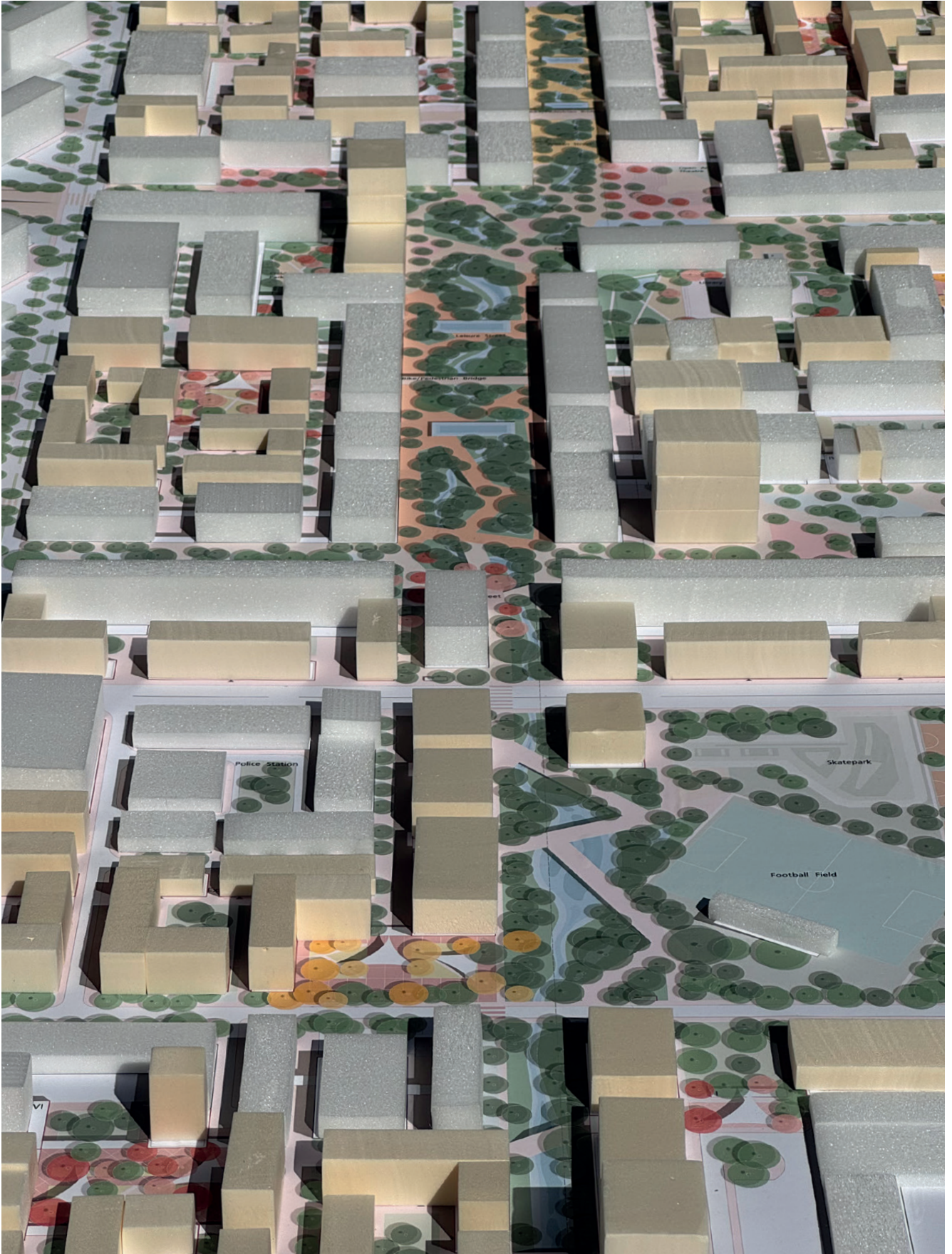
This also extends already present considerations and uses of water in the design of public places and adds onto well beloved elements of city infrastructure. The vast roofing areas could not only be used to collect solar energy, but also as

water collection and retention areas if subtle greenery is added, both choices are valid for the system.

