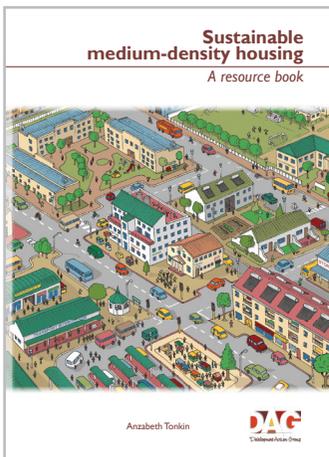


URBAN LAND MATTERS

A DEVELOPMENT ACTION GROUP PUBLICATION

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MEDIUM DENSITY



In 2008, the Development Action Group (DAG) published ***Sustainable medium-density housing: A resource book*** about sustainable and affordable medium-density housing.

This series, ***Urban Land Matters***, is adapted from the book to bring DAG's research to a wider audience, offering innovative and accessible planning ideas to government officials, practitioners and communities. If you would like more information on the concepts contained in these issues, please refer to the book. It's available on CD and on DAG's website: www.dag.org.za.

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3. Why participation is essential to determining true affordability
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5. How the current housing supply is not actually linked to affordability levels

OTHER TOPICAL ISSUES

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affordability for the poor

Community Participation
four case studies

How to *accommodate everyone*

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WAIT! THERE'S MORE...



Learn what 'affordability' means for the very poor.

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See how affordability is a cross-cutting issue.

CHECK OUT...page 4



Understand how affordability is linked to the overall sustainability of every housing development.

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AfriSam
Build with Confidence

“Affordability is at the heart of households’ efforts to improve their housing situation. It has been widely recognised that employment, income generation and access to housing are highly interrelated. In South Africa, the poor’s incomes continue to be too meagre or unstable to permit commitment of scarce resources to housing.”

Adebayo and Adebayo, consultants in sustainable construction

Did you know?

The sale of subsidised RDP houses (‘matchboxes,’ ‘uno’s’ or ‘izinyawo’s’) found on the periphery of many South African cities is a well-known and often criticised phenomenon. Poor families are motivated to sell their houses due to unaffordability, the need for surplus income and dissatisfaction with the overall housing environment. Beneficiary households do not know the value of their units and therefore do not recognise their houses as assets. If they knew the true cost of their units, they would be far less likely to sell or to rent for less than market value.

What is affordability?

When applied to housing, affordability refers to the ability to afford a dwelling unit on a sustained basis – including the capital cost as well as the ongoing maintenance – while still being able to pay for other essentials. The table below divides South Africans into eight income brackets, depending on their ability to afford housing. Approximately 79% of all households fall into the fully-subsidised housing market (household incomes of less than R3,500 per month), with 38% earning no wage income at all. Housing affordability is therefore very low, with approximately 90% of the population unable to afford dwelling units costing more than R190,000, and as much as 63% of the population being totally dependent on the state subsidy. According to Kecia Rust, current housing supply across the country is inadequate and does not support the affordability thresholds of most low-income earners. **It is very important for government to institute policies and programmes that encourage the provision of a range of housing options available to all income levels.** See pages 74-75 in the Resource Book.

INCOME (R/month)	HOUSEHOLDS (% of all households)	AFFORDABILITY (% income & R/month)	ELIGIBILITY	CONTRIBUTION	AFFORD	PRICE
V. HIGH			NO	NO	YES	
>R8,001						
R7,500	10%	25% / +R1,875/m		R18,921	R170,286	R189,207
HIGH			NO	NO	YES	
R7,499		25% / to R1,874/m		R18,918	R170,264	R189,182
R5,500	4%	25% / to R1,375/m		R13,875	R124,877	R138,752
MID-HIGH			NO	NO	YES	
R5,499		25% / to R1,374/m		R13,873	R124,854	R138,727
R4,500	3%	25% / to R1,125/m		R10,669	R96,050	R106,694
MIDDLE			NO	NO	YES	
R4,499		25% / to R1,124/m		R10,667	R96,003	R106,670
R3,500	4%	25% / to R875/m		R8,025	R72,471	R80,524
MODERATE			YES	NO	YES	
R3,499		25% / to R874/m	R34,000	R10,529	R72,451	R116,980
R2,500	6%	25% / to R625/m	R34,000	R8,331	R51,765	R93,996
LOW INCOME			YES	YES	YES	
R2,499		25% / to R624/m	R34,000	R2,479	R17,603	R54,082
R1,500	10%	25% / to R375/m	R36,000	R2,479	R6,408	R44,887
V. LOW INCOME			YES	YES	YES	
R1,499		25% / to R374/m	R36,000	R2,479	R64,04	R44,883
R1	25%	25% / to R0.25/m	R36,000	R2,479	R4	R38,483
NO WAGE			YES	NO	NO	
R500		0% / to R0/m	R36,000	R0	R0	R36,000
R0	38%	0% / to R0/m	R36,000	R0	R0	R36,000

