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Land, Governance & Settlement Transformation

Courtyard Housing for Dignified Urban Density: Lessons from the ZIMA Homes Affordable Housing Pilot, Kenya

Rapid urbanisation across the Commonwealth is increasing pressure to deliver affordable housing at higher densities without compromising liveability. ZIMA Homes in Nairobi demonstrates how courtyard-based, mid-density housing can provide climate-responsive, community-oriented homes while remaining affordable. The project offers practical lessons for planning reform, land strategy, and scalable delivery of dignified urban housing.

Image: Zima Homes, Nairobi. Credit: Sustainable Housing Technical Group (SHOUT)

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1. Executive Summary

Kenya's rapidly growing cities must deliver significantly more affordable homes while increasing urban density without compromising liveability, climate resilience, or dignity. A widening housing deficit—driven by rapid urbanisation, rising land values, and prescriptive zoning limits innovation in density and constrains delivery of safe, climate-responsive housing for low-income households.

ZIMA Homes[1], an award-winning, EDGE-certified[2] project in the Nairobi Metropolitan Region, demonstrates a scalable solution. Its mid-density courtyard typology combines narrow building depths, single-loaded corridors, passive cooling, and green micro-infrastructure to deliver naturally ventilated, well-lit homes. The scheme achieves higher density while improving comfort, safety, community interaction, and environmental performance.

Operating within existing regulations, ZIMA illustrates how performance-oriented planning can enable more liveable density. It provides practical lessons on land strategy, phased delivery, modular construction, digital design, and gender-responsive governance. As such, it offers a replicable model for inclusive, climate-aligned, human-centred urban development in rapidly urbanising contexts.

[1] Zima Homes: https://zimaresidences.com/
[2] IFC EDGE: https://edge.gbci.org/

2. Context and Challenge

Delivering affordable housing at scale requires balancing two pressures: increasing supply while ensuring dignity, safety, and healthy living conditions. Across Africa, urbanisation is accelerating, with around half the population projected to live in cities by 2050 (CAHF[3], 2022).

In Kenya, Nairobi faces a housing deficit exceeding two million units. Annual demand is approximately 250,000 units, yet only 50,000 are delivered, and just 2% are affordable to low-income households. Informal settlements house over 60% of residents on roughly 6% of land (KIPPRA[4], 2024). Income data highlights the gap: households at the 40th percentile earn about KES 24,500 per month, while those at the 80th percentile earn KES 42,000–45,000, well below the levels served by formal housing markets, while households at the 80th percentile earn around 42,000- 45,000 per month. Less than 4% of formal housing is affordable to the bottom 80% of households, with half accessible only to the top 1%. (REALL[5], 2022).

Planning regulations play a central role. Kenya's system relies on prescriptive zoning—fixed standards for plot ratios, height, setbacks, and land use. While providing certainty, these rules constrain design innovation and limit responses to local climate and social needs. According to Kenya's housing policy and law, affordability is defined as housing costs below 30% of income, meaning households earning KES 25,000–45,000 can afford only KES 7,500–13,500 monthly, far below prevailing market levels. (NCPD[6], 2019). This places most Nairobi's population well below the income levels typically served by the formal housing market.

ZIMA Homes addresses this "missing middle" households too affluent for subsidised housing but excluded from formal markets. It targets lower-middle to middle-income groups (around the 40th–80th percentiles), aligning with Kenya's Affordable Housing Programme and broader Commonwealth priorities.

An alternative to prescriptive zoning is performance-oriented planning, which focuses on outcomes such as daylight, ventilation, safety, and environmental performance. ZIMA demonstrates how courtyard housing can reconcile density with wellbeing and sustainability. At scale, such typologies could deliver significant housing volumes while maintaining walkable, socially cohesive urban environments.

[3] Centre for Affordable Housing Finance in Africa (CAHF): https://housingfinanceafrica.org/
[4] The Kenya Institute for Public Policy Research and Analysis (KIPPRA): https://kippra.or.ke/
[5] REALL: Understanding-Household-Incomes_Kenya_12Dec22.pdf
[6] National Council for Population and Development (NCPD): Policy Brief No. 65

Case Study: ZIMA Homes

ZIMA Homes is an EDGE-certified affordable housing development in the Nairobi Metropolitan Region, where urban expansion is driven by rising land values in the core. Conceived as a 120-unit pilot, its first phase has delivered 84 occupied homes across two blocks.

The project aligns with Kenya's Affordable Housing Programme, gender inclusion frameworks, and emerging sustainability regulations, functioning as a live demonstration of policy in practice.

Its defining feature is a mid-density courtyard typology: three residential blocks arranged around a central courtyard to maximise daylight, cross-ventilation, and privacy, while capturing prevailing winds. Openings on east and west façades are minimised to reduce heat gain.

A shallow building depth (≈7.5 metres) and single-loaded corridors ensure all units, studios, one- and two-bedroom apartments, receive natural light and ventilation. This enables passive cooling, reducing energy demand while maintaining comfort.

Nature is integrated as infrastructure. Green walls, a planted courtyard, and a rooftop garden improve microclimates and provide shared social space. These passive measures are complemented by energy modelling, modular prefabrication, solar hot water systems, efficient fixtures, and shading devices, achieving full EDGE certification.

