

Spluma, Zoning and Effective Land Use Management in South Africa

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Abstract For the first time, South Africa has a single national piece of legislation, the Spatial Planning and Land Use Management Act, 2013, that creates an overarching framework for spatial planning, policy and land use management for the entire country, including rural and informal settlements. Spatial plans linked to zoning schemes are at the heart of this planning system. However, zoning as a land use management tool has been intensely criticised as being exclusionary and socially, economically and environmentally unsustainable. Given that the purpose of the new legislation is to create equitable and sustainable development, this paper questions whether zoning is indeed the most suitable land use management tool in South Africa. The paper briefly outlines the requirements of the new act and then evaluates the usefulness of various forms of land use management such as land use zoning, performance zoning, form-based control and discretionary systems in the South African context. Drawing on the strengths of some of the alternative land use management systems, proposals are made for a more suitable land use management system for South Africa that could have applicability in other countries with a similar colonial history.

Keywords Land use management · Zoning · South Africa · Development control · Development planning legislation · Spatial planning system

Introduction

Over the past 20 years, South Africa has experienced momentous changes, particularly in the political and legislative arenas. Along with democracy is a progressive constitution that guarantees human rights, which is firmly upheld by the courts. There is also a swathe of legislation supporting these rights and the new democratic dispensation.

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Despite the good intentions of the Development Facilitation Act (67 of 1997) and early policies such as the Urban Development Framework (1997), only now in 2015 has the Spatial Planning and Land Use Management Act, 16 of 2013 (South Africa 2013) come into force. This act, colloquially known as SPLUMA, is the first piece of legislation that provides a cohesive spatial planning and land use management system for the entire country and is applicable to all spheres of government.

Unlike apartheid era legislation, SPLUMA is decidedly normative. It emphasises redress, social justice, equity and inclusion, community participation and transparent decision-making, and awareness of the role of property, housing and environmental management in creating functional, efficient and humane settlements (Van Wyk and Oranje 2014). These goals are reflected in the development principles (Section “[Conclusion](#)”), namely, spatial justice, spatial sustainability, spatial resilience, efficiency and good administration. In addition to these explicit planning principles, SPLUMA also creates a spatial planning system that integrates policy, spatial planning and land use management, particularly at the local government level. Land use management is regarded as the implementation mechanism for spatial plans and policy and the realisation of the principles in practice.

However, while SPLUMA has many innovations in the South African context, it employs land use schemes, based on zoning, as the land use management tool. However, land use zoning has been widely criticised for being exclusionary, rigid, segregating both land uses and people. This is contrary to the goals of SPLUMA and indeed the ethos of the constitution.

Zoning, in its traditional form, is neither desirable nor apposite in South Africa. The question thus arises regarding alternatives. Is there a land use management system that is more appropriate for South Africa taking into account the goals of inclusive, equitable and sustainable development in the SPLUMA principles as well as the challenges facing any land use management system in the country?

This paper will consider the issues around land use management, zoning and alternative land use management systems in order to make some preliminary suggestions regarding a more appropriate model for the country. The following section reflects on the challenges of land use management in South Africa. Section “[Zoning and alternative land use management tools](#)” discusses zoning and alternative land use management systems with section “[The problem with zoning](#)” proposing a functional land use management system. The implications of the proposals and areas for further research are discussed in the concluding section.

Challenges Facing a Land Use Management System in South Africa

The legal framework governing spatial planning and land use management reflects the spatial fragmentation of the apartheid legacy (van Wyk 2012; Harrison and Todes 2015). SPLUMA has repealed some national legislation, but the diverse provincial legislation remains. Thus, in one province, old provincial ordinances alongside previous ‘Bantustan’ legislation may be applicable. As a framework act, the intent was that SPLUMA would be supplemented by provincial legislation that would fill in the details, particularly with respect to land development applications. However, at the time of writing,

most provinces were still revising their existing or draft provincial acts to align them to SPLUMA. In the absence of provincial legislation, draft municipal bylaws have been adopted by many local municipalities as a basis for land use management. While based on ‘model’ bylaws, municipalities have the freedom to adapt their planning bylaws to meet local circumstances, leading to variations between municipalities and provinces.