Source: adapted from D. Gardner in K. Rust

URBAN DESIGN

Families could choose from a variety of different unit styles, based on their needs and incomes.

CROSS SUBSIDISATION

Very low-income housing has been made possible through cross-subsidisation from the gap market. Mixed-income neighbourhoods prevent the formation of low-income ghettos.

ENVIRONMENTAL EFFICIENCY

An attempt was made to maximise north facing units. Those that are not north facing are east/west oriented to benefit from some natural lighting and heating.

PARTICIPATION

Many beneficiaries reported that they wished to have been more included in the design and implementation.

LOCATION

The project is very near Cape Town city centre, offering good job opportunities for residents.

DENSITY

Springfield Terrace makes good use of infill land, providing 133 units on less than a hectare of land. The relatively high number of units made each individual unit less expensive, achieving cost efficiency.



PARTNERSHIPS

Strong partnerships were formed between Headstart, the City of Cape Town, and the affected community. This aided the overall success of the project.

LED

Very few home-based enterprises run in the project. More could have been done to provide trading spaces for small entrepreneurs.

INCLUSIONARY HOUSING

The project was prompted by the threat of eviction. One-third of the units were geared toward families earning less than R3,500/month.

SPRINGFIELD TERRACE

AFFORDABILITY FOR THE POOR

	What's needed for AFFORDABILITY	Case study EXAMPLE ONE	Case study EXAMPLE TWO
	<p>Key to household affordability is an integrated approach to human settlement development where access to urban opportunities, public transport, education, health care, employment and other essential life-enhancing elements are accessible to the household, without incurring high costs.</p>	<p>The main intention of the Samora Machel housing project was to provide a serviced site and a simple, 'starter' house (27m²) that would be easily extendable for micro-enterprises. Due to low household incomes and a lack of space, only 15% of families made improvements and only 10% added an additional room.</p>	<p>Johannesburg Housing Company (JHC) emphasised the importance of the triple bottom-line in the Carr Gardens project: attention to environmental, social and financial sustainability was given. The company invests in the empowerment of tenants through various training and support programmes in order to ensure ongoing affordability.</p>
	<p>Strong partnerships between the public, private and non-profit sectors have enormous potential to provide housing that is affordable to the end user, especially if the roles and responsibilities of the respective parties are set out clearly. Johannesburg Housing Company (JHC) is a good example of partnership formation in financing social housing, while the N2 Gateway (Phase 1) stands as an example of poor partnerships.</p>	<p>Initiatives such as the Gauteng Partnership Fund are a strategic response to the funding shortcomings experienced by the housing sector. They attract private sector finance by enabling housing institutions to obtain loans on favourable terms for people in the low and middle-income market. The scheme provides security to banks, making it easier to facilitate assistance for projects by leveraging funding and joint venture agreements.</p>	<p>The Missionvale project demonstrated how the formation of a partnership between public and private stakeholders and the community contributed to innovative methods of project implementation. Moreover, interaction between housing components such as planning, engineering, land registration and financing saved costs. Economies of scale took effect, with more money available for the housing structure and a reduction in building costs.</p>
	<p>Local economic development opportunities should be supported through the involvement of residents in project sustainability; cleaning, maintenance, refuse removal and gardening can all be sub-contracted. A livelihoods assessment is a useful tool to ascertain the level and type of assistance needed to stabilise the local economy in every housing project.</p>	<p>In Missionvale, social sustainability was not achieved due to the absence of social capital formation post-implementation and the absence of strong community leadership structures. The inaccessibility of commercial opportunities and high unemployment (40%) meant that the incorporation of informal trading space should have received design attention.</p>	<p>In Sakhasonke Village, unemployment is high and literacy levels are low. In response to these social problems, the project provides business training, informal trading spaces, home-based care courses and a food gardening project.</p>
	<p>Good location is absolutely necessary to household affordability. Only by having a relatively stable income can families actually afford to hold on to their RDP houses. Therefore, it is vital for poor families to be located within close proximity to employment, and to have minimal transport expenses.</p>	<p>Sakhasonke Village is on well-located land in close proximity to an informal settlement and a 'middle-class' suburb, integrating the poor with the existing environment. This contributes to the overall satisfaction of residents who, unlike many recipients of subsidised housing, do not report feeling 'trapped in space' or 'left on their own.'</p>	<p>Springfield Terrace demonstrated how lower-income households could afford to have access to a range of urban opportunities. Mechanisms to achieve this included increased densities that decreased the cost of land, direct subsidies of interest and redemption rates, and government's contribution of land at a nominal value.</p>

