

# Does participating in the development of Medium-Density Mixed Housing projects make a difference in the resident satisfaction with the quality of their environments

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## INTRODUCTION

CSIR Built Environment recently completed a multiyear research project, undertaken by Landman et al, which aimed to determine the appropriateness and applicability of medium-density mixed housing (MDMH) developments in South Africa. The research identified and described five critical factors that various stakeholders - including residents, financiers, officials and developers - consider necessary for MDMH projects to be successful. These factors are affordability; design and layout; safety and security; maintenance and management; and neighbourliness.

The premise of this poster is that the quality of the built environment directly influences the people who use it. Good-quality spaces, for example, promote social inclusion, socially cohesive behaviour and citizenship, whereas a decline in the quality of urban space can contribute to anti-social behaviour. This poster uses two case studies from the multi-year research project to investigate whether perceptions regarding the quality of the built environment were affected by the residents' participation, or lack thereof, at the planning and design stages of the developments.

## METHODOLOGY

The views of residents were obtained through household surveys distributed to a sample of residents in the developments. The survey questionnaire was structured into seven sections, with the first section obtaining demographic and socio-economic information. The following five sections required the views of residents on the five critical success factors named above. The importance of each of these five sections, linked to the critical success factors, was rated (by the residents) on a scale from 'one' (i.e. 'not at all' [important]) to 'five' (i.e. [important] 'to a large extent').

The final section included three open-ended questions referring to factors that may have been excluded. The survey questionnaire facilitated both quantitative and qualitative data analysis as it included both closed and open questions. The closed questions were analysed. The open questions elaborated on many of the issues concerned and were analysed through the identification of a number of themes and sub-themes that arose. (Landman et al. 2009a; Landman et al. 2009b)

This poster focuses on highlighting the findings of two case studies for both the quantitative and qualitative analysis according to the one critical success factor that is directly linked to the built environment, namely design and layout.

## CASE STUDIES

Seven case studies were selected for the multiyear MDMH research project. These all adhered to the selection criteria, in that their characteristics encompassed medium density and various forms of mix (i.e. income, housing, tenure) within a low-rise development. Two of the seven case studies have been selected for this poster because their construction had been completed at the time the surveys were undertaken. This ensured that more holistic views could be obtained from the residents as they had resided in the developments for longer than a year and had thus experienced different conditions (i.e. summer and winter) in their respective units.

### Case Study 1: Amalinda Village Project

The Amalinda Village Project constituting 598 units was constructed in two phases between 2000 and 2005. The project is designed around a central open space situated on the highest part of a hill from where the blocks pan out in concentric circles following the natural contours. Some parts of the site are steep and consequently different platforms were created to accommodate the gradient of the natural ground level, with the majority of the buildings being three-storey walk-ups. (Landman et al. 2009a)



Figure 1: A view of the Amalinda Village Project from the circulation path



Figure 2: A view of the children's play area within the Amalinda Village Project

### Case Study 2: Sakhasonke Village Project

The Sakhasonke Village Project constitutes 337 units and was constructed in phases between 2000 and 2006. The construction of the development began with a 'prototype' house that was used to gauge the response of end-users. Members of the adjacent communities were invited to participate during the planning and implementation phase of the development. Although the units have similar designs, the arrangement varies between semi-detached units and clusters with three units. (Landman et al. 2009b)



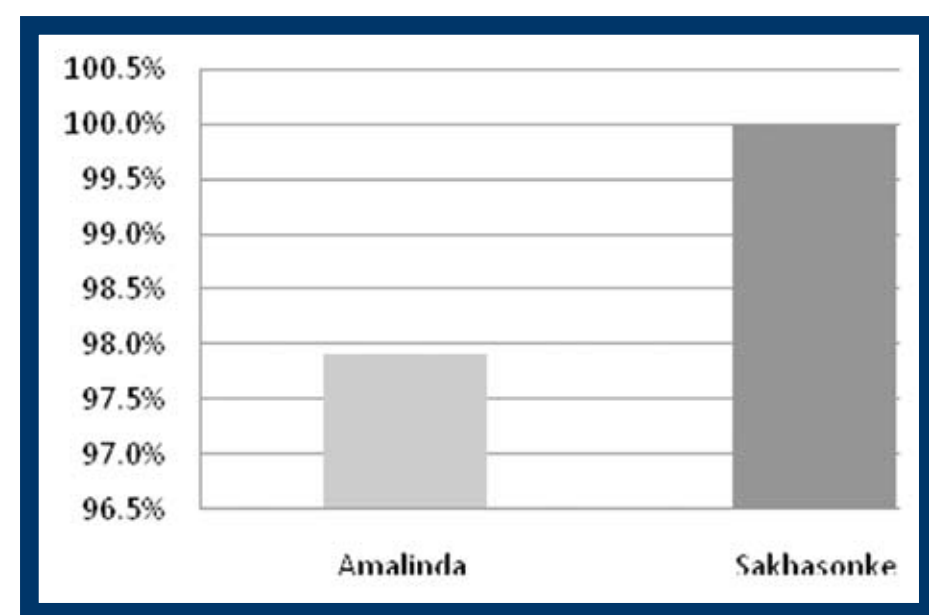
Figure 3: A view of the Sakhasonke Village Project from the main vehicular road