South African settlements are still spatially fragmented with a high degree of spatial exclusion (Steedley 2014; Harrison and Todes 2015). This is reflected in the nature of land use management as well as the application of law enforcement. Most areas under traditional authority have been excluded from land use management by the municipality (Sekonyela 2014; Dubezane 2015) as have previous ‘townships’ and informal settlements (Charlton 2008; Parnell and Pieterse 2010). In higher income areas, land use regulations are enforced, while in low-income (predominantly Black residential) areas, there is little or no land use management, and little or no concern for the health, safety and amenity of residents of these areas and as such it undermines “the right to a safe and environmentally protected city” (Parnell and Pieterse 2010: 1567). The problem is particularly acute in informal settlements where no land use or building regulations are applicable.

SPLUMA requires that land use schemes “include provisions that permit the incremental introduction of land use management and regulation in ... informal settlements, slums and areas not previously subject to a land use scheme” (South Africa 2013, section 24(2)(c)). One challenge of introducing land use management within informal settlements is the very informality of such areas and the absence of surveyed sites or individual property boundaries and registered ‘owners’ of those sites. A second concern is that municipal officials are too concerned for their own safety to enforce land use regulations in many ‘townships’ and informal settlements (Parnell and Pieterse 2010). The City of Johannesburg, through Amendment Scheme 9999, has made an attempt to establish some security of tenure and order in various informal settlements in the city. Through the compilation of a layout plan, prepared in consultation with residents, existing and hence permitted activities can be determined along with a process for ‘permission’ to deviate from the agreed-upon plan (City of Johannesburg 2009).

Included amongst areas not previously subject to land use management are those under traditional authority (essentially the former Bantustans). Land use management is closely bound with land tenure and traditional authority in many South African indigenous cultures. Land is a sacred medium through which one is connected to the past (the ancestors), the future and the present (Williams 2013). The right to allocate land for occupation by a household is viewed as one of the core roles of traditional authority. Implicit in the allocation of land is the determination of the use of the land, such as the site of the homestead, fields for crops or rangelands for grazing (Sekonyela 2014) as well as sacred sites. However, many traditional leaders see the imposition of land use management schemes and land use decisions by the municipality as mandated by SPLUMA as intruding or usurping their traditional authority. Traditional councils in the Eastern Cape and KwaZulu Natal are voicing strong opposition to SPLUMA (Sowetanlive 2015).

Related to the inconsistent enforcement of land use legislation is a common disregard for planning regulations (Watson 1993). In 2006, it was estimated that less than 15 % of all formal housing in Pretoria complied with the town planning

scheme and national building regulations (Yates 2006, personal communication). Such lawlessness may arise from the inconsistent enforcement of legislation as well as the incapacity of local authorities to inspect and prosecute ‘illegal land uses’ (Parnell and Pieterse 2010). Furthermore, the courts view contraventions of bylaws and land use regulations as minor infringements and are reluctant to allocate time and space on a crowded court roll for such ‘misdemeanours’ when there are so many other more serious crimes awaiting trial (personal communication: Mike Yates 2006). The City of Tshwane addressed this problem through negotiations with the local Magistrate’s Courts where it was agreed to institute a special ‘development control’ court that heard building control, town planning scheme and related contravention cases.

The capacity to perform land use management—the preparation and maintenance of a land use scheme, the processing, evaluation and deciding of applications for land development as well as the law enforcement component—is unevenly spread throughout the country. While the metropolitan municipalities are generally well resourced, many smaller municipalities lack this capacity. There is a shortage of technical and professional skills in many municipalities (National Planning Commission 2011). Over half the planners in the country are employed by the metropolitan municipalities while the remainder of the planners are spread out thinly between local and district municipalities (Municipal Demarcation Board 2012). There is also a turnover of young professional planners in smaller municipalities who drift towards the higher paying metropolitan regions (Oranje 2014). Thus, there are not only shortages of suitably qualified persons but also of people with adequate experience in the administration and evaluation of land development applications. This has serious implications for the nature of an appropriate and effective land use management system in local municipalities in South Africa.

