

Beyond Bigness: A Green, Walkable Future for Al Bateen

Introduction

Urban development in the Gulf region, particularly in the cities of Abu Dhabi and Dubai, has historically been characterized by an ambitious embrace of scale, rapid transformation, and a preference for monumentality. Fueled by global capital, petroleum wealth, and aspirations of international recognition, urban design has often prioritized infrastructural grandeur and iconic architecture over more subtle aspects of the built environment such as walkability, community interaction, and environmental sustainability. While these cities have earned accolades for their skyline-defining towers and artificial islands, they have simultaneously produced spaces that are fragmented, automobile-dependent, and socially isolating.

The site of Al Bateen Executive Airport in Abu Dhabi exemplifies the legacy of such an approach. With over 200 hectares of centrally located land largely underutilized, the airport currently serves a narrow demographic of VIP travelers and private jets. It is fenced off from adjacent neighborhoods, with the 3.2 km runway acting as a physical and symbolic barrier to connectivity. Less than 10% of the land is built upon, with only about 500 staff and no residents occupying the site. Yet, its location within the urban core, combined with its proximity to coastal frontage and an existing urban grid, makes it an unparalleled candidate for redevelopment.

This paper argues that replacing Al Bateen Airport with a dense, green, human-scale, mixed-use neighborhood represents a transformative shift in Abu Dhabi's urban planning philosophy. Instead of serving a privileged few, this prime site can become a vibrant, accessible district organized around everyday life. In alignment with international precedents and theories of human-scale urbanism, we propose to reconnect the site to surrounding neighborhoods, establish a fine-grain walkable grid, create a mixed-use and mixed-income fabric, and repurpose the existing runway into a continuous 3-km green promenade. This proposal draws on the works of Lefebvre, Sim, Sennett, Jacobs, and others to demonstrate how regulatory tools and design frameworks can make such a vision both ideologically grounded and practically implementable.

From Monumental Bigness to Spatial Justice

The United Arab Emirates, like many rapidly urbanizing states, embraced what Rem Koolhaas termed "bigness" (Koolhaas, 1995). In cities such as Abu Dhabi and Dubai, this resulted in vast suburban sprawl, mega-projects like Yas Island and Palm Jumeirah, and heavily privatized public spaces. Henri Lefebvre's concept of "abstract space" critiques exactly this condition: a technocratic, commodified spatial order that favors administrative control and visual spectacle over lived experience (Butler, 2012). Al Bateen, with its restricted access and minimal usage, is a textbook example of abstract space. Its infrastructure not only privileges elite mobility but excludes everyday urban interaction.

In contrast, Lefebvre's idea of "the right to the city" emphasizes the democratization of urban space. It demands that cities respond to the needs and rhythms of everyday life, offering opportunities for citizens to shape their environment and participate in public life. As Butler (2012) notes, asserting this right requires us to imagine urban design not merely as a product of state power or capital investment but as a collaborative, social process. In practical terms, our proposal fulfills this mandate by turning an exclusive zone into a public asset. We dismantle the airport's spatial wall and instead stitch the land back into the existing street network through a fine-grained, pedestrian-friendly grid.

Moreover, Jane Jacobs (2004) warned that when urban planning ignores the vitality of everyday life, civilizations risk a form of cultural amnesia—a Dark Age Ahead. She argued for neighborhoods that foster "sidewalk ballet," diversity of use, and informal social contact. Al Bateen's current condition, serving fewer than 40 flights per day, is functionally obsolete in a city that urgently needs more affordable housing and walkable districts. Redeveloping it in the spirit of Jacobs is not only a practical reuse of land but a cultural imperative.

Soft City and the Framework of Comfort and Flexibility

David Sim's "Soft City" presents a powerful alternative to rigid, top-down urbanism. He emphasizes designing cities that are comfortable, inclusive, adaptable, and human-scaled (Sim, 2019). According to Sim, density should not be feared if it is designed with care, allowing for

close proximity between work, home, leisure, and services. This approach rejects the sharp separations of modernist planning in favor of overlap and multifunctionality.

In the Al Bateen proposal, this philosophy is translated into a "smart, compact density" strategy. Each block is designed to be traversed within two minutes, ensuring permeability and increasing pedestrian activity. The mix of mid-rise and high-rise buildings balances density with human scale, avoiding the superblocks that dominate many Gulf developments. Our use of mixed typologies also mirrors the goals of affordability and inclusivity—30% of residential units will be designated as affordable housing, a vital intervention in a city where high rents exclude many middle- and lower-income workers.

The proposal's core feature is the transformation of the 3.2 km runway into a linear green spine. Much like the 6-km greenway at Mueller Airport in Austin and the planned pedestrian promenade at Downsview in Toronto (YZD, 2024), our spine serves both ecological and social purposes. Lined with trees, shaded pathways, play areas, and bike lanes, the green spine becomes a space for movement, gathering, and biodiversity. It reflects what Sennett and Sendra (2020) describe as "infrastructures of disorder"—spaces designed to remain open to change and layered use.