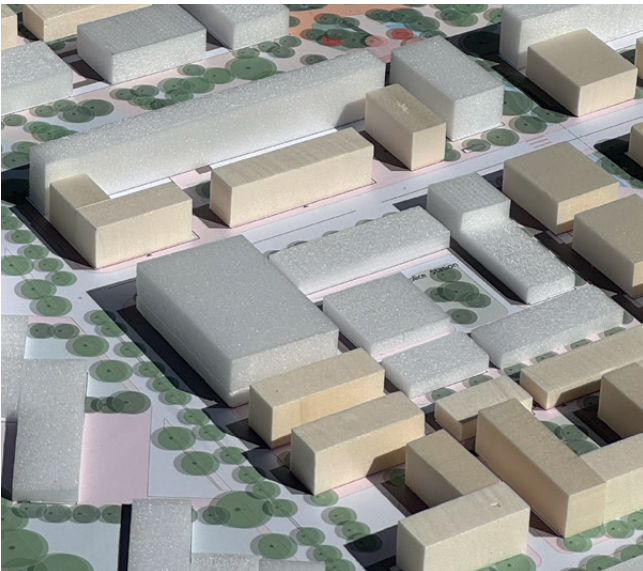
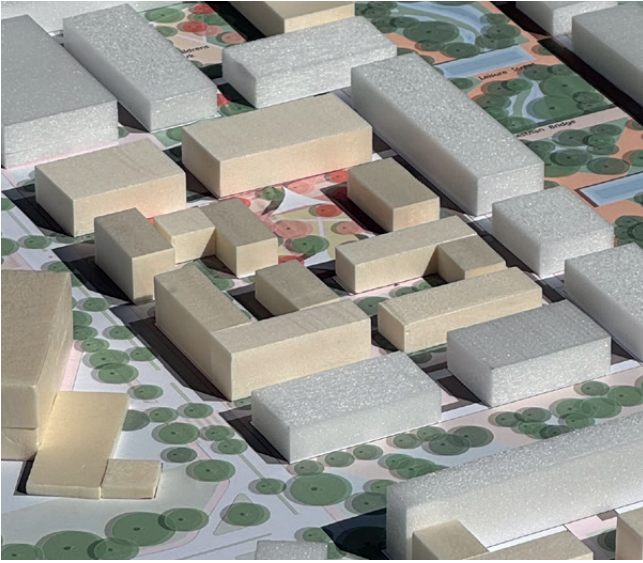
The large monotonous blocks of pavement with no retention capabilities and high impact on temperatures would be mostly reduced. The landscaping architecture and public squares would thus orient themselves along ideas of circulatory natural systems of water and Greenery

This would be one building block towards the completion of the Green Band which was initially envisioned for the city and its Green-Blue Infrastructure could be extended throughout other Sectors.











# Blue Infrastructure and Public Space



Cultural Square Visualisation

## CULTURAL SQUARE

The Culture Square as seen in our Zoom-In serves as our main example for a new approach to the free spaces. We are opting for a small and use focused design of these public areas with a major focus on green-spaces, plants and the river infrastructure supporting these and enhancing local micro climate.

In the visualisation we can see how the buildings heights relate to each other and to what degree the formerly vast, uniform and paved area was broken up by new spaces and further extended Tree and bush coverage.

The River can be seen in the background running through

the new green-spaces and the system of roads and pathways can be seen. The centrally located Cultural Tower in Orange provides a focal point and identity to the square and serves as an anchor point.

Thus the planned free-spaces are a interaction of carefully designated structural interventions, both large like the tower but also subtle like the re-connection of missing galleries between buildings. New green spaces, usage of existing foliage and parks, the water-elements to support this and a new designation of zoning uses to inform what would be happening on these public areas.



Public Green Spaces would be offered along the Green-Blue Belt for pedestrians as pockets of nature, providing shade and a natural cooling effect, the ground would be able to take in safe water and give it back to the environment at a later date. Similar green pockets would be placed throughout all sector-internal "Blocks".

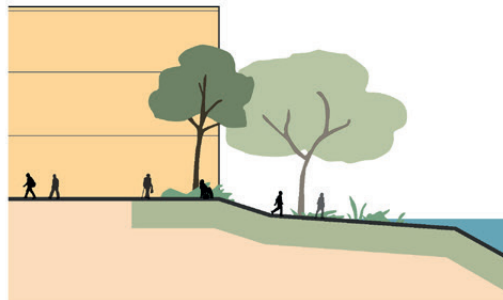
The water-features offers "Riverside" slopes where natural Greenery can be enjoyed by locals. Its a natural spot for plants bushes and trees and can be formed to the cities liking. Different greenery, city infrastructure and street furniture can adapt the space according to needs.