ZIMA also functions as a policy-linked demonstration. It has tested streamlined approvals, modular construction, blended finance, and gender-responsive governance. Units are priced between USD 13,000–35,000, with rents of USD 100–250 per month, well below Nairobi's mainstream market, which targets households earning above KES 70,000.

The scheme is primarily owner-occupied, with units sold to households, 74% of buyers are women, reflecting strong gender inclusion. Post-completion, management is handled by the Sustainable Housing Technical Group (SHOUT), responsible for operations, maintenance, and services.

4. Insights and Lessons

ZIMA Homes offers practical lessons for delivering mid-density housing in rapidly urbanising contexts:

1. **Phased delivery enhances viability**
   Sequencing construction around the courtyard allowed the project to manage financing, demand, and logistics while preserving design integrity. Each phase functions independently, improving resilience to market and capital constraints.
2. **Land strategy is critical**
   Early land acquisition at favourable prices enabled affordability and viability. In volatile markets like Nairobi, timing, tenure security, and acquisition strategy are decisive factors, though not always replicable in speculative contexts.
3. **Early typology decisions shape outcomes**
   Embedding the courtyard model from the outset ensured alignment with cost, regulatory, and spatial parameters. Retrofitting such typologies later would have been significantly more expensive and less effective.
4. **Digital tools improve efficiency but create constraints**
   Use of BIM (AutoCAD Revit) enabled integrated design, rapid iteration, and performance optimisation while reducing reliance on costly external inputs. However, access to software, infrastructure, and skills may limit replication in lower-capacity contexts, requiring alternative delivery models.
5. **Building form supports climate resilience**
   The shallow building depth enhances ventilation and daylight while increasing permeable courtyard space. This improves water infiltration, reduces runoff, and supports resilience to heat and flooding, critical in climate-vulnerable cities.

Overall, ZIMA demonstrates that success depends not only on design innovation but also on institutional capacity, land economics, and delivery systems.

5. Key Takeaways

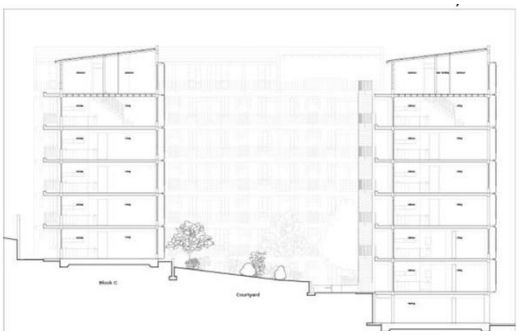
- **Planning reform opportunity:** Emerging frameworks (e.g. NIUPLAN 2016, draft Urban and Planning Policy, Affordable Housing Programme) can enable courtyard-based typologies that combine density with liveability and environmental performance.
- **Shift to performance-based planning:** Moving beyond prescriptive zoning toward outcome-based standards would unlock innovations such as courtyard housing and single-loaded corridors, improving ventilation, daylight, and social interaction.
- **Protect shared open space:** Courtyards and atriums require enforceable safeguards to prevent conversion to parking or service uses, preserving their environmental and social value.
- **Role of demonstration projects:** Pilot schemes like ZIMA build confidence among developers, policymakers, and communities by evidencing financial, environmental, and social benefits.
- **Scaling strategy:** Replication depends on joint ventures, public-private partnerships, and development along metropolitan growth corridors (e.g. bypass routes). Targeting areas with emerging land values and strong connectivity enables scalable, accessible mid-density housing.

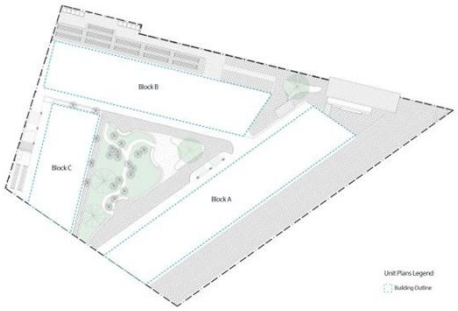
ZIMA Homes therefore functions not only as a successful development but as a policy prototype, demonstrating how Kenya can transition toward inclusive, climate-aligned urban density at scale.

See here for further information: https://youtu.be/K5tM0fCeAHI?si=PXniUaRiCZ1wplTb

This case study has been prepared by Etta Madete and Kezia Georgina from the Sustainable Housing Technical Group[7] (SHOUT) by way of contribution to the work of the Commonwealth Sustainable Cities Coalition Housing Action Group, March 2026

[7] Sustainable Housing Technical Group: https://shout-group.com/





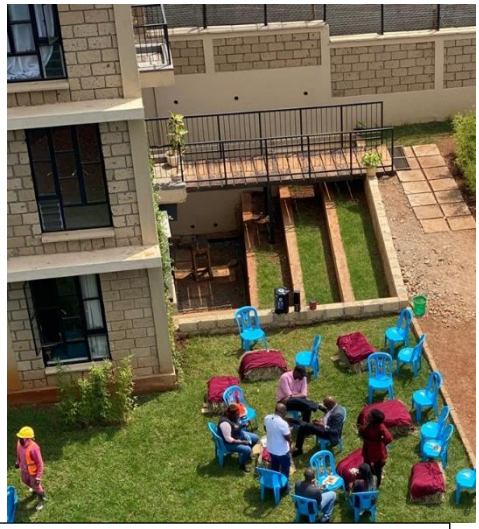


Figure 2:As Buit- ZIMA Block C

Figure 1 : ZIMA Courtyard in use by community

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