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Research on the Renewal and Transformation of Waterfront Spaces in the Context of Urban Regeneration: A Case Study of Mengzhuiwan, Chengdu

Yuanjiao Qin
Southwest Minzu University, Chengdu, China

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Abstract

Waterfront regeneration can improve public access and neighborhood vitality, but commercial revitalization may also weaken residential inclusion and local identity. This study examines Mengzhuiwan, Chengdu, as a qualitative case of integrated industrial heritage and waterfront renewal under the park city agenda. A literature review, site observations, and informal exchanges with residents and business operators are used to examine spatial interventions, commercial restructuring, cultural programming, and project governance. The case indicates that reallocating road space, opening previously enclosed planting areas, and introducing cultural uses can reconnect the riverfront with neighborhood life. However, commercial homogenization, pressure on residential affordability, fragmented heritage management, and limited resident influence remain important concerns. The study proposes a coordinated strategy combining pedestrian access and incremental spatial renewal, culturally grounded business development, and clearer responsibilities within the engineering, procurement, construction, and operation model. Regeneration should be assessed through everyday accessibility, continuity of community life, and long-term stewardship as well as visitor activity. The findings provide a case-based framework for balancing waterfront activation with public value, while acknowledging the limits of qualitative evidence and unverified commercial indicators.

Keywords

Urban Renewal; Waterfront Regeneration; Mengzhuiwan; Industrial Heritage; Collaborative Governance

1. Introduction

China's transition from outward urban expansion toward the renewal of existing built areas has increased attention to waterfronts as public resources. Riverfronts accommodate ecological processes, pedestrian movement, recreation, and collective

memory. Their regeneration therefore involves decisions about access, heritage, everyday services, and the distribution of benefits. In Chengdu, the park city agenda has placed the Jinjiang greenway and the renewal of adjoining neighborhoods within a broader effort to improve urban living environments.

Mengzhuiwan, on the Jinjiang River in Chenghua District, offers a useful case through which to examine these relationships. Its twentieth-century industrial development left buildings and memories associated with enterprises such as the Hongguang Electron Tube Factory. Subsequent functional decline weakened the area's connection to both the river and the surrounding city. Renewal initiated in 2018 sought to combine public-space improvements, the reuse of existing buildings, commercial activity, and cultural programming. Earlier studies of Wangping community and everyday urbanism in Chengdu provide relevant contexts for understanding this approach .

The project integrates engineering, procurement, construction, and operation, referred to here as EPC+O. Linking construction with subsequent operation may improve coordination, but it also raises questions about who defines public value and how commercial objectives interact with resident needs. This paper asks how Mengzhuiwan's waterfront has been spatially and functionally reorganized, what tensions remain, and how its renewal strategy could better support inclusive neighborhood life. The analysis treats spatial design, business development, and governance as interdependent dimensions of regeneration.

2. Research Design and Case Context

2.1. Qualitative Research Approach

The study combines literature research with field-based observation. The literature review considers waterfront renewal, public-space design, urban regeneration, and Chengdu's neighborhood practices. Relevant journal articles, case accounts, and planning materials inform the interpretation of the site and help position the findings within wider discussions of waterfront renewal . The review is interpretive rather than a systematic evidence synthesis.

Fieldwork focuses on the arrangement of streets, buildings, landscape facilities, waterfront access, and commercial frontages. Informal exchanges with nearby residents consider perceptions of spatial change, while exchanges with business operators address the relationship between renewal and commercial activity. Photographs document selected conditions and interventions. These materials support a qualitative account of the case rather than a statistically representative evaluation of residents or businesses.

The available records do not specify the dates of all visits, the number of interviewees, or a standardized interview protocol. Accordingly, the analysis does not estimate causal effects or generalize interview observations to the entire neighborhood. Statements about commercial composition, rental change, and event

attendance are treated as contextual reports that require independent verification before being used as performance indicators.

2.2. Project Setting and Renewal Principles

The Mengzhuiwan project occupies a former industrial area developed during the 1950s and 1960s. Its principal waterfront intervention includes approximately 1 km of Wangping Street and the adjoining riverside route. The project combines food and beverage businesses, leisure activities, cultural uses, and community spaces. Its stated approach emphasizes retaining the character of existing buildings, activating functions, and implementing incremental renewal rather than relying solely on comprehensive redevelopment .