This "soft infrastructure" also connects to everyday interventions observed in older Abu Dhabi neighborhoods. In W46 Block in Al Mushrif, residents organically activated alleys with carpets, seating, gardens, and fountains (Ahmmed & Sejona, 2025). These informal spaces demonstrated how residents adapt their surroundings for social life, even when planning frameworks are absent. Our proposal codifies this bottom-up vitality through zoning regulations that mandate flexible ground-floor use, encourage community gardens, and allow informal vendors in designated nodes.

Regulatory Tools for Human-Scale Transformation

Turning a visionary design into built reality requires institutional and regulatory translation. As observed in *Plan Abu Dhabi 2030*, densification in central areas like Al Bateen is part of the long-term urban vision (UPC, 2007). However, such transformations often falter when

left to market forces alone. Without strong planning guidance, redevelopment risks devolving into gentrification or isolated high-end enclaves.

Our proposal envisions zoning rules as enablers of a just urban form. We define four core regulatory instruments:

1. **Grid-Based Parcelization:** Superblocks are eliminated. Street layouts mirror historic street widths (6-12 meters), ensuring every block is permeable and walkable. This recalls the "Neighborhood Unit" model advocated by Clarence Perry (LeGates & Stout, 2011).
2. **Land Use Integration:** Every block must include a combination of residential, commercial, and community services. No more than 70% of a building's footprint may be dedicated to a single use. This hybridization guarantees activity at different times of day, enhancing safety and vitality.
3. **Density Management:** Mid-rise buildings (5-8 floors) form the majority, with taller towers (up to 25 floors) positioned along the spine and plazas. Floor area ratios are capped to ensure solar access and reduce overshadowing.
4. **Green Infrastructure Mandates:** A minimum of 20% of each block is reserved for open space. Tree planting, bioswales, and permeable paving are required, aligning with sustainability goals.

These regulations create what Jan Gehl (2010) calls "life between buildings" by ensuring human interaction is embedded into the physical design. We also borrow from the New Urbanism charter, which emphasizes fine grain, compact form, and public space hierarchy.

Additionally, our zoning recognizes the importance of difference. Lefebvre's concept of "differential space" suggests that urban life thrives on diversity, complexity, and contradiction (Butler, 2012). Thus, our code supports architectural variation, mixed-income tenures, and non-standard plot sizes—breaking the monotony that afflicts many master-planned communities.

Comparative Precedents and Local Adaptation

While the redevelopment of Al Bateen is ambitious, it is not without precedent. Mueller Airport in Austin transformed a 280-hectare airfield into a thriving community with 5,900 homes (35% affordable), 140 hectares of parks, and four million square feet of commercial space. Similarly, Toronto's Downsview redevelopment will accommodate 55,000 residents and 30 hectares of parks on a former military airfield (YZD, 2024).

Al Bateen is arguably better positioned than either site: it is only 3 km from the city core, adjacent to the coastline, and embedded within an existing grid. This geographic advantage means fewer infrastructural hurdles and greater potential for integration. The urban history of Abu Dhabi also provides insight. The modernist architecture of the 1960s-1980s, documented in *The Abu Dhabi Guide* (2014), included experimental housing types, shaded arcades, and central courtyards—all features that resonate with contemporary principles of livability and sustainability. Our plan reinterprets these elements in new forms.

Furthermore, community acceptance will hinge on offering flexibility. As Richard Sennett (2020) notes, a city cannot be fully planned; it must also allow space for improvisation. Accordingly, our proposal includes a participatory planning phase, offering residents and stakeholders a voice in determining key public spaces, housing typologies, and mobility features.

Urban Equity and Environmental Resilience

Beyond the social and spatial implications, the transformation of Al Bateen is also a climate resilience strategy. In the context of the Gulf's increasing vulnerability to heat, water scarcity, and rising sea levels, the built environment must shift from concrete sprawl to adaptive green infrastructure. The green spine proposed in this redevelopment acts as more than just a recreational asset, it serves as a stormwater management system, a carbon sink, and a microclimate moderator. Sim (2019) emphasizes that good density can be low-carbon if it reduces travel needs, integrates shading, and allows for passive cooling strategies.

The Gulf's dominant building paradigm, glass towers and vast asphalt parking lots, contributes heavily to urban heat island effects. According to Gehl (2010), reintroducing street trees, narrow shaded alleys, and enclosed courtyards can significantly mitigate urban overheating. Our

proposal adopts these measures holistically. The new urban blocks are designed with internal green courtyards and ventilated breezeways. Materials with low thermal mass are prioritized. Shaded arcades—drawing from historical Gulf architecture, line commercial streets, providing relief to pedestrians.

This approach also speaks to a broader shift in Gulf urbanism: from extractive development to regenerative design. Abu Dhabi's Vision 2030 identifies sustainability as a core pillar, yet much of the development remains carbon-intensive. Reclaiming Al Bateen as a green, low-energy neighborhood sets a new precedent. It signals that environmental responsibility and livability are not in opposition, but mutually reinforcing.