The water collection system would amend already present drainage systems and make the way of the water tangible for local people, examples would be systems like in Freiburg, Germany or the Civita Central Park, San Diego, USA. The water could therefore be controlled and used locally or across other sectors to water plants, support urban Gardening and be used by the locals and the city itself.

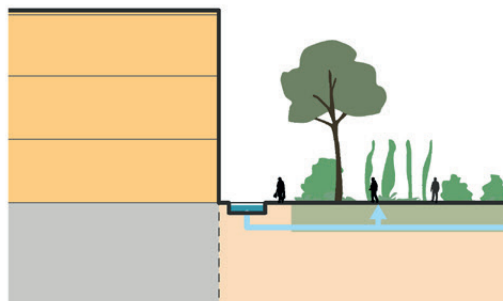
Public spaces can be strategically divided and linked by bridges, green-spaces, river-and water retention areas, thus creating the ability to define spaces, lead pedestrian traffic and focus areas on specific uses, breaking up monotonous large fellow or paced spaces with little definition.



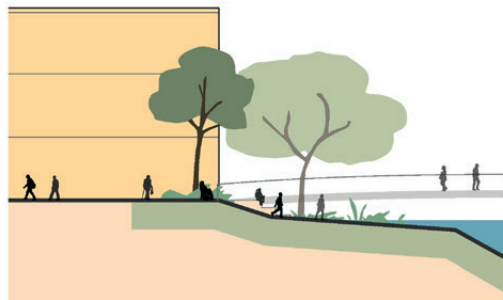
Public green Spaces



Riverside plains and recreational areas



Watering Solutions

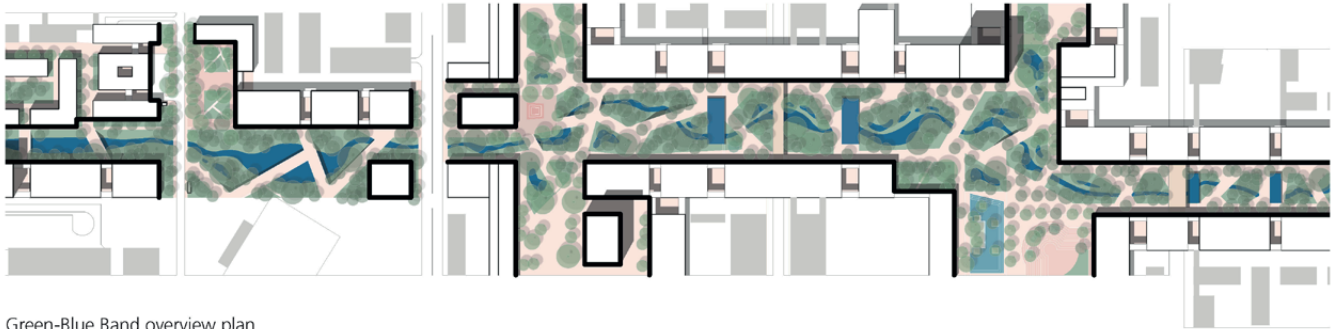


Rivercrossing and Infrastructure

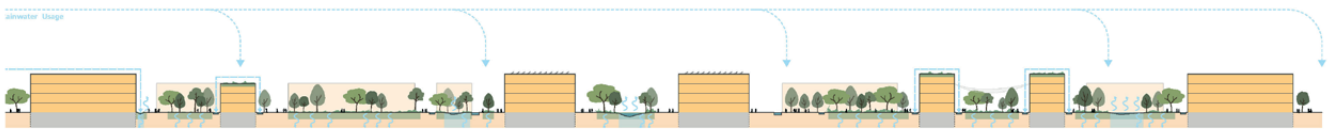


# Blue Infrastructure

Water Feature and Management



Green-Blue Band overview plan



Water System Section

## WATER INFRASTRUCTURE OVERVIEW

The Green-Blue Band overview plan shows how this central water feature runs throughout the entire sector.