The analytical framework distinguishes three dimensions. Spatial renewal concerns the allocation of street space and physical access to the river. Functional renewal concerns the reuse of buildings, business mix, and cultural activity. Governance concerns responsibilities, operational arrangements, and resident influence. Evaluating these dimensions together makes it possible to identify why an attractive destination may still fall short of providing a durable and inclusive public environment.

3. Regeneration Interventions and Observed Changes

3.1. Reallocation of Riverside Street Space

Before renewal, a 7 m wide two-way carriageway occupied much of the riverside corridor. The absence of a clearly separated footway and buffer created conflicts between pedestrians and vehicles. Informal parking reduced usable circulation space, while fenced planting areas prevented access to land designated for urban greenery. These conditions limited opportunities for everyday recreation and weakened the relationship between shops, streets, and the waterfront.

The intervention reduced the former motor-vehicle carriageway to a 4 m wide cycle route, retained established trees in good condition, and removed enclosure from sections of the planting strip. Selected shrubs and ground cover were cleared to form accessible platforms; other areas received understory planting. Along approximately 500 m of riverfront, around ten platforms with different recreational functions were introduced. Table 1 summarizes the reported physical changes. The dimensions describe particular project sections rather than the entire renewal area.

Table 1. Riverside greenway conditions before and after renewal. Source: adapted from the author's original comparison.

Element	Before renewal	After renewal
Riverside route	7 m wide motor-vehicle carriageway; mixed pedestrian and vehicle movement	4 m wide cycle route within the reorganized waterfront corridor

Planting strip	Access obstructed by shrubs and fences	Fences removed and selected planting opened to public use
Recreation space	Limited access to enclosed riverside greenery	Approximately ten accessible platforms along a 500 m section, with retained trees and understory planting

These changes illustrate how the redistribution of existing space can support public use without requiring a wholly new waterfront. Opening the planting strip is especially important because visual greenery alone does not ensure public accessibility. The value of the intervention depends on whether the platforms and connecting routes remain open, safe, and usable by different groups throughout the day.

3.2. Adaptive Reuse and Commercial Restructuring

The former tax bureau building was adapted into a cultural complex combining the Mengzhuiwan Story Museum, a bookstore, a theater, and shared workspace. The wider neighborhood attracted bookstores, gift retailers, heritage food businesses, cafés, and restaurants. Figure 1 and Figure 2 show examples of commercial and street environments documented during the original fieldwork. These uses broaden the range of reasons to visit the area and connect building reuse with street activity.



Figure 1. An adapted commercial frontage in Mengzhuiwan. Source: author's field photograph.

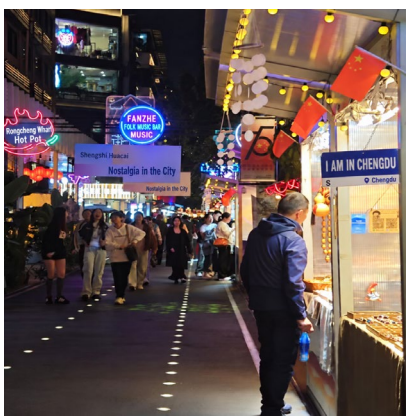


Figure 2. A neighborhood setting within the renewed Mengzhuiwan area. Source: author's field photograph.

Commercial restructuring has also been linked to event-based place promotion. The original account describes cooperation with local cultural brands and a street arts festival held in October 2020. It reports attendance exceeding 800,000 visits across associated cultural, commercial, tourism, and sports activities. Because the counting method and event boundary are not documented, this figure is contextual evidence of promotional ambition rather than a verified measure of project impact.

The main planning implication is that building reuse and tenant selection can operate together. Reuse preserves a physical setting, while the activities introduced into it determine how that setting is experienced. Nevertheless, attracting fashionable consumption does not by itself establish a stable relationship with the daily needs of surrounding residents.

3.3. Cultural Programming and Street Activity

Cultural activities, exhibitions, and themed markets form another component of renewal. The market known as Shier Yue Shi provides recurring opportunities for food, crafts, and creative products. Open-air stalls give young designers opportunities to display and sell their work, while street arts events turn ordinary routes into temporary cultural venues. Figure 3 documents this market-oriented use of neighborhood space.