Mobility, Accessibility, and Urban Justice

Urban mobility is central to achieving social equity. In Abu Dhabi, like many modern cities, the dominance of private vehicles has marginalized pedestrians, cyclists, and those without access to cars. Public transportation, while improving, remains insufficiently integrated into daily urban life. The redevelopment of Al Bateen is an opportunity to pivot towards a mobility paradigm that centers people over cars.

The site's new layout eliminates internal highways. Instead, it features a mesh of pedestrian-priority streets, bike lanes, and transit corridors. Public buses and potential tram lines will circulate through the site, linking to existing transportation hubs. Parking is placed underground or at block peripheries to prevent surface-level domination. Streets are designed with Gehl's "5 km/h" principle in mind, prioritizing visibility, safety, and interaction over vehicular throughput.

By designing for walkability and transit access, the proposal empowers children, elderly residents, and workers to navigate the neighborhood independently. This independence is not a luxury but a fundamental right, linked to dignity and inclusion. Moreover, by enabling car-free lifestyles, the development reduces household expenses and carbon emissions.

Mobility also intersects with gender justice. Research shows that car-centric environments disproportionately disadvantage women, who often perform caregiving tasks requiring short, flexible trips (Wheeler, 2011). The Al Bateen plan supports mixed uses, daycare centers, clinics,

and local shops, within walking distance, reducing the burden of mobility on caregivers and increasing community cohesion.

Cultural Continuity and Architectural Identity

A common critique of redevelopment projects in the Gulf is their tendency toward architectural pastiche or imported aesthetics. However, a truly inclusive urbanism must also be rooted in place. The architectural character of Al Bateen's new district should reflect Abu Dhabi's historical forms, courtyards, shaded sikkak, wind towers, while also embracing innovation.

Rather than enforcing a rigid architectural code, our proposal encourages a design palette inspired by traditional Emirati typologies but interpreted through contemporary materials and climate-adaptive technologies. Buildings are permitted to vary in façade articulation, roof forms, and colors, but must adhere to sustainability targets and public realm quality metrics. Community centers, mosques, and schools are prioritized as architectural landmarks, anchoring the social life of each block.

This approach counters the homogenization common in mega-projects. It affirms Lefebvre's idea of differential space, a space that allows for multiplicity, contradiction, and memory (Butler, 2012). It also reinforces Jacobs' notion that cities are complex ecosystems, not machines to be engineered into uniformity.

Art and culture are also embedded in the master plan. Murals, shaded galleries, and performance stages are distributed throughout public spaces. A portion of the green spine is reserved for rotating cultural programming, markets, festivals, and installations. This not only animates the district but ensures cultural continuity as the city evolves.

Conclusion

The vision for transforming Al Bateen Airport is ambitious, but ambition is exactly what is needed at this inflection point in Abu Dhabi's development. The city must not only plan for growth but also for cohesion, equity, and resilience. Replacing the underused runway with a dynamic green spine, reconnecting the fragmented urban grid, embedding mixed-use and mixed-income housing, and nurturing a participatory, human-scale public realm are not merely design choices, they are ideological commitments.

This transformation is not about nostalgia or aesthetic correction. It is about creating a future where every citizen has the right to live in a neighborhood that is beautiful, functional, and inclusive. Where design regulations protect diversity rather than standardize it. Where everyday life, walking your child to school, chatting with neighbors, resting under a shaded tree, is the central concern of planning.

Ultimately, the Al Bateen proposal champions the return of public life to the core of Abu Dhabi. It stands as a counter-model to gated compounds and spectacular but empty plazas. It draws strength from global best practices and from the region's own architectural lineage. Most importantly, it sets a precedent for how post-oil cities in the Gulf can thrive, socially, environmentally, and culturally, by embracing not more bigness, but more of the everyday.

As cities face growing pressures of climate change, population growth, and socio-economic polarization, Al Bateen's reimagination offers a roadmap. It shows that the city can be redesigned not from the top-down but from the street up, through policies that invite participation, architecture that encourages coexistence, and spaces that celebrate life in all its ordinary beauty.

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Governing Implementation and Long-Term Success

While the design vision is critical, the success of Al Bateen's transformation ultimately depends on its governance. Institutional frameworks must be designed to ensure continuity, transparency, and accountability throughout the redevelopment process. A multi-stakeholder development authority could be established to manage phasing, monitor compliance with zoning codes, and coordinate public-private partnerships. This body should include representatives from local government, residents, developers, sustainability experts, and urban design professionals to ensure that the diverse goals of the project are met.

Furthermore, ongoing evaluation mechanisms, such as community feedback loops, performance metrics for walkability and public space usage, and adaptive planning reviews, should be built into the process. As cities are living entities, flexibility must be embedded not only in architecture but in governance.

Importantly, the long-term affordability of the district must be safeguarded. Policies such as inclusionary zoning, rent caps for certain income groups, and support for cooperative housing models can maintain the mixed-income character of the area. Without these, even the best design will fall short of its social justice aims.

By ensuring that design excellence is matched with institutional foresight and participatory planning, the Al Bateen transformation can set a benchmark for equitable urban development in the Gulf and perhaps inspire similar efforts in other rapidly urbanizing parts of the world.

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