The end points would be led into existing drainage systems in the bordering sectors or connected to watering systems. The water is expected to change in level depending on rainfall, supporting a dynamic re-naturalisation within the city and a natural water circulation.

The river is not a uniform canal but instead follows an organic form, creating narrow rapid flowing areas, deeper broad areas and shallow retention areas. This is made to ensure water-flow and react to different uses surrounding the river, retention focused areas are wider and deeper while areas, where the flow of the river is more pronounced, are narrower. In either case, completely standing water would be avoided by structural elements and the strategic inflow of collected and retained water at specific points.

The central nature of the Green-Blue band makes it easy to lead a network of connectors into it at various different points.

In the section, we can see how the system would work schematically within the framework of the sector, leading throughout various stations, collectors, neighbourhood canals, retention areas towards the river in the centre.

Specific substrate would ensure that if there is low water and no rainfall, the water would seep away to be retained underground instead of forming muddy puddles.

The buildings and neighbourhoods with their squares would further compliment this system and gain benefits from it like drainage systems, flooding protection and a cooling effect

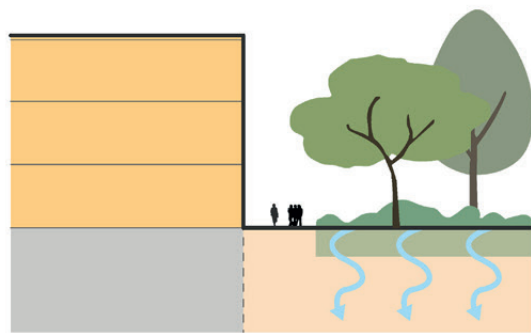


Green Corridors provide a positive contribution to the micro-climate and offer local greenery for pedestrians in a thus far heavily paved and sealed environment. These Corridors would also define the spaces of newly created residential areas.

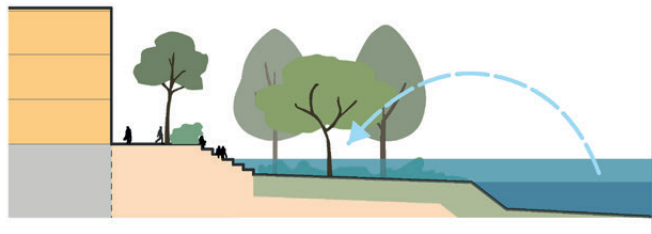
With heavy rainfall and changes in climate, extreme water situations are a possibility. The vast retention areas provide chances for water to naturally evaporate, help local fauna and relieve drainage systems. It further reduces risks of flooding and collects, filters and provides water as a vital resource of the City.

With the presents of a changing water aspect to the new green areas, naturalised green-spaces are possible and can host a wide arrange of plants and animals which can be curated by careful landscape planning and worked into a self sufficient system. Offering a increase to local biodiversity, while keeping unwanted pests away.

Built structures can serve as a integral part of this water system, building runoff can be collected, the water aspect serves as a natural drainage system, and a grid through the city leads the water away from structures towards these green fields and retention areas. Furthermore the building and its environment is cooled by this system.