Figure 3. The Shier Yue Shi market in Mengzhuiwan. Source: author's field photograph.

Recurring programming can sustain interest beyond the initial construction phase and allow streets to accommodate changing uses. Its contribution to cultural continuity, however, depends on the participation of local practitioners and residents. A program focused mainly on visitor consumption may generate recognizable images of a place while narrowing the range of ordinary activities that made the neighborhood distinctive.

4. Persistent Problems and Their Causes

4.1. Public Access and Discontinuity of Heritage

The pre-renewal dominance of vehicles and enclosed greenery shows how a riverfront can function as a transport corridor despite its potential public value. Physical improvements address part of this problem, but accessible space must also be connected to the wider street network and maintained as a shared resource. Figure 4 and Figure 5 provide further field documentation of street conditions in the case area.



Figure 4. Street conditions documented in the Mengzhuiwan area. Source: author's field photograph.



Figure 5. A further view of neighborhood street conditions. Source: author's field photograph.

Heritage stewardship presents a related difficulty. Complex property relationships can delay the maintenance and adaptive reuse of industrial buildings. Protection without a viable maintenance or use arrangement may allow deterioration to continue. The resulting gaps weaken spatial continuity and make it harder for industrial history to remain part of everyday neighborhood experience. Industrial heritage should therefore be considered through ownership, maintenance responsibilities, and feasible uses as well as architectural appearance.

4.2. Commercial Homogenization and Residential Inclusion

The original report raises concerns that food and beverage businesses and creative retail have become dominant, citing a combined share of approximately 80%. It also

reports rental increases of 60%-70%. Neither estimate is accompanied by a baseline inventory, sampling procedure, or time interval. These values cannot establish the extent of neighborhood change, but they identify issues that warrant systematic monitoring.

The underlying concern is that repeated business formats can reduce local distinctiveness while higher occupancy costs make it difficult for established residents and ordinary service providers to remain. If residential functions recede, the area may become dependent on visitor peaks and event schedules. Public-space vitality should therefore be considered alongside resident retention, affordable services, and activity during ordinary hours, rather than inferred from crowded commercial scenes alone.

4.3. Responsibilities and Limits of Participation

EPC+O integrates delivery and operation, but integration does not automatically clarify accountability. Government regulates and coordinates public objectives, while enterprises manage operations and tenant recruitment. Where these roles overlap, decisions about access, revenue, maintenance, and commercial programming may be difficult for residents to understand or influence. The challenge concerns the transparency of rules and the balancing of interests, rather than an inherent failure of the procurement model.

The case account also describes participation as insufficiently influential. Government-led objectives dominated early stages, and subsequent coordination through neighborhood organizations did not necessarily provide residents with enforceable influence over decisions. Consultation is limited when participants cannot see how comments are assessed or why proposals are accepted or rejected. More durable participation requires a defined process, a documented response, and opportunities to revisit operational decisions after construction.

5. Discussion and Optimization Strategies

5.1. Lessons from Comparative Waterfront Cases

The original comparative discussion considers Darling Harbour in Sydney and the Xuhui waterfront in Shanghai. Both illustrate the combination of former industrial settings, public-space improvement, cultural uses, and improved pedestrian connections. Their relevance lies in the coordination of access and reuse across a wider waterfront network, rather than in the direct transfer of visitor totals or commercial models to Mengzhuiwan.

These comparisons suggest that a waterfront should connect destinations with ordinary neighborhood routes and services. They also indicate the need to keep heritage adaptation, public access, and long-term operation within the same planning framework. Because the comparative material does not provide a harmonized dataset or independently documented indicators, it is used to identify

planning principles rather than to rank project performance. Related waterfront studies likewise offer context for strategies that combine spatial improvement with the renewal of existing urban functions .

5.2. Spatial Renewal through Connected and Incremental Interventions

5.2.1. Prioritizing Ground-Level Public Access

The ground level should provide a continuous and legible pedestrian environment, with clear relationships between cycling routes, shop entrances, public platforms, and neighborhood streets. Existing trees and small residual spaces can support sheltered resting areas. Any proposal for underground parking or additional commercial space should be tested against demand, flood conditions, construction feasibility, and its effect on surface access. Such proposals are future options rather than completed interventions established by this study.

