

## HOLISTIC WELLNESS CENTER: URBAN OASIS BASED ON REGENERATIVE ARCHITECTURE IN SURABAYA

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### **ABSTRACT**

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The increasing demands of urban life in Surabaya, combined with intense workloads, rapid development, and poor work-life balance, have contributed to a significant rise in stress, anxiety, and mental health disorders, particularly among the productive-age population. Reports from the World Health Organization and the 2018 Riskesdas survey indicate that East Java has one of the highest prevalence rates of psychological disorders in Indonesia. Locally, prolonged working hours and toxic workplace environments are recognized as major contributing factors. At the same time, Surabaya holds strong potential in providing environmental and health-supportive infrastructure. The city has achieved 22% green open space (RTH), exceeding the national standard, and demonstrates growing public awareness of wellness and physical fitness. In response to these issues, this project proposes a Holistic Wellness Center as a regenerative urban solution. The design combines facilities for physical and mental well-being such as gym areas, yoga studios, spa, and reflection spaces with regenerative architectural strategies including green building integration, renewable energy systems, grey and black water recycling, and natural ventilation. This project aims to create an inclusive and sustainable facility that not only addresses mental and physical health concerns, but also contributes positively to urban ecological restoration and environmental awareness through regenerative design.

**Keywords:** *Holistic Wellness, Regenerative Architecture, Green Space.*

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### **INTRODUCTION**

Surabaya, the second-largest metropolitan city in Indonesia, faces significant physical and mental health challenges due to rapid urbanization, high work-related stress, and imbalanced quality of life. According to WHO and the 2018 Riskesdas survey, East Java records a relatively high prevalence of mental health disorders, with approximately 15% of the adult population experiencing depression or anxiety that affects their productivity. (Riskesdas, 2018; Yulia Indrasari, 2024) On the other hand, the city demonstrates strong potential for regenerative solutions, evident from its 22% green open space achievement surpassing national standards and growing public awareness of healthy lifestyles. (PERWALI kota Surabaya, 2017; TunasHijau, 2022).

Addressing these issues requires facilities that function not only as fitness centers but also as holistic recovery spaces integrating physical, mental, and emotional well-being. The proposed

Holistic Wellness Center responds to this need through regenerative architectural approaches that combine green technologies, natural vegetation integration, and urban ecosystem restoration. Planned facilities include gym areas, yoga and dance studios, spa and sauna, swimming pools, reflection gardens, and public green spaces. The application of regenerative principles is expected to move beyond minimizing environmental impact by actively contributing to ecological restoration, improving air quality, and enhancing the overall well-being of urban communities. (Ramadhan & Gandha, 2024) This design serves as a prototype for sustainable urban development, harmonizing human and natural systems, while supporting green city policies and improving the quality of life for Surabaya's urban workforce.

## LOCATION DESCRIPTION

The design site of the Holistic Wellness Center is located on Jl. Ngagel, Surabaya, a major urban corridor characterized by high activity density. The site selection was based on several considerations: accessibility, proximity to business and residential areas, and the urgent need for holistic recovery facilities within a dense urban context. The site covers an area of approximately 35.055 m<sup>2</sup>, bordered by an arterial road to the west, commercial areas to the south, and nearby residential areas.

This site description also refers to the Surabaya City Regional Regulation of 2014 (PERDA) regarding Regional Spatial Planning (RTRW) and the Surabaya Mayor Regulation of 2017 (PERWALI), which regulate technical provisions on land use and building requirements. Based on these regulations, the site is classified as a commercial-service zone, with Floor Area Ratio (KDB), Building Coverage Ratio (KLB), and Green Coverage Ratio (KDH) that are suitable for the function of a Holistic Wellness Center. (PERDA Kota Surabaya, 2014; PERWALI kota Surabaya, 2017). The site offers potentials such as its close integration with public transportation networks and the availability of existing urban green spaces that can be incorporated into the design. Constraints include high traffic noise, the hot-humid climate of Surabaya, and limited open space within the dense area. A regenerative architectural approach is implemented to optimize these potentials by utilizing local vegetation, applying natural noise buffers, and integrating green public spaces to support the building's function as an urban wellness center.

