



## Proceedings

9 - 11 December 2015  
University of Pretoria, Pretoria, South Africa

ISBN number 978-0-7988-5624-9  
Edited by J Gibberd and DCU Conradie



# **Proceedings of the Smart and Sustainable Built Environment (SASBE) Conference 2015**

9 - 11 December 2015

University of Pretoria, Pretoria, South Africa

Editors

Dr J Gibberd, CSIR, South Africa  
Dr D C U Conradie, CSIR, South Africa

ISBN: 978-0-7988-5624-9

SAIA CPD Nr: CPD SAIA 15-24

Published by: CIB, CSIR, University of Pretoria

Date published: 2015

## REVISING THE SOUTH AFRICAN GUIDELINES FOR HUMAN SETTLEMENT PLANNING AND DESIGN (THE *RED BOOK*)

Willemien VAN NIEKERK <sup>1</sup>

Engela PETZER <sup>2</sup>

Dumisani NDABA <sup>3</sup>

Amy PIETERSE <sup>4</sup>

Azra RAJAB <sup>5</sup>

Tinus KRUGER <sup>6</sup>

<sup>1</sup> Built Environment, Council for Scientific and Industrial Research, Email: wwniekerk@csir.co.za

<sup>2</sup> Built Environment, Council for Scientific and Industrial Research, Email: epetzer@csir.co.za

<sup>3</sup> Built Environment, Council for Scientific and Industrial Research, Email: dndaba@csir.co.za

<sup>4</sup> Built Environment, Council for Scientific and Industrial Research, Email: apieterse@csir.co.za

<sup>5</sup> Built Environment, Council for Scientific and Industrial Research, Email: arajab@csir.co.za

<sup>6</sup> Built Environment, Council for Scientific and Industrial Research, Email: dkruger@csir.co.za

Keywords: human settlements, planning and design guidelines, *Red Book*

### Abstract

The Guidelines for Human Settlement Planning and Design, commonly known as the *Red Book*, is a South African publication aimed at providing practical guidance to built environment professionals in support of the creation of sustainable and vibrant human settlements. The most recent set of guidelines, published in 2000, are currently in the process of being updated and revised. This revision has been necessitated by a range of factors, including the need to align the guidelines with recent policies and strategies and with current thinking regarding sustainable and resilient human settlements. Also, socio-political changes and global challenges, especially climate change and its impact on the built environment, need to be acknowledged, while new technological innovation in materials and processes should be incorporated. This paper presents the background to the current *Red Book*, including its nature, purpose and how it is being applied. The reasons why a revision of the guidelines is required are described, and the process and method to be followed in updating and revising the *Red Book* presented. This is followed by a discussion of the progress made with this initiative and a summary of preliminary findings, including those related to possible enhancements to existing content, new themes that may have to be addressed and potential structuring elements. The paper concludes with an outline of the remaining components of this process to revise and update the *Red Book*.

### 1. Introduction

Throughout history, settlements have been shaped by the most powerful forces of the time, and today's settlements are no exception (Madanipour, 2006). A number of significant local and global transitions have started to unfold simultaneously in recent years, among them environmental, economic, urban, demographic and socio-political (UN-Habitat, 2014). The various emerging global and local issues need to be addressed in the planning and design of settlements. These include climate change adaptation, infrastructure planning, planning for informality, settlement economies and land markets, and issues of spatial justice.

Climate change has emerged as a major global threat to both the planet and to people. Settlements, with their high concentration of people, are exposed to the impacts of climate change and are vulnerable to disaster risks, with informal settlements being particularly vulnerable. Climate change impacts on all aspects of human settlement planning and design, urging planning professionals to specifically change their approach to the provision of infrastructure and the use of resources within settlements (Van Niekerk, 2013). But settlements, as incubators of innovation, can also serve as a space where new climate friendly and resilient building technologies can be developed and replicated, thereby playing an important role in the mitigation of and adaptation to climate change (Hamin *et al.*, 2009).