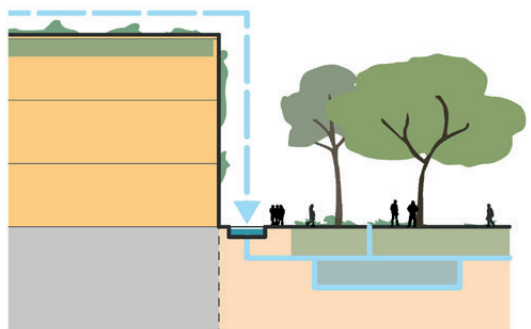
Green Corridors



Overflow Floodplains



Stream naturalisation and bio-retention areas

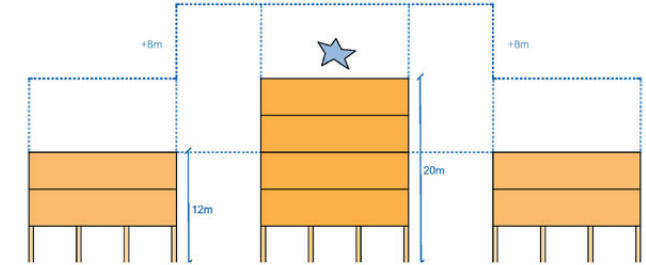
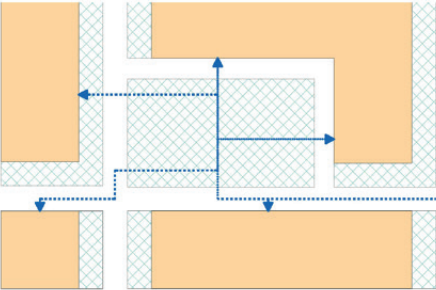
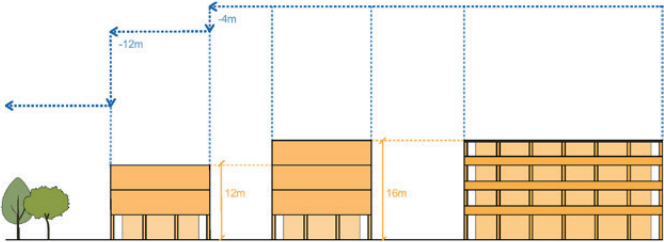
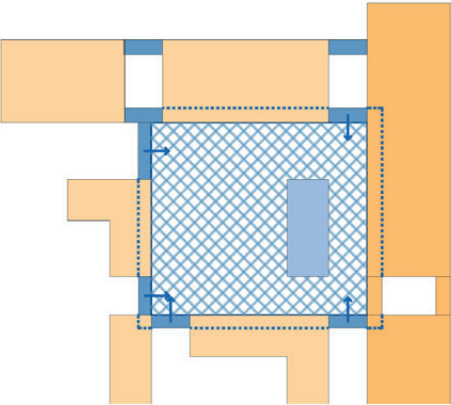
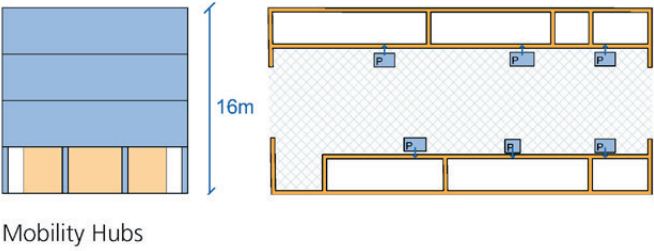
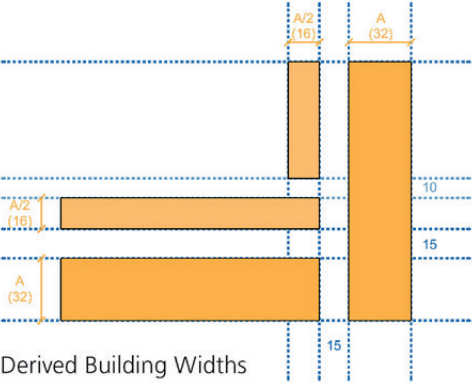


Building Collection Systems



# Design Manual

Including axonometric Overview



Design Code





Neighbourhood Visualisation

## BUILDING CODE

For creating our new buildings we took the original ones as a reference and make them half the size. We also created rules regarding the spacing between the buildings, differentiating between which buildings types are created.

The heights of our buildings would be oriented according to the existing 4 levels typologies, going down to 3 levels when the building is situated away from a block edge.

Closing the space usually makes a square more defined. With our squares we try to create the edges with galleries inspired by the existing characteristic structures

Within these common squares we will design a special building, which would offer different public activities and offering the people a place to meet.