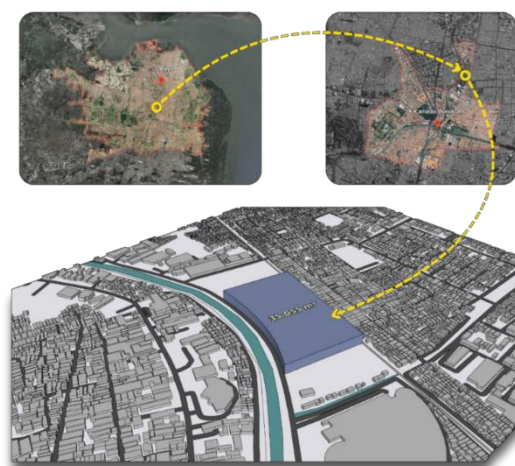


Figure 1. Site Location (Source: Author)

## THE SITE ANALYSIS

The site analysis identifies existing conditions and potentials influencing the design of the Holistic Wellness Center on Jl. Ngagel, Surabaya. The site is located within a dense urban corridor with strong connections to city transportation networks and nearby public spaces, providing potential integration with its surroundings.

Environmental linkage analysis reveals that the site is surrounded by commercial and residential functions, with proximity to key public facilities. View analysis indicates the best orientation toward the south, facing urban open spaces, while the northern side requires visual mitigation due to direct exposure to the arterial road. Access and building approach analysis highlight the main entry point from the northern arterial road, supported by pedestrian pathways to facilitate user mobility.

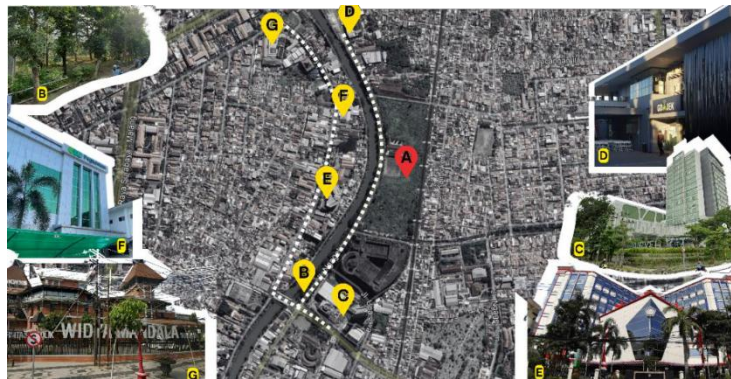


Figure 2. *Environmental Reach Analysis (Source: Author)*

Climate analysis shows high heat exposure in the east-west axis during morning and afternoon periods, while prevailing winds from southeast to northwest inform opening placements and vegetation planning. Topography, drainage, and landform analysis indicate relatively flat terrain with minimal flood risk, though proper drainage management is required to support environmentally responsive design.

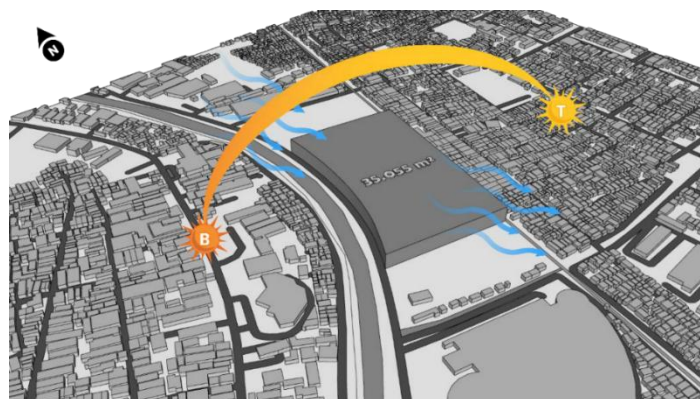


Figure 3. *Climate Analysis (Source; Author)*

Noise and pollution analysis identifies high noise levels on the northern side caused by heavy traffic and air pollution from the arterial road. Natural buffers, massing arrangements, and integration of green spaces are applied as key strategies to mitigate these impacts while enhancing the regenerative quality of the design.

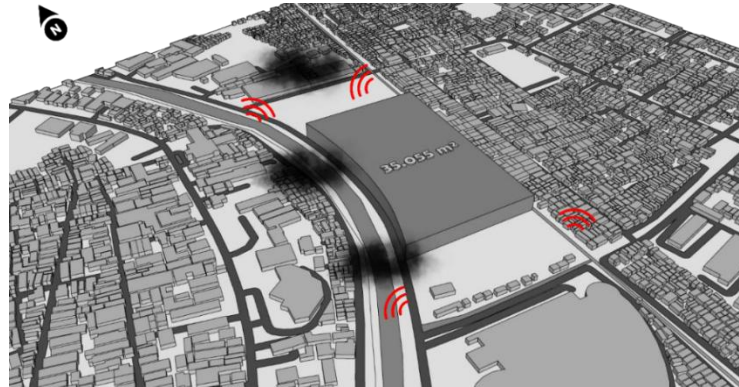


Figure 4. Noise and Air Pollution Analysis (Source: Author)

## CONCEPTUAL APPROACH AND WARFARE THEME

The design approach of the Holistic Wellness Center focuses on regenerative architecture principles, emphasizing environmental restoration while enhancing user well-being. This approach moves beyond reducing negative impacts by actively contributing to the urban ecosystem through vegetation integration, renewable energy management, and optimized natural ventilation.