The last decade has seen many social, economic and environmental changes across the globe. In response to this there has been a move towards approaches aimed at the creation of sustainable human settlements. With the international development agenda emphasising settlement principles of integration, inclusivity, resilience and sustainability, it has been largely accepted by state institutions and built environment practitioners that similar principles be applied to the South African context.

In addition to the global challenges and emerging issues mentioned above, South Africa also has to address a number of context specific issues with respect to the country's cities and towns. Since the first democratic elections held in 1994, these issues have regularly been highlighted. For instance, in the Comprehensive Plan for the Development of Sustainable Human Settlements (Department of Housing, 2004), commonly referred to as Breaking New Ground (BNG), the following is stated:

“After the 1994 elections, Government committed itself to developing more liveable, equitable and sustainable cities. Key elements of this framework included pursuing a more compact urban form,

facilitating higher densities, mixed land use development, and integrating land use and public transport planning, so as to ensure more diverse and responsive environments whilst reducing travelling distances. Despite all these well-intended measures, the inequalities and inefficiencies of the apartheid space economy, have lingered on.”

The reasons for this, according to BNG, include the “...lack of integration between housing delivery and land use, transportation and bulk municipal infrastructure investment planning has meant that the existing spatial fabric has shown little change. Housing for low-income urban dwellers is still provided on the periphery and very limited delivery has taken place in rural areas” (Department of Housing, 2004).

In 2011, similar concerns are again described in the National Development Plan 2030 (NDP) (National Planning Commission, 2011):

“A great deal of progress has been made since 1994, but South Africa is far from achieving the Reconstruction and Development Programme (RDP) goals of ‘breaking down apartheid geography through land reform, more compact cities, decent public transport and the development of industries and services that use local resources and/or meet local needs’. Despite reforms to the planning system, colonial and apartheid legacies still structure space across different scales.”

Numerous documents have been developed since 1994 in support of the transformation of the South African urban landscape, including the Guidelines for Human Settlement Planning and Design, commonly known as the *Red Book*. Sharing a “...mutual concern for the quality of the built environment and the country’s natural resources, as well as a common recognition of the role that human settlement planning and the provision of engineering services plays in its protection or destruction...” (CSIR, 2000), several government departments, under the auspices of the (then) Department of Housing, commissioned the CSIR to take responsibility for the development of the *Red Book*. This document was published in 2000. Since then, substantial shifts in priorities, values and the understanding of human settlements have occurred globally as well as in South Africa, and the national Department of Human Settlements has again contracted the CSIR, as the custodian of the *Red Book*, to update and revise the document. The process commenced in March 2015 and will be completed towards the end of 2017.

This paper describes the planned initiative to update and revise the current *Red Book* and, this being an ongoing project, discusses the progress made to date. It commences with a brief background to the current *Red Book*. The reasons why a revision of the guidelines is required are described and the process and method to be followed in updating and revising the *Red Book* presented. This is followed by a discussion of the progress made with this initiative and a summary of preliminary findings, including those related to possible enhancements to existing content, new themes that may have to be addressed and potential structuring elements. The paper concludes with an outline of the remaining components of this process to revise and update the *Red Book*.

## 2. The Need to Revise the Guidelines for Human Settlement Planning and Design

### 2.1 Background

The current *Red Book* represents the latest in a series of guideline documents that have played a significant role in the development of South African residential townships. These documents were originally developed in recognition of the fact that the cost of providing engineering services forms a significant component of the overall cost of housing. As such, they were essentially aimed at optimising the provision of engineering services by ensuring that they are of sound quality and also acceptable (both financially and technologically) to the recipient communities (CSIR, 2000). The effect of layout planning on the cost of providing engineering services became increasingly evident, and the guidelines evolved over time to acknowledge this reality. The first set of guidelines, the Guidelines for the Provision of Engineering Services in Residential Townships (Blue Book) was published in 1983. It was followed by the publication of Towards Guidelines for Services and Amenities in Developing Communities (Green Book) in 1988. In 1994 the first *Red Book*, entitled Guidelines for the Provision of Engineering Services and Amenities in Residential Township Development, was published.