What's needed for AFFORDABILITY

Case study EXAMPLE ONE

Case study EXAMPLE TWO



A **supportive planning environment** is vital for the sustainability of South African cities. Development time and costs are increased by municipal inefficiencies. Municipal processes related to housing must be streamlined. Inefficient planning approvals influence project viability, and title transfer delays undermine the housing market.

Springfield Terrace demonstrated how delays in approval processes and procedures can incur excessively high costs. Just under two years lapsed between plan submission and approval for Springfield Terrace, with huge escalation on the cost of the final contract.

The Stock Road project illustrates how financial sustainability is severely affected by the technical irregularities of government and housing institutions. Stock Road residents were not in possession of title deeds four years after the completion of the project.



The maxim 'high-density housing is affordable housing and affordable housing is high-density housing' is a myth. The fact is that not all higher-density housing is affordable to low-income families. However, the myth expresses an essential truth that more units per hectare imply lower land costs per unit, if local governments allow concessions and density bonuses. **High population density** means increased economic growth, employment opportunities and urban productivity.

Waverley Council (Australia) offered a density bonus to developers who provided affordable housing as part of private residential developments. A 34.5% bonus to floor space ratio was offered in return for a one-bedroom unit to be included as affordable housing in perpetuity; and a second unit to be rent controlled for five years. Title for the former was transferred to the council, while title for the latter remained with the developer. The value of the bonus was shared between the developer and the community.

Low-density leads to long infrastructure runs and higher costs per consumer for installation and operation. Experiences with shallow sewerage in Brazil demonstrate the relationship between population density and optimal sewerage cost. Evaluations of the system showed a reduction in costs per household as density increased. At densities above 160 persons/ha, annual cost per household fell below US\$4,819.



According to the Urban Sector Network, there is little clarity on how to cross-subsidise, however, the general belief is that there should be **cross-subsidisation** from rich to poor. One option for subsidisation could come from commercial premises in residential buildings; another option could come from mixed-income buildings.

The Springfield Terrace project demonstrated that cross-subsidisation has to occur over a large area or between different users in order to successfully employ more expensive non-subsidised housing to cross-subsidise lower income housing. Cross-subsidisation in the project failed largely due to deep-rooted class attitudes.

One of the foremost success factors of the Vashi project (India) is that sustainability was achieved through low- and middle-income earners living together. This was brought about by well-functioning boards, good social planning, the provision of services and amenities, and access to economic opportunities.



An obstacle towards more affordable housing is the rejection of alternative technologies, despite major cost savings to the homeowner. Low awareness of the benefits of **energy and water-efficiency measures** result in a lack of implementation by government and developers. It makes environmental and financial sense for developers to use sustainable technologies.

The winning design in an affordable eco-housing competition in Adelaide (Australia) achieved a 90% energy savings through solar power and portable evaporative coolers; and 63% water saving through grey water storage for toilet flushing. Simple materials and building methods, like earth walling and lightweight timber framing, reduced the overall cost.

Energy efficient technologies can reduce monthly costs in the long term, as shown in Moshoeshoe (Sol Plaatjie) and Lynedoch EcoVillage (Stellenbosch). Green technologies should be prioritised in medium-density housing projects, and accompanied by training and homeowner education. Public-private partnerships make innovations attainable.

Affordability builds sustainability

Did you know?