5.2.2. Connecting Activity Anchors with the Wider Neighborhood

Cultural anchors such as bookstores and established lanes can attract activity to adjoining streets. Incremental renewal should connect these anchors through accessible routes and small public spaces, allowing benefits to extend beyond isolated destinations. Upper-level connections may be considered where they improve continuity, but their accessibility and maintenance requirements need to be assessed. Figure 6 illustrates the attention to small-scale design details described in the original case.

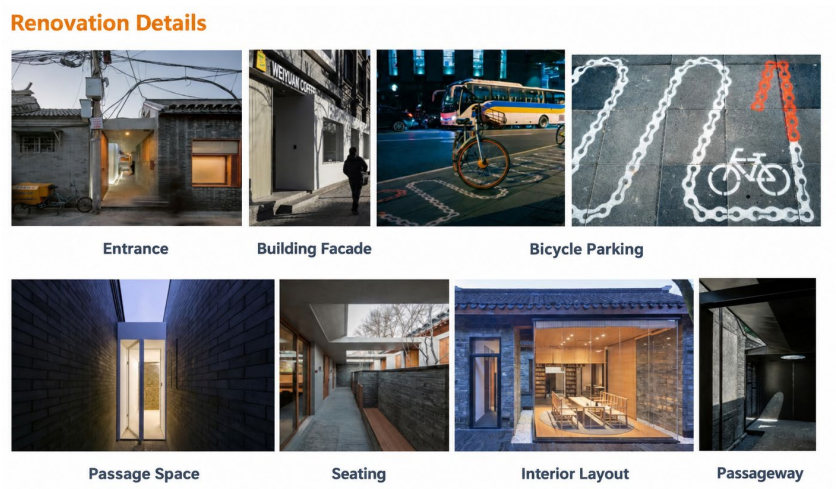


Figure 6. Details of renewal interventions in Mengzhuiwan. Source: author's field photograph.

5.3. Culturally Grounded Business Development

Tenant selection should encourage variety and a credible relationship with local culture. Traditional craft workshops, independent design businesses, community services, and affordable food outlets can complement leisure-oriented uses.

Admission criteria should address excessive repetition of business formats without treating everyday low-cost retail as intrinsically undesirable. A diverse business environment depends on both cultural distinctiveness and the continued availability of ordinary goods and services.

A tailored approach to shopfront adaptation can retain historic materials and proportions while accommodating individual operators. The use of brickwork and contemporary glazing, for example, should be evaluated through the character of each building rather than applied as a uniform visual formula. Cultural content is more likely to endure when supported by practitioners, programming, and viable tenancy arrangements than when reduced to decorative signs.

5.4. Accountable Governance within the EPC+O Model

A clearer allocation of responsibilities would distinguish public policy and oversight from commercial operation. Government should define access requirements and public-service commitments; operators should implement maintenance and business management within these requirements; residents should have regular opportunities to influence both spatial management and programming. Digital participation can supplement face-to-face discussion, but it should not exclude people who are less able to use online platforms.

Operational agreements should identify which spaces remain freely accessible, how temporary commercial occupation is approved, and how complaints are resolved. Affordable tea stalls, community squares, and other ordinary meeting places can help retain neighborhood use. Their effectiveness should be monitored through observed access and user experience. The objective is a continuing relationship between residents and the waterfront, supported by transparent decisions and sustained maintenance.

6. Conclusions

Mengzhuiwan demonstrates how reallocating street space, opening enclosed greenery, reusing existing buildings, and organizing cultural activities can reconnect an industrial waterfront with urban life. The case also shows that physical accessibility and commercial popularity do not resolve every dimension of renewal. Heritage fragmentation, repeated business formats, affordability pressures, and weak resident influence require attention during operation as well as design.

The proposed strategy combines connected pedestrian spaces, incremental adaptation, a culturally grounded and diverse business mix, and more accountable collaboration within EPC+O. Evaluation should include everyday access, the continuity of residential and service functions, heritage maintenance, and the responsiveness of management. These priorities connect the park city agenda with the practical conditions of neighborhood life.

The findings remain case-based. Future research should document fieldwork dates

and interview procedures, establish comparable tenant and rental inventories, and observe use across seasons and times of day. These measures would allow the qualitative concerns identified here to be tested and would provide a stronger basis for evaluating the long-term social and environmental effects of waterfront regeneration.

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