Subsequent to the publication of the first *Red Book* in 1994, South Africa experienced significant political and societal changes and it soon became evident that these guidelines “...have a number of shortcomings which restricted its usefulness in the drive to produce sustainable and vibrant human settlements, as opposed to mere serviced townships” (CSIR, 2000). This led to the publication of the current *Red Book* in 2000.

### 2.2 The Current Version of the *Red Book*

The intention and purpose of the *Red Book* published in 2000 is summarised as follows in the document itself (CSIR, 2000):

“The intention of the new *Red Book* is to provide performance-based guidelines for informed decision making. The purpose is essentially to indicate the qualities that should be sought in South African settlements, and to provide practical guidance on how these qualities can be achieved.”

The *Red Book* is primarily aimed at the various built environment professional and others responsible for planning and designing human settlements, in particular engineers (civil, transportation, electrical etc.), town and regional planners, urban designers, architects, landscape architects, and energy specialists. It is aimed at practitioners and decision makers from both the private and public sectors.

The *Red Book* contains a set of guidelines rather than standards or regulations. It provides guidance on appropriate practices and technologies and it does not replace the need for professional experience and

judgement. The guidelines are also not legally enforceable. Furthermore, the *Red Book* is intended to supplement guidelines developed by national and provincial government departments, statutory bodies and local authorities.

The guidelines are focused on residential areas and associated developments and are specifically concerned with 'local' services and planning issues. Bulk services and amenities (for instance main water supply pipelines, outfall sewers, treatment works, landfills, freeways, etc.) are not addressed.

The document is divided into two volumes. The first volume introduces a guiding philosophical framework for settlement making and the spatial and structural principles that support it, with chapters that provide guidelines on planning and urban design aspects such as movement networks, transport systems, open spaces, public facilities and land subdivision. Cross-cutting issues that are applicable to both planning and engineering, such as environmental design for safer communities, ecologically sound urban development; and fire safety are also addressed in this volume. The second volume contains guidelines that outline technical engineering requirements, engineering principles and technology choices that should be considered for the provision of various engineering services. These guidelines are informed by the planning and urban design principles in volume one, and they pertain to stormwater management, roads, water supply, sanitation, solid waste management and energy (CSIR, 2000).

### 2.3 Motivation for Updating and Revising the *Red Book*

In essence, a revision of the *Red Book* is required in order to:

- Reflect society's altering values and give guidance on local responses to global challenges, especially climate change and its relation to the built environment;
- Bring the theoretical approach to settlement-making in line with current thinking as reflected in the latest research and in various policies and strategies developed by government since 2000; and
- Update the planning and design guidelines with the latest technical information, standards and costs and incorporate the most recent technological advances in processes and materials.

#### 2.3.1 A changing context

There are growing arguments internationally for linking spatial planning and infrastructure, with roads and transport infrastructure being the most important in shaping the form of urban areas for they influence land values and accessibility. "Spatially efficient investment choices in both economic and basic infrastructure spending can make a significant impact on the equity, efficiency and sustainability of human settlements" (Coetzee *et al.*, 2014). There are many arguments for the inclusion of 'green infrastructure', which preserves land for agriculture, environmental purposes, and open space. Important in this debate is infrastructure that promotes sustainability, for example informal settlement upgrading, improving urban safety and redeveloping land (Todes, 2011).

The South African spatial context has changed substantially during the last 15 years. New spatial forms and processes impact on social and economic behaviour. "Most South African cities have experienced some degree of spatial deconcentration and dispersal of formal economic activity over the last two decades" (Sinclair-Smith & Turok, 2012). The resulting spatial form is in many places no longer arranged monocentric, but increasingly has a multi-centred or polycentric pattern. Alongside other driving forces such as globalisation, this has resulted in a major shift in the way settlement economies work. For example, city spaces are increasingly used for income generation, resulting in street vendors becoming one of the most visible economic actors (Hansen *et al.*, 2014).