The conceptual process originated from identifying urban issues such as density, noise, and the lack of mental and physical recovery spaces. These analyses led to the design theme “Urban Oasis”, which merges recreational and restorative functions within green and open spaces. Healing architecture principles are applied through natural lighting, eco-friendly materials, and transitional spaces that encourage relaxation.

The building massing is designed to be open and fragmented, following pedestrian circulation patterns to create seamless spatial experiences. Water elements, local vegetation, and organic forms are incorporated to mitigate heat and enhance visual quality. This theme forms the basis for spatial planning, massing composition, and circulation, positioning the Holistic Wellness Center as not only a wellness facility but also a catalyst for urban environmental regeneration.

## DESIGN THEME

The design theme of the Holistic Wellness Center is “Urban Oasis”, driven by the urban community’s need for a holistic healing space within a dense city environment. The theme is implemented through regenerative architecture and healing architecture approaches, emphasizing the integration of humans, nature, and spatial experience as part of a comprehensive recovery process.

The building is designed as a single unified mass applying the stepped massing concept, with a vertical tiered layout. Each level features variations in circulation and green areas, enhancing spatial experience while supporting natural thermal comfort. This form allows for the optimization of natural lighting and cross ventilation across all levels.

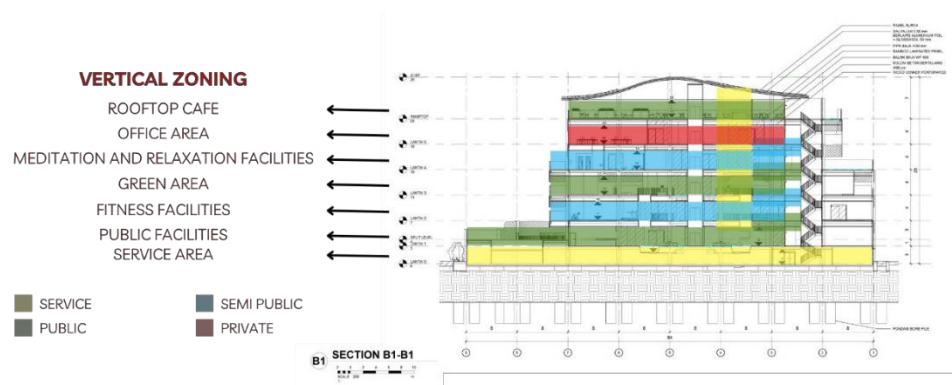


Figure 5. Vertical Zoning (Source: Author)

Architectural expression emphasizes organic and curved forms, creating a soft, open, and landscape-integrated impression. Pedestrian pathways flow seamlessly with outdoor and transitional spaces, guiding users through a gradual healing experience from public zones to more private ones. Elements such as local vegetation, water features, natural lighting, and eco-materials are applied to foster a space that supports physical, mental, and emotional recovery.

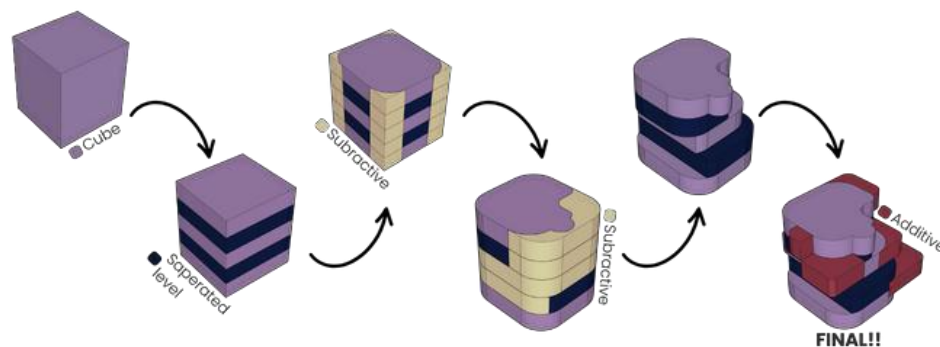


Figure 6. Concept of Form (Source: Author)

## IMPLEMENTATION OF CONCEPT IN DESIGN

The regenerative architectural concept of the Holistic Wellness Center is fully implemented through the integration of massing, spatial strategies, material selection, and green technologies all working together to create a sustainable, holistic recovery space. The building adopts a stepped massing configuration, forming a single mass that recedes backward, creating green terraces on each level. This allows for functional zoning, optimal natural lighting, and vertical landscape integration.