Zoning and Alternative Land Use Management Tools

Zoning defines the rules governing what and where people and institutions can and cannot build and operate in our cities, suburbs, and towns. By regulating what gets built and where, it sets the basic parameters of where and thus *how* we live, work, play, socialize, and exercise our rights to citizenship. ... In fact, zoning not only expresses our societal consensus on the “correct” relationships and categories it also shapes it. ... zoning solidifies in our minds what is normal and expected, decent and desirable. It thus imposes a moral geography on our cities (Hirt 2014: 3, italics in original).

Zoning has ancient origins where certain noxious uses and activities that caused a ‘nuisance’ were banned within cities (Ben-Joseph 2005; Talen 2012a; Hirt 2013a). However, the first modern form of zoning was used to separate foul and polluting industrial activities from residential areas in Prussia (Ben-Joseph 2005). Some inoffensive activities were still permitted within residential zones, and certain residential uses could occur within industrial zones (Fischel 2004; Talen 2012a; Hirt 2013a).

The concept of zoning, the separation of land uses, was later enthusiastically propagated in the USA under the aegis of health, high moral standards, public welfare and safety. By separating activities in space, hazards such as fires and pollution could be minimised or contained (Ben-Joseph 2005; Talen 2012a, b). Other benefits of zoning were that it could resolve land use conflicts through demarcated zones for specified activities, it facilitated differential taxation based on land value that is directly related to permissible land uses and furthermore and it did not have to be associated with a plan (Fischel 2004; Tarlock 2014). Most importantly, it protected land values, particularly the property value of the detached single family home (Fischel 2004; Hirt 2014).

The Problem with Zoning

By restricting neighbouring land uses to the same (or very similar) use, the threat of encroachment by industries or other activities that could devalue the property could be eliminated. Restrictions on the use of the home for business purposes also limit supplementary income-generating activities of less wealthy residents. Controls such as large building restriction areas that determine the form of a building density (large minimum property sizes and limits on the number of units per property) exclude multi-family residences more affordable to the poor (Knaap et al. 2007; Talen 2012a, b, 2013). Zoning can then be used to define who may, and who may not, reside in an area (Watson 1993; Silver 1997).

Zoning thus creates and maintains exclusivity of land use and income group, in conflict with the SPLUMA principle of spatial justice.

The very nature of land use zoning tends to create mono-functional areas, such as the South African 'townships' (National Planning Commission 2011) and the formless modern suburbia with little legibility or imagination (Connor 1981; Eggers 1990; Ben-Joseph 2005; Coyle 2011; Talen 2012a). Land use zoning is largely insensitive to aesthetics and design, focussing on the individual uses rather than the interaction between them. Standard development controls such as building restriction areas (set-backs and side spaces) and parking requirements generate monotony within residential environments and a disjunction between residential and non-residential uses (Ohm and Sitowski 2003; Talen 2012a:90).

Besides the blandness of the suburbs and townships, single use zoning requires commuting from place of residence (residential zone) to place of work (business or industrial zone) and expensive infrastructure (Ben-Joseph 2005; Coyle 2011). Sprawling suburbs and 'townships' formed through low-density zoning are an antithesis of sustainability as they place a high demand on resources, such as fossil fuel for commuting, inefficient use of water and costly service reticulation (Swilling 2011).

Zoning thus produces settlements that are counter to the SPLUMA principles of spatial sustainability and efficiency.