Figure 4: A view of the pedestrian routes between buildings within the Sakhasonke Village Project

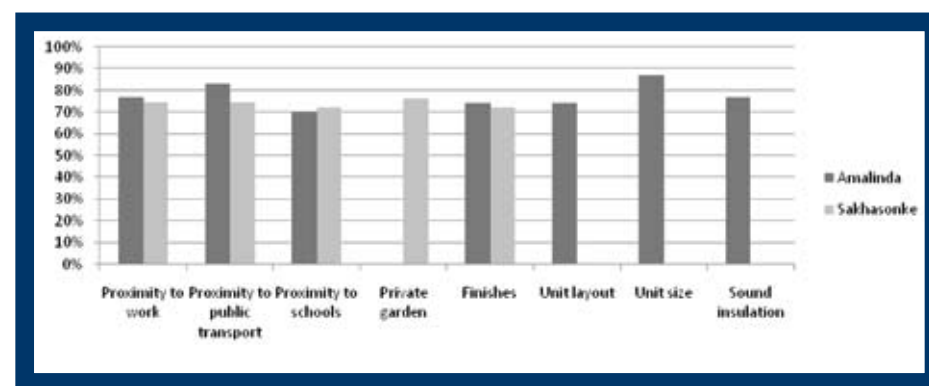
## DISCUSSION OF FINDINGS

The findings from the resident surveys presented in the MDMH research reports (Landman et al. 2009a; Landman et al. 2009b), particularly highlighting the 'design and layout' critical success factor, are outlined and discussed below. Overall, in terms of the 'design and layout' critical success factor, the majority of respondents from both projects rated this as important 'to a large extent' – Amalinda Village Project (97,9%) and Sakhasonke Village Project (100%). See **Graph 1**.



Graph 1: Proportion of respondents who viewed the 'design and layout' of their development as important 'to a large extent'

Respondents from the two case study projects highlighted several sub factors as being important 'to a large extent', refer to **Graph 2**.



Graph 2: 'Design and layout' sub factors viewed by respondents as important 'to a large extent'

The graph shows that although a high proportion of respondents from both case study projects considered proximity to work, public transport and schools as important 'to a large extent', only the Amalinda Village Project respondents considered the 'design and layout' sub factors (i.e. unit layout, unit size and sound insulation), in their own living unit as important 'to a large extent'. The quantitative findings were also supported by the following comments by the Amalinda Village Project respondents, as highlighted in the qualitative analysis:

"This type of housing is fine, but it should be built closer to towns, the people feel as if they are still excluded." (Female respondent, aged 33)  
 "Carpets, cupboards should be standard...Ventilation and sound insulation not at all adequate." (Female respondent, aged 35)  
 "Building material should be of higher quality, otherwise they in any way just end up being repaired and fixed the whole time." (Female respondent, aged 24)

The quantitative findings were also supported by the following comments by the Sakhasonke Village Project respondents, as highlighted in the qualitative analysis:

"The bus is far and expensive." (Female respondent, aged 44)  
 "I am close to work but my child is far from school. Our transport is cyclical because in the morning there is no transport but in the afternoon it's closer." (Female respondent, aged 27)  
 "Layout of unit is unsafe for kids and elderly people because they fall on the stairs." (Female respondent, aged 40)

It is of interest to note that although the respondents of the Sakhasonke Village Project seemed not to consider the 'design and layout' sub factors as important 'to a large extent', they addressed this in the section with open questions.

## CONCLUSIONS

The Amalinda Village Project does not appear to have had any community participation during the early phases of the development, whilst the Sakhasonke Village Project included community participation by obtaining the view of residents from neighbouring communities. Although the Sakhasonke Village Project residents were involved (by proxy), from comments made by respondents, they appear to have had more dissatisfaction with their immediate environment than those of the Amalinda Village Project.

Good-quality spaces within the built environment promote social inclusion, socially cohesive behaviour and citizenship, whereas a decline in the quality of urban space can contribute to anti-social behaviour.



The poster suggests that there are aspects of the MDMH developments that require improvement and that as the stakeholders with the most intimate use of these environments, residents may hold some of the answers to these improvements. This may be done in the form of feedback processes that ensure the professional team learns from the experience and performance of the completed building.

## REFERENCES

- Landman, K. et al., 2009a. *Medium Density Mixed Housing in South Africa: the case of Amalinda*, Pretoria: CSIR.
- Landman, K. et al., 2009b. *Medium Density Mixed Housing in South Africa: the case of Sakhasonke*, Pretoria: CSIR.