The issue of informality is receiving increasingly more attention. Al-Sayyad and Roy (in Watson, 2009) argue that recent economic trends have given rise to an exploding informality in the cities of the Global South. For a long time associated with illegality and marginalisation, informality in its many forms (income generation, settlement and housing, negotiating life in the city) has become a dominant mode of behaviour in our cities (Watson, 2009). But informality is not only relevant as an urban organising logic (where do things belong?); it is particularly relevant in understanding wealth distribution (whom do things belong to?) (Roy, 2005).

The critical role of land markets in human settlement development has been emphasised by recent rapid urbanisation in South Africa. The issue of land and specifically the identification of and investment in appropriate land for government intervention is a key consideration to local planners (Todes, 2011).

Social and spatial justice in the planning and design of South African settlements is also a growing concern among planners. The distribution of wealth, opportunity, health, educational attainment, job creation, and virtually all of the metrics of quality of life are not distributed equally across space (Bromberg *et al.*, 2007), causing inevitable spatial injustices across the geographic landscape. Spatial justice can be described as the equal distribution of resources (public goods and services) and the spatial distribution of people such that there is a balance between who gets what. Furthermore, spatial justice is concerned with equal access to and distribution of public services such as schools, jobs, health care, transport and other economic opportunities, and the accessibility of these public services (determined by the freedom of movement and proximity to services) (Amer, 2007).

#### 2.3.2 Recent government policies and plans for sustainable settlement-making

The theoretical approach and normative framework of the existing *Red Book* need to be aligned with current thinking regarding sustainable settlement-making as reflected in various recent government policies, plans and strategies. Some of the key documents that have contributed significantly to shaping recent thinking regarding settlement planning and design are briefly discussed below. These are the National Development

Plan 2030 (NDP) (National Planning Commission, 2011), the draft Integrated Urban Development Framework (IUDF) (Department of Cooperative Governance and Traditional Affairs, 2014) and the Comprehensive Plan for the Development of Sustainable Human Settlements, or Breaking New Ground (BNG) (Department of Housing, 2004).

The National Development Plan 2030 (NDP) provides a long term vision and perspective for the entire country by defining the desired destination of the country in 2030. It also identifies the roles different sectors as well as society will have to fulfil to achieve the vision. Chapter 8 of the NDP addresses the transformation of human settlement and the national space economy, and identifies five overarching principles to guide spatial development in the country. They are spatial justice, spatial sustainability, spatial resilience, spatial quality, and spatial efficiency. The Plan argues that planning in South Africa should be guided by this set of normative principles to create spaces that are liveable, equitable, sustainable, resilient and efficient, and support economic opportunities and social cohesion. In the chapter an urban vision is introduced and promotes the establishment of well performing human settlements that are vibrant, diverse, safe and valued places. The qualities identified to achieve this include densification, affordable housing on well-located land, retrofitting in support of sustainability, focussing development around transport corridors and nodes, using public transport to link the urban poor with mainstream city life, in situ upgrading of well-located informal settlements and increasing the quality design of public spaces (National Planning Commission, 2011).

Following the adoption of the National Development Plan, government, in 2014, developed an urban policy framework to ensure that urban spaces are well planned and managed. The draft Integrated Urban Development Framework (IUDF) sets out a policy framework on how the urban system in South Africa can be reoriented so that cities and towns can become increasingly liveable, inclusive and resource efficient over the next 20 to 30 years. The IUDF also recognises that urban and rural areas operate on a continuum and proposes measures to strengthen the rural-urban linkages. To achieve this vision the IUDF identifies four strategic goals, namely “to ensure people have access to social and economic services, opportunities and choices, to harness urban dynamism for inclusive, sustainable economic growth and development, to enhance the capacity of the state and its citizens to work together to achieve social integration, and to forge new spatial forms in settlements, transport, social and economic areas” (Department of Cooperative Governance and Traditional Affairs, 2014:9).