Diversity is a key attribute of resilience; a lack of diversity leads to vulnerability, as is the case of cities dependent on a single economic base (Ahern 2011; Page 2011; Wilkinson 2012; Talen 2006). It creates swathes of similar land uses and residential areas populated by similar income, class or racial groups and restricts consumer choice (Fischel 2004). Land use zoning simplifies and reduces (or ignores) the complexity of the built environment to a set of rules and restrictions for a few categories of activities

and land uses, within an inflexible framework (Ben-Joseph 2005). Jane Jacobs (1961), amongst others, decried zoning as a tool that deprives a city of the essential diversity that generates economic activity and innovation (Eggers 1990; Talen 2006; Glaeser 2011; Hirt 2013b).

Zoning that produces sameness, not diversity is contrary to the SPLUMA principle of spatial resilience.

One of the advantages of land use zoning is its simplicity and ease of application (Ben-Joseph 2005). In principle, the application of a zoning scheme does not require great technical skills or much experience. A proposed development or activity that conforms to the land use scheme is permissible; developments, land uses or activities that do not comply are not permitted and hence illegal. Changes to the land use scheme are possible, and the legislation sets out a transparent process such applications that include representations by relevant stakeholders and the community. Despite concerns regarding the extent of genuine participation in land use management processes (Oranje 2014), there is potentially a participatory process in the South African planning legislation.

Land use zoning schemes can therefore be aligned with the SPLUMA principle of good administration.

The preceding analysis indicates that the effect of zoning is a social, economic and physical landscape that is in total conflict with the objectives encapsulated in the SPLUMA principles. Zoning entrenches unjust spaces, drives unsustainable and inefficient development and increases vulnerability. It is thus not the most appropriate land use management tool in the South African context.

Alternatives to Zoning

If zoning cannot meet objectives of SPLUMA, what are the alternatives? The following paragraphs will briefly describe some better known land use management tools and evaluate their applicability in the South African context.

Laissez-Faire and Common Law

The effects of the lack of development regulation are probably most clearly seen in the cities of the industrial revolution prior to the introduction and enforcement of municipal bylaws and planning legislation (Hall 2002). However, as Ben-Joseph (2005) points out, most civilisations have regulated urban development in some form of another. Disputes arising from ‘nuisances’ fall within the ambit of common law in South Africa (Van Wyk 2012). However, the onus is on the aggrieved party to approach the courts for relief—a costly process that few residents are prepared to engage in.

Traditional Land Use Management

Land falling within areas under traditional authority was—and in many places still is—managed under customary law. Traditional leaders, such as the chiefs and headmen, allocate land to applicants and adjudicate disputes (Sekonyela 2014; Dubezane 2015; Mbense 2015). In some areas, modern town planning principles are used in conjunction

with customary practices. While these customary practises may have worked well in the past under conditions of low density, predominantly agricultural areas, there is little research on the applicability of traditional land management practices under current circumstances in these densely populated, poverty stricken regions (Harrison 2014).

Restrictive Conditions and Covenants

Amongst the oldest development control tools are restrictive conditions and covenants in title deeds. These form the basis of land use management in Houston, Texas (Oranje 1995; Buitelaar 2009; Qain 2010). Such restriction and covenants have been used in South Africa for over two centuries (Van Wyk 2012), and many title deeds—particularly of areas developed prior to the introduction of town planning (zoning) schemes—still contain conditions that restrict the use, the number of dwellings or even the building materials, e.g. “no wood or iron buildings may be erected on the erf”. Although the function of controlling development has largely moved to town planning/land use schemes, restrictive title conditions are still employed in new affordable housing (Nel 2011) or in ‘lifestyle estates’ where home owner associations use these to control the use and development of properties to retain land value and exclusivity (De Beer 2014).

The drawbacks of title deed restrictions as a land use management tool are fourfold. Firstly, they are not transparent and even within one area, and may differ from one property to another. Other than obtaining copies of all the title deeds in an area, there is no way of knowing what conditions are applicable to which property. Secondly, the process of removing restrictive title deed conditions is akin to a rezoning and can be a costly and time-consuming process. Thirdly, restrictive conditions and covenants are often used in conjunction with other development control regulations, as is the case of Houston (Buitelaar 2009; Qain 2010). Lastly, restrictive conditions generally protect the wealthier home owners (Oranje 1995).