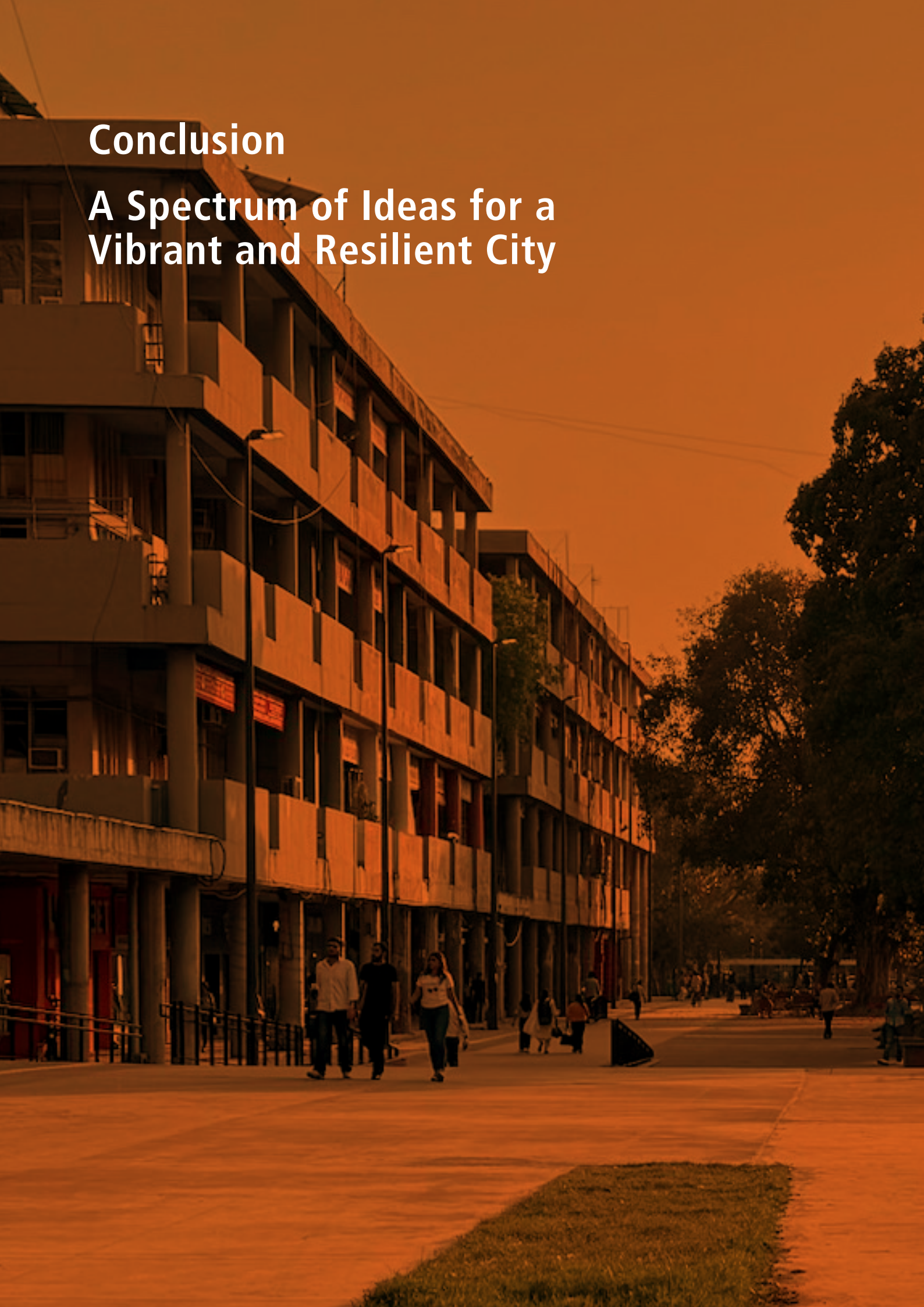
The entrance into the residential buildings would be through a common courtyard where neighbours would be able to share experiences, creating a small semi-private green space.

Parking lots would now be placed in strategic places to help decrease the traffic congestion. They would also serve as bike/scooter parking and as a electrical charging spot, offering a different driving perspective.