The Comprehensive Plan for the Development of Sustainable Human Settlements, or Breaking New Ground (BNG) was developed by the then Department of Housing in 2004 and represents a shift in emphasis after 1994 from building houses to developing human settlements. The key elements of the plan is to pursue a more compact urban form, facilitate higher densities and mixed land use development, and integrate land use and public transport planning, so as to ensure more diverse and responsive environments whilst reducing travelling distances (Department of Housing, 2004).

The concept Master Spatial Plan for Human Settlements articulates the principles and approaches that are aligned with those of the Spatial Planning and Land Use Management Act of 2013 (SPLUMA) and Chapter 8 of the NDP. In addition, the plan introduces spatial targeting principles that can be applied at the various planning levels and include increasing densities through compaction; restructuring and transforming space through connections; and integrating settlements by providing mixed use environments and choice. It also proposes short, medium and long term strategic phases in the delivery of human settlements. It is premised on the creation of a spatial plan for human settlements investment, where state intervention in the residential property market is seen as one of the catalysts of transformation (Department of Human Settlements, 2014).

The Habitat III National Report by the Republic of South Africa for the Third United Nations Conference on Housing and Sustainable Development (Habitat III, 2014) promotes a new model of urban development that is able to integrate all facets of sustainable development to promote equity, welfare and shared prosperity, by introducing a new Urban Agenda (Habitat III n.d). The new Urban Agenda includes supporting urbanisation, integrating equity into the development agenda, fostering national urban planning, supporting development goals through sustainable urbanisation and aligning institutional arrangements to ensure effective delivery of the new Urban Agenda (Habitat III n.d). The National Report encourages an integrated approach to human settlement planning which is based on a sustainable livelihoods approach and promotes higher densities in good locations, universal design, an emphasis on the green economy, and spatial economic inclusivity. The 17 Sustainable Development Goals adopted by the United Nations General Assembly are intended to stimulate action over the next fifteen years. The revised *Red Book* could make a significant contribution in supporting South Africa with reaching the targets related to the goals.

The shifts in institutional thinking around sustainable settlement planning has largely been focussed around addressing past imbalances by promoting development that supports equity, justice, integration and economic growth.

### 3. Methodology

The project is divided into two phases. The first phase involves a range of assessments aimed at gaining a thorough understanding of the weaknesses of the current *Red Book*, the context within which the revised guidelines will be implemented, the needs of the potential users and the themes or topics to be considered for inclusion in the new *Red Book*. The second phase will involve more studies of the themes or topics identified during phase one and the preparation of the revised guidelines.

The extent and nature of the revision will vary, depending on the theme or topic under review. The content of some of the existing chapters/themes may require only minor revisions and amendments, while others may be subject to more intensive enhancements and could require the addition of new information. Entirely new

sections may also have to be developed containing guidance on issues/themes not previously addressed in the *Red Book* (e.g. housing typologies, informality and climate change).

The revisions and updates will be guided by a range of information sources. A series of assessments will be conducted, including a rapid assessment to determine the key issues to be addressed and a situational analysis to identify gaps in the current content and to gain an understanding of the context within which the updated guidelines would have to be implemented. The assessments include various desktop studies to gain an understanding of international and national trends and the policy environment. This will be supported by a comprehensive consultation process that includes semi-structured interviews with selected role players, including officials from relevant government departments and entities, municipal officials and councillors, academics, researchers and built environment professionals including engineers, urban designers, town and regional planners, architects and landscape architects. A limited number of case studies may be included to serve as examples of environments that demonstrate the concepts and principles outlined in the guidelines.

A conceptual framework will be developed to structure the document in a systematic and logical way. Once the assessments have been completed, specialist teams will take responsibility for the themes and topics identified for inclusion in the revised document. These teams will be supported by two structures, namely a Project Steering Committee (PSC) and Thematic Reference Groups (TRGs).

The PSC will provide strategic guidance with respect to the approach to settlement planning, design and development that the *Red Book* should be advocating. It will also assist in defining the nature, purpose and objectives of the revised *Red Book*, and, based on current and envisaged policy directions, advise the project team on the philosophy and principles that should underpin settlement planning and design in South Africa. The PSC will comprise of individuals with appropriate experience representing the DHS and its entities, key government departments, the CSIR and councils for the various built environment professions.