Performance Zoning

According to Watson (1993), performance zoning is a land use management system that focuses on the control of externalities and nuisances instead of land uses per se. Standards for the performance of the development or activity are pre-determined, including measures to mitigate impacts of development (Connor 1981; Jaffe 1993; Baker et al. 2006). The standards include environmental management criteria for stormwater management and carrying capacity, floor area ratios and impacts on neighbouring properties such as hours of operation, noise, odours and traffic generated (Watson 1993; Baker et al. 2006). In many cases, performance zoning is used in conjunction with standard land use zoning as it does not provide sufficient control on its own (Talen 2012a). Furthermore, performance zoning is more complex than land use zoning as it requires precise definition of acceptable performance standards (Watson 1993) as well as the means to measure them. Studies have indicated that performance zoning is more costly to developers and local authorities alike as it requires specialist skills to

prepare and assess the applications (Eggers 1990; Baker et al. 2006). Given the existing skills shortages in local government (Municipal Demarcation Board 2012), the demands of a performance zoning system are probably beyond the capacity of most local municipalities.

Master Plans for Land Use Control

The use of spatial plans for control of development has a long history as towns such as Harrappa, Palmanova or St Petersburg demonstrate (Hirt 2014). Early British planning adopted the master plan as the equivalent of a zoning scheme (Todes et al. 2010). In Germany, both general and detailed local plans are used for land use control; similar detailed development plans are used in Nordic countries as well as Japan (Hirt 2014). The Land Use Planning Ordinance (15 of 1985) of the former Cape Province is based on the master plan approach. A master plan is relatively easy to use as a basis for land use management: uses that are in line with the plan are permissible, others that deviate are either prohibited or require an amendment of the plan.

Although there may be a case for the use of master plans where the land owner develops the entire settlement in a short period of time, the use of master plans and a form of land development control has been extensively criticised. They are regarded as inflexible, unable to deal with change (Watson 2009; Todes et al. 2010; Todes 2012) and in the African context, they may be idealistic and fail to take informality into account (Watson 2009; Huchzermeyer 2011). While some master plans may be too detailed and rigid, strategic spatial plans may lack sufficient detail for land use management purposes and require an additional layer of plans to provide the additional information (Harrison et al. 2008; Todes et al. 2010), but these may then resemble master plans. Görgens and Denoon-Stevens (2013) propose a multi-tiered land use management system prepared in consultation with communities that combine strategic and more detailed local plans. SPLUMA mandates comprehensive spatial development frameworks as the foundation for the land use scheme: it is thus possible that that these plans may be directly transcribed into a land use scheme with all the attendant drawbacks.

Form-Based Codes

Although form-based codes are closely associated with New Urbanism, they have been in use for many years in Europe (Talen 2009; 2012a; Hirt 2014). The 'Law of the Indies' that defined the form of development could be viewed as form-based regulation (Rodriguez 2005). Instead of land uses, it is the built form, the streetscape and the interface between the public and private domains, the needs of pedestrians and promoting public transport that receive attention (Talen 2002a, 2009; Hirt 2012). These codes are useful in managing historic districts or main streets to maintain their attractiveness, while accommodating new uses. Form-based codes are not specific to western culture but can reflect local values and traditions, creating spaces that reflect the values and ethos of local cultures such as Islamic cities (Ben-Joseph 2005; Talen 2009).

New Urbanist form-based codes can address the inadequacy of land use zoning pertaining urban design and a more sustainable, inclusive and liveable environment

(Talen 2002a, b), but they require specialised skills to develop the codes and evaluate development applications; skills that are lacking in most local authorities.

Discretionary System

The English discretionary system requires almost all new development or change to be vetted, thus bestowing substantial powers on planning authorities (Lloyd and Peel 2