### FINAL DESIGN



Figure 7. Final Design (Source: Author)

Regenerative architecture criteria are applied through various strategies. First, the facade design follows a biomimicry based approach, inspired by natural patterns that support visual comfort, passive shading, and air circulation. Second, green space integration occurs both externally and internally through atriums, indoor vegetation, and open voids creating a healthier microclimate and a stronger human-nature connection.

In terms of green technology, the building utilizes solar panels on the rooftop, a rainwater harvesting system, and grey and black water treatment systems for landscape irrigation supporting sustainable energy and water use. Natural daylighting is enhanced through vertical openings and the use of stopsol glass, which filters excessive sunlight while maintaining thermal comfort inside the building.

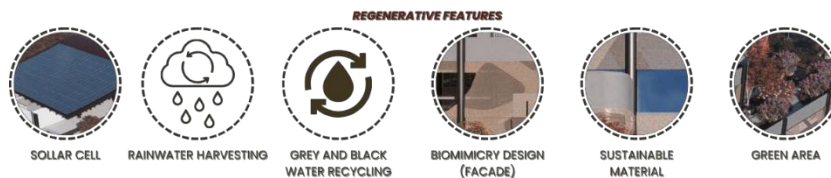


Figure 8. Regenerative Features (Source: Author)

In line with circular economy principles, materials such as self-healing concrete and recycled modular components are applied. The material and color palette is based on natural hues greens, earthy browns, and water blues offering a calming, nature integrated ambience. Lastly, the landscape and reflection concept is enhanced through open gardens, reflective pools, and organically flowing pedestrian paths facilitating a step by step healing experience for users.

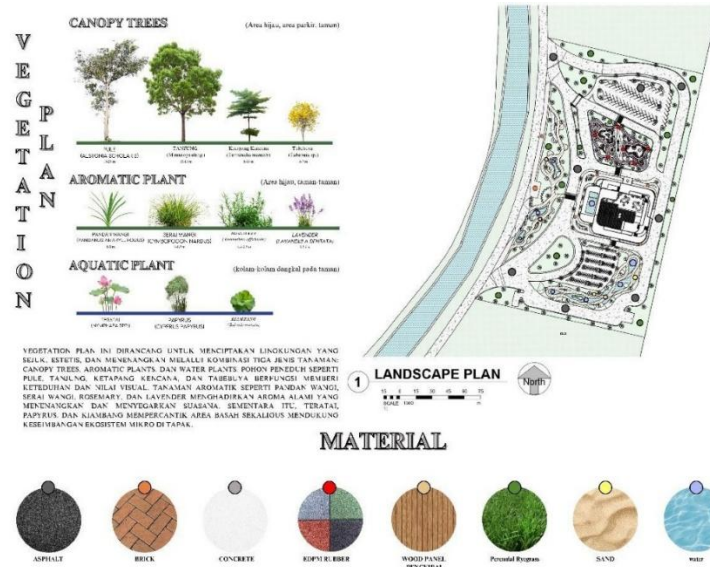


Figure 9. Vegetation Plan (Source: Author)



Figure 10. Implementation Primary Material (Source: Author)



Figure 11. Concept of Color Implementation

## CONCLUSION AND SUGGESTIONS

The design of the Holistic Wellness Center demonstrates that regenerative architecture can serve as a relevant solution to the urban community's need for holistic healing spaces, especially amid increasing stress and limited green space. By integrating natural elements, eco-friendly technologies, and immersive spatial experiences, the project aims to create a space that supports physical, mental, and emotional balance.

Through the concept of an "Urban Oasis," the building functions not only as a fitness facility but also as an inclusive public space that strengthens the connection between people and their environment. Design innovations such as stepped massing, biomimicry, and sustainable water and energy systems play a central role in achieving adaptive, efficient, and regenerative architecture.

As further development, similar designs should emphasize the use of local materials, functional flexibility for diverse user groups, and optimization of renewable energy processing and utilization supporting a healthier and more sustainable urban future.

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