A number of TRGs will be established to provide practical, domain-specific guidance to the project team. Separate TRGs will be responsible for the respective themes to be addressed in the *Red Book* (e.g. settlement planning and design, housing, energy, stormwater management, roads, water supply, sanitation, etc.). They will advise the project team on the revisions to be made and the content to be included in the different sections dealing with each of the themes identified. They will also be responsible for ensuring that the revised technical content is appropriate and accurate by providing information and input and commenting on the draft and final versions of the relevant sections prepared by the project team. TRG membership will consist of an experienced representative of each of the relevant government departments responsible for the different themes identified, institutes representing relevant built environment professionals and recognised local or international specialists (e.g. academics, researchers, practitioners) in the field related to each of the themes identified.

#### 4. Discussion

The initial assessments conducted thus far as part of the first phase have confirmed that a comprehensive revision and update of the *Red Book* is indeed required. A rapid assessment indicated that all the chapters in the current document need to be amended. Some chapters would require fairly minor changes, while others would need substantial revisions. Furthermore, it emerged that the purpose, nature and scope of the new *Red Book* should be clearly defined to ensure that it provides relevant and practical guidance that will result in noticeable changes in the built environment. The structuring framework and arrangement of the content need to encourage and facilitate integrated planning and design. The updated *Red Book* may have to be less permissive (at least in certain sections) so as to provide more concrete guidance. Tasan-Kok (2008) calls for 'guided flexibility' to make planning more realistic and fair. The dissemination method and packaging should allow the new *Red Book* to be accessible to as wide a readership as possible, and an internet-based version as well as a printed version may have to be produced. The findings of the rapid assessment would be explored further as the revision process unfolds.

The initial findings of the ongoing situational assessment have proved useful in guiding the revision process. A range of relevant international and local publications have been accessed, including policy and strategy documents, regulations, standards, guidelines, toolkits, studies, and research articles. These publications serve different purposes – for instance, some provide information regarding the latest international thinking and planning and design approaches to the development of sustainable settlements, others provide local contextual information, while some will be used as supporting documentation in the new *Red Book*.

The assessments have resulted in the identification of emerging theoretical constructs in, and approaches to, settlement planning and design. One of the key issues that emerged relate to climate change. It is clear that the revised *Red Book* should aim to address some of the challenges faced by human settlements as a result of climate change. The National Climate Change Response Policy lists the following challenges related to settlements in urban settings (Government of the Republic of South Africa, 2011):

- Climate change may exacerbate the problems caused by poor urban management. For example, poor storm water drainage systems and urban-induced soil erosion result in flash flooding. Increased storm intensity due to climate change would exacerbate such problems.
- Cities are particularly vulnerable to climate change because they are slow to adapt to changes in the environment and they have entrenched dependencies on specific delivery mechanisms for critical services.
- The effective management of the interface between urban residents and their surrounding environment producing sustainable social-ecological systems needs to be addressed. Similarly the concept of climate resilience in the context of urban social-ecological systems needs to be further developed.

- South Africa's cities still reflect apartheid planning with the poorest communities tending to live far away from services and employment. Our cities are relatively spread out and these two factors contribute to increased transport emissions.
- Water demand in urban centres is growing rapidly, placing undue stress on water supply systems. Investment in waste water treatment works has not remained in line with the growth in demand and use.
- Informal settlements are vulnerable to floods and fires, exacerbated by their location in flood- or ponding-prone areas and on sand dunes; inferior building materials; and inadequate road access for emergency vehicles.
- Cities and dense urban settlements consume large amounts of energy.

According to the strategy, responses that could be considered include the promotion of climate-resilient urban infrastructure, densification, the use of climate-resilient technologies, water-sensitive urban design and providing low-income developments with access to affordable lower-carbon public transport systems. The revised *Red Book* should incorporate guidelines that focus on vulnerabilities at a neighbourhood level and could deal with closed loop systems, energy efficiency, resource flows, low carbon infrastructure, green infrastructure zero emission settlements etc.