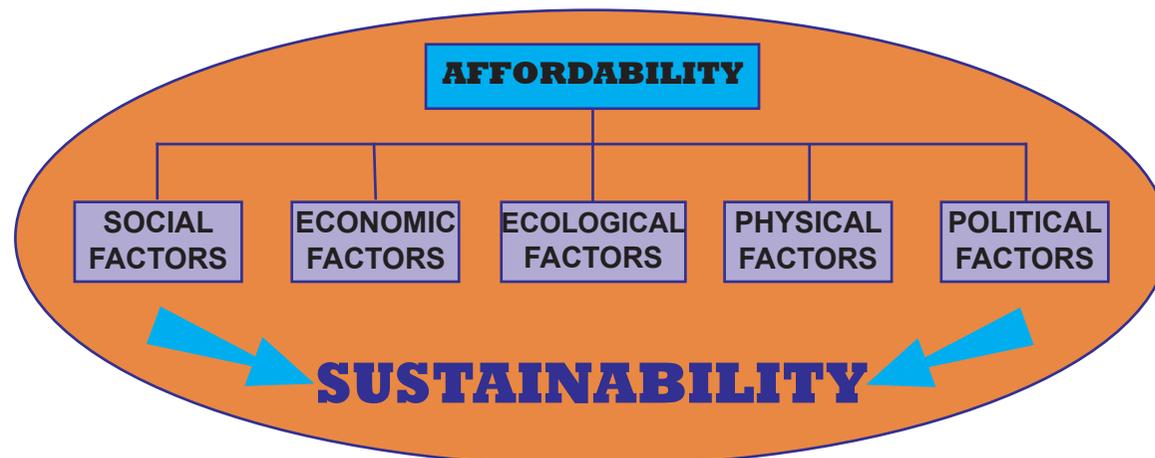
Affordability is an important criterion for the delivery of housing, with far-reaching implications in planning and implementation of public sector initiatives. There are three main sources of finance, which, when combined, create potential affordability for a 'starter house':

- **State subsidies in the form of capital contributions towards the cost of a defined minimum standard unit;**
- **Commercially available credit products;**
- **Household contributions in the form of monetary or personal investment in managing or building accommodation.**

Kecia Rust, from FinMark Trust recommends that government accept responsibility for the performance of the entire housing market and streamlines housing development functions, in higher-income developments as well as lower-income developments. She argues that the entire market is relevant to government's goal of addressing the needs of the poor. Supply constraints and increased demand lead to continually increasing property prices, which occur across the market, particularly at the lower end, further excluding the poor. In this regard, barriers and enablers influencing housing demand and supply must be monitored and addressed. Attention must to be drawn to the importance of government intervention in housing and land markets to achieve desirable outcomes for the poor.

Additionally Sharon Biermann, of the Council for Scientific and Industrial Research (CSIR), points out that if affordability is not a central part of the densification argument, the gap will not be breached between policy objectives for integration and the reality of sprawling peripheral developments. Government subsidisation of infrastructure and facilities and a contribution toward a basic housing unit are essential, but all spheres of government need a keen understanding of the socioeconomic profile of the target market of their policies and frameworks. For households with low, irregular or unstable incomes, adequate housing needs to be affordable and short-term cost benefits should not outweigh long term costs – a free house does not necessarily imply a product that is affordable in the longer term.

Matching the tenure type, payment ability, affordability levels (socioeconomic profile) and needs of target households with the housing product and overall housing environment is an important factor when it comes to sustainability. Research in urban economics, especially consumer preference and demand analysis, will assist policy makers in longer-term decisions. Equally important, the type of tenure must be appropriate to the income of residents; those earning below R2,500 per month (approximately 70% of the South African population) are unable to afford social rental housing and should not be made to pay more than they can manage.



This chart shows how housing affordability is affected by social, economic, ecological, physical and political factors, which work together to promote or impede sustainability.

Community Participation

Four short case studies about how involving communities makes housing more affordable



Newtown Urban Village

The affordability of the Newtown Housing Cooperative was jeopardised because members were unclear about the terms and conditions of their loans. Cooperative members did not understand that they were obliged to pay monthly service fees towards the running of the cooperative. One-third of members did not know that their tenure was cooperative ownership and at least two-thirds did not understand the nature of cooperative ownership.



Hostel Redevelopment

Social Housing Foundation research on six hostel redevelopments demonstrates the correlation between well-organised residents, and effective hostel transformation. Sustainability issues such as crime prevention, rent collection and resident behaviour can be addressed by a democratically-elected and transparent resident's committee. Crime and non-payment threatened sustainability in the two hostels where organisation was the weakest.



Springfield Terrace

The chairperson of one of Springfield Terrace's body corporates ascribes its financial sustainability to diligent management of income and expenditure, transparency and trust among members. Community participation brings about units that meet user requirements, making the housing more salable, and preventing costly changes later. Carr Gardens demonstrates how responsive management also plays a role in overall sustainability.