# Conclusion

## A Spectrum of Ideas for a Vibrant and Resilient City









# Conclusion



Chandigarh Sector 17D, The old scene of Neelam Theatre, Uploaded 2019

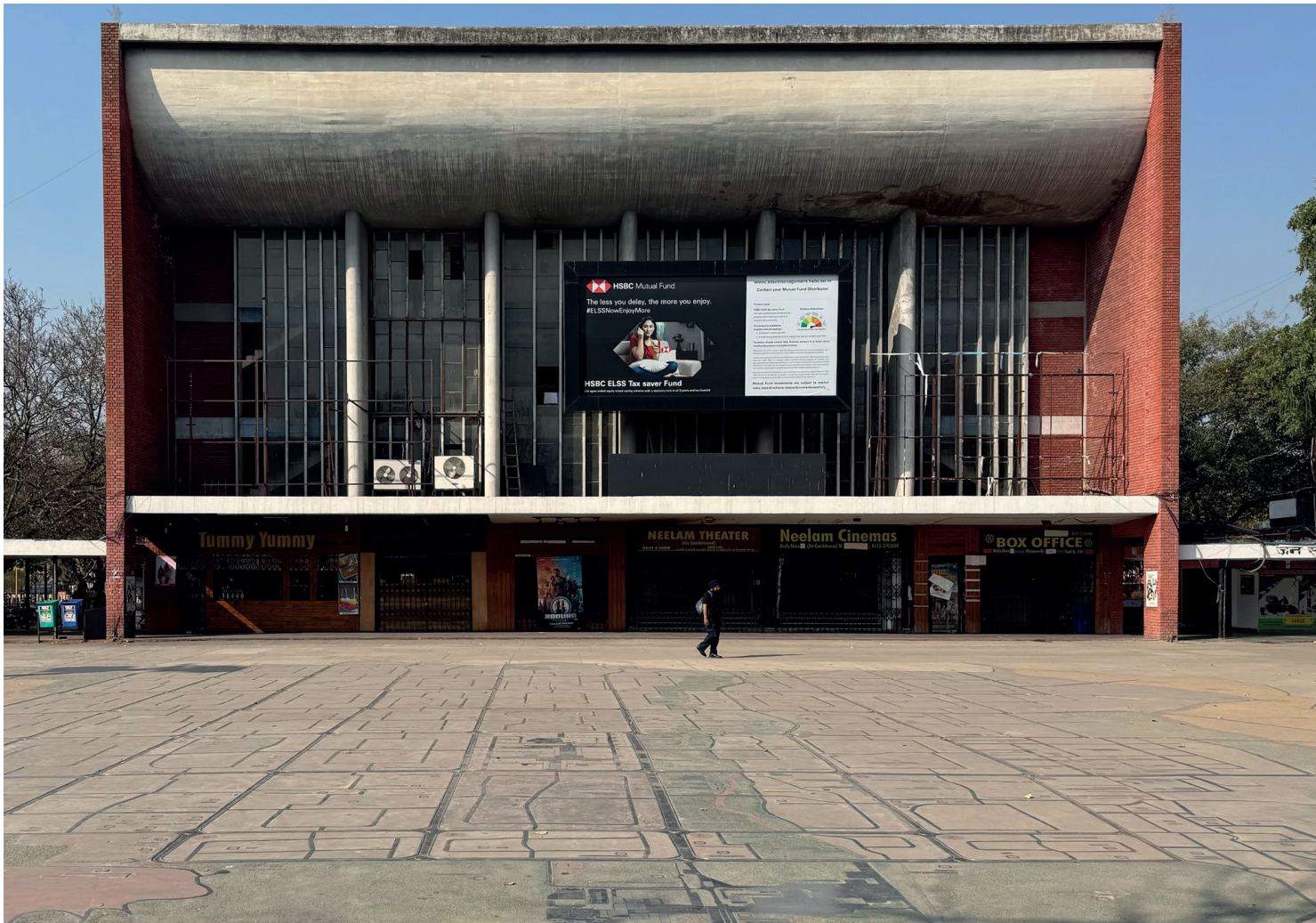
The seven projects developed in this urban design master studio at KIT collectively reveal the rich potential of Sector 17 to evolve into a vibrant, resilient, and inclusive urban center. While grounded in the same analytical framework and guided by Chandigarh's original planning principles, each proposal takes a unique approach to the city's challenges – creating a diverse spectrum of ideas that ranges from bold spatial reconfigurations to subtle interventions within the existing fabric.

Together, the projects form a broad and inspiring range of possibilities, demonstrating that urban design is not a one-size-fits-all solution. Some projects explore inventive approaches to underused land, some focus on activating

public spaces, while others experiment with mixed uses, social infrastructure, and new urban amenities. Despite their differences, all share a commitment to preserving Chandigarh's distinctive character while responding creatively to contemporary urban needs, sustainability, and climate adaptation.