Some of the other issues emerging from the situational assessments are briefly discussed below:

The strategic role of urban centres in enabling the necessary conditions for achieving government outcomes has gained local prominence recently. An urban networks approach is aimed at facilitating the eradication of spatial inequality to enable the creation of liveable, sustainable, resilient, efficient and integrated human settlements. The focus of this approach is to shift infrastructure investments towards the creation of efficient and effective urban centres through an approach of spatial targeting of public investment, primarily infrastructure. An urban network is then created through a city-wide interconnected hierarchy of strategic nodes and public transport links between and within nodes.

Transit oriented development recognises the importance of maximising access to public transport. Promoting mixed land uses and higher densities, such an approach claims to reduce traffic congestion and air pollution. Approaches such as non-motorised transport also need to be considered. Related to this is the concept of the compact city, which attempts to concentrate growth and avoid sprawl by advocating walkable neighbourhoods with mixed land uses and 'complete streets' with a range of housing choices and improved access to public transport.

In recognition of the key role of housing in the creation of sustainable human settlements, the revised *Red Book* should provide guidance on issues related to housing typologies. The guidelines could indicate how to approach and plan for mixed incomes, mixed tenure and mixed typologies. Within the perspective of creating more resilient settlements, the revised document could provide guidance on the planning for transitional low income rental accommodation areas and emergency housing. Guidance could also be given on how to structure investment in housing projects to make them viable ventures.

Guidance could be given to municipalities on strategies to improve the supply of (good) land for housing, thereby contributing to a functional and accessible property market. Detail on land readjustment and land value capture approaches as possible funding sources for urban investment could be provided.

The development of townships into more economically and socially sustainable communities has been the subject of growing interest in South Africa. As a key driver for development, guidance could be given on how township economies work, with practical examples of how this will inform decision-making. Guidance could be given on how individual settlements fit into the broader township economy and should provide for on-site and off-site opportunities for income generation. Planning guidelines could look at planning for economic activity along main roads including trading spaces for informal traders.

Sometimes referred to as inclusive design, universal design creates buildings and environments that are accessible to everyone, paying special attention to older people and to people with physical disabilities. By designing for diversity, universal design makes things safer, easier and more convenient for everyone. Detail guidelines could be included on the implications of designing for universal access at a neighbourhood level.

Given the changed thinking and the need to adapt settlement development practices to manage, minimise or adapt to the impacts of climate change and respond to other, often associated, resource pressures such as water and energy scarcity, there is a need to consider the incorporation of alternative, appropriate technologies for housing and municipal service delivery. This would require a balance between the implementation of established practices and new ideas and innovative technologies. The updated guidelines also need to take into account advances in existing technologies and infrastructure, for instance in the field of communication.

## 5. Conclusion

This paper introduced an initiative to update and revise the Guidelines for Human Settlement Planning and Design (*Red Book*) published in 2000. This publication was intended to identify the qualities to be strived for in South African settlements and provide guidance on how these qualities could be achieved. The reasons why the current version of the *Red Book* needs to be updated and revised were outlined, particularly the fact that the international and local understanding of settlement making has evolved significantly and priorities have shifted, primarily due to challenges brought about by climate change. The method to be employed in revising and updating the guidelines were discussed, highlighting the focus on thorough assessments aimed at guiding the nature and structure of the revised guidelines and assisting in identifying potential themes and topics to be included in the new *Red Book*. Some of the preliminary key findings of the assessments to date were summarised, including, amongst others, the need to specifically address issues related to climate



change, resource efficiency, sustainability, resilience, water sensitive urban design, informality, social and spatial justice and the role of housing in the creation of sustainable human settlements.

The next phase of this project will involve the finalisation of a structuring framework for the revised *Red Book*, agreeing on the themes and topics to be included and writing the new set of guidelines. This will involve further focussed studies to ensure that the information provided on each of the themes or topics is current and appropriate for the South African context. It is anticipated that the final publication will be made available online and in hard copy to ensure that it is accessible to all. The ultimate aim with this new *Red Book* is to lead to significant, visible changes in the built environment that would result in vibrant, safe and resource-efficient settlements that are economically, physically, environmentally and socially integrated.