Stock Road

The houses provided to residents of the Stock Road project were inappropriate for the affordability levels of the target market. According to the Cape Town Community Housing Company's (CTCHC) profile, Stock Road geared their repayment plan toward the 'gap market,' people earning between R3,500 and R7,500 per month. However, to qualify for the institutional subsidy utilised in the project, beneficiaries had to fall below the 'gap market,' earning less than R3,500. This was highly contradictory and had serious implications for the affordability of the project. It is unclear why the company continued to design and implement a housing project that the targeted beneficiaries could not afford: two-thirds of households interviewed had monthly incomes below R2,500 per month; and 80% of households interviewed were headed by single women, surviving on pensions and/or social welfare grants. Public rental or RDP housing would have been more appropriate. In addition, high monthly transport and housing maintenance costs made the Stock Road units even more unaffordable for the tenants.

The CTCHC also chose to sell houses to beneficiaries on an installment plan. This was highly unsuitable, given the lack of clear communication, capacity development and consequent misunderstandings with regard to payment amounts. Due to the low literacy levels and language barriers, contracts were difficult to understand and residents required guidance from the CTCHC, which was never provided. The CTCHC did try to introduce an 'affordability programme,' as a way of lowering high monthly installments. Although the 'affordability programme' reduced beneficiaries monthly installments, the period of repayment was significantly extended, making their houses more expensive in the long term. *See pages 77-79 in the Resource Book.*

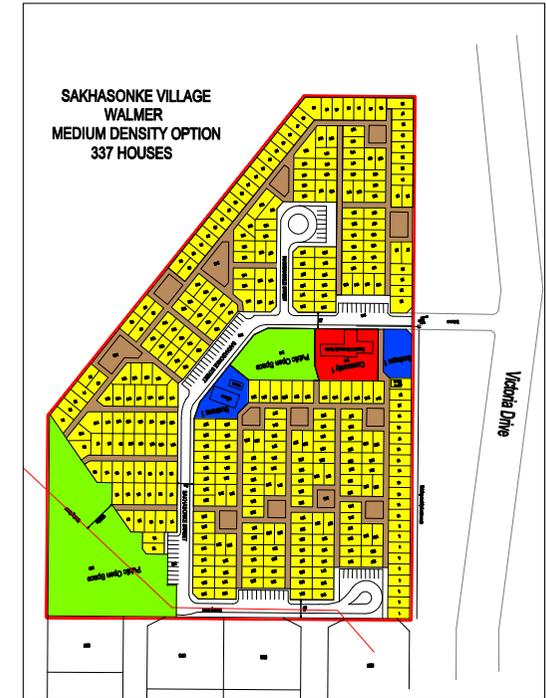


HOW TO... ACCOMMODATE EVERYONE

Metroplan Town and Regional Planners, responsible for the design and management of both the Missionvale and Sakhasonke projects, developed a comparative analysis between low-density and medium-density scenarios for Sakhasonke Village, which clearly demonstrates the cost-effectiveness of medium-density housing. The fundamental consideration for Sakhasonke Village was how to increase dwelling unit density and decrease land and service cost. The layout chosen for Sakhasonke was able to meet these objectives, while still providing a larger dwelling unit and a dignified urban environment.



	LOW-DENSITY	MEDIUM-DENSITY
Area of settlement (m ²)	4,4900	4,4900
Residential area (net)	27,185	24,629
Number of units	126	337
Average erf size (m ²)	216	73
Gross density	28	75
Net density	46	137
Average unit area	40	46
Coverage	19	31
Population potential (5 persons per household)	630	1,685



	LOW-DENSITY	MEDIUM-DENSITY	SAVINGS
Professional fees	R1,000	R1,000	0% savings
Land cost (R3/m ²)	R687	R219	68% savings on land
Service cost	R8,000	R6,000	25% savings on services
Top structure cost	R18,400	R19,222	5% savings on cost
• Area (m ²)	40	46	13% increase in area
• Building cost/m ²	R460	R420	9% savings on building
Other cost	R1,500	R1,500	0% savings
TOTAL	R29,587	R27,941	
PHP SUBSIDY	R26,662	R27,941	
SHORTFALL	R2,925		

COMING UP NEXT: Look forward to more issues of *Urban Land Matters* on the People's Housing Process.