These proposals illustrate how thoughtful interventions can transform vacant and underutilized areas into lively, functional, and inclusive spaces. Street-level parking is strategically reorganized, pedestrian areas are enriched with program and landscape elements, and social infrastructure – from schools to communal spaces – is carefully integrated to support a diverse urban population. Beyond the practical





Chandigarh Sector 17D, The new scene of Neelam Theatre, 2025

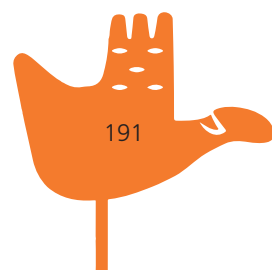
solutions, the projects ignite the imagination, offering novel ideas and approaches that challenge conventional thinking while remaining sensitive to context and heritage.

The diversity of these seven projects is their strength: they showcase a wide palette of urban design strategies, each offering different spatial qualities, programmatic mixes, and aesthetic visions. This variety encourages discussion, comparison, and evaluation, providing both a reference and inspiration for urban planners, decision-makers, and local stakeholders.

Ultimately, these works are more than exercises – they are provocative, hopeful, and actionable visions. They demon-

strate that even within an existing urban framework, there is enormous scope for creativity, experimentation, and transformation. The future of Chandigarh can be actively shaped through an approach grounded in heritage, careful analysis, and bold ideas.

By adopting an innovative approach to the city's cultural heritage, Chandigarh is able to demonstrate its ability to embrace change, create a new vision for the future, and remain a sustainable, livable city and an outstanding example of modern urban planning for generations to come.





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## Introduction

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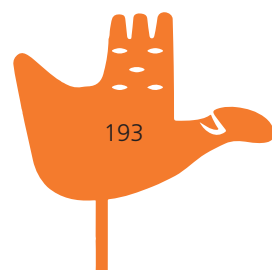
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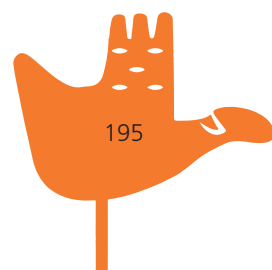
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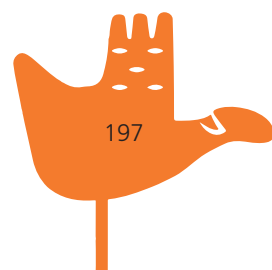
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# Imprint

## CHANDIGARH REIMAGINED URBAN DESIGN STRATEGIES BETWEEN HERITAGE AND TRANSFORMATION

### IESL - MASTER STUDIO SUMMER TERM 2025 EDITORS

Prof. Markus Nepl, Dr. Manuel Giralt, Nima Maghsoudi

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Dr. Manuel Giralt, Nima Maghsoudi

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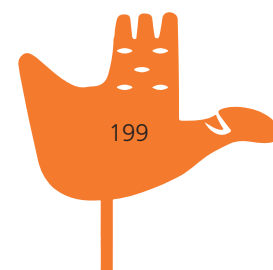
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The master plan for Chandigarh, developed by Le Corbusier together with his cousin Pierre Jeanneret, is widely regarded as a seminal example of a 'Functional City' based on the Charta of Athens. With a projected population increase of 35 % by 2035, the Chandigarh metropolitan region also serves as an illustrative case study of dynamic urbanization in India. This leads to a conflict of interests between the aim to preserve the central part of the city and the urgent needs of urban development.

The 'City Beautiful' is characterised by its tree-lined streets, minimal traffic congestion, vibrant neighbourhood squares, and meticulously designed neighbourhoods, contributing to an overall aesthetic appeal. However, analysis undertaken during an extended visit, in addition to literature research and interviews with local stakeholders, has revealed the weaknesses of the existing structures and its vast, underused public spaces. It has come to a point where the urban fabric is not able – or allowed – to adapt to the rapid changes in society regarding the way we live, work, move, shop and spend our leisure time.

Would it have been in Le Corbusier's interest to design the city as a living museum, or did he intend to create a constantly renewing urban structure?

This publication presents the results of an urban design master studio that developed alternative scenarios for a balanced urban transformation using a 'research by design' methodology. Several teams created concepts that explore the potential for a successful integration of cultural heritage and urban development.

By adopting an innovative approach to the city's cultural heritage, Chandigarh is able to demonstrate its ability to embrace change, create a new vision for the future, and remain a sustainable, livable city and an outstanding example of modern urban planning for generations to come.