## 6. Acknowledgement

The project to revise and update the *Red Book* is funded by the Department of Human Settlements.

## 7. References

- Amer, S. 2007. *Towards Spatial Justice in Urban Health Services Planning*. Enschede: International Institute for Geo-Information Science and Earth Observation.
- Bromberg, A., Morrow, G.D. & Pfeiffer, D. 2007. Editorial note: Why spatial justice? *UCLA Journal of Urban Planning*, Volume 14, pp. 1-4.
- Coetzee, M., Waldeck, L., Le Roux, A., Meiklejohn, C., Van Niekerk, W. & Leuta, T. 2014. Spatial policy, planning and infrastructure investment: Lessons from urban simulations in three South African cities. *Town and Regional Planning*, Volume 64, pp. 1-9.
- CSIR (Council for Scientific and Industrial Research). 2000. *Guidelines for Human Settlement Planning and Design Volume 1*. Report No. BOU/E2001. Pretoria, CSIR Building and Construction Technology.
- Department of Cooperative Governance and Traditional Affairs. 2014. *Integrated Urban Development Framework: Draft for discussion*.
- Department of Housing. 2004. *Breaking New Ground: A Comprehensive Plan for the Development of Sustainable Human Settlements*.
- Department of Human Settlements. 2014. *Concept Document: Master Spatial Plan for Human Settlements*.
- Government of the Republic of South Africa. 2011. *The National Climate Change Response White Paper*.
- Habitat III. 2014. *National Report by the Republic of South Africa for the Third United Nations Conference on Housing and Sustainable Urban Development*.
- Habitat III. n.d. *About Habitat III: The New Urban Agenda*. Online available at: <https://www.habitat3.org/the-new-urban-agenda>, accessed 25 August 2015.
- Hamin, E. & Gurrán, N. 2009. Urban form and climate change: Balancing adaptation and mitigation in the U.S. and Australia. *Habitat International*, Volume 33, pp. 238-245.
- Hansen, K.T., Little, W.E. & Milgram, B.L. (eds.) 2014. *Street Economies in the Urban Global South. Advanced Seminar Series*. Santa Fe: School for Advanced Research Press.
- Madanipour, A. 2006. Roles and challenges of urban design. *Journal of Urban Design*, Volume 11 (2), pp. 173-93.
- National Planning Commission. 2011. *National Development Plan 2030*.
- Roy, A. 2005. Urban informality: Toward an epistemology of planning. *Journal of the American Planning Association*, Volume 71 (2), pp. 147-58.
- Sinclair-Smith, K. & Turok, I. 2012. The changing spatial economy of cities: An exploratory analysis of Cape Town. *Development Southern Africa*, Volume 29 (3), pp. 391-417.
- Tasan-Kok, T. 2008. Changing interpretations of 'flexibility' in the planning literature: From opportunism to creativity. *International Planning Studies*, Volume 13 (3), pp. 183-95.
- Todes, A. 2011. Reinventing planning: Critical reflections. *Urban Forum*, Volume 22, pp. 115-133.
- Turok, I. 2013. Transforming South Africa's divided cities: Can devolution help? *International Planning Studies*, Volume 18 (2), pp. 168-187.
- UN-Habitat (United Nations, Human Settlements Programme). 2014. *The state of African Cities 2014: Re-imagining sustainable urban transitions*. Online available at: <http://unhabitat.org/books/state-of-african-cities-2014-re-imagining-sustainable-urban-transitions/>, accessed 31 August 2015.
- Van Niekerk, W. 2013. Translating disaster resilience into spatial planning practice in South Africa: Challenges and champions. *Jàmbá: Journal of Disaster Risk Studies*, Volume 5 (1), pp. 1-6.
- Watson, V. 2009. Seeing from the South: Refocusing urban planning on the globe's central urban issues. *Urban Studies*, Volume 46 (11), pp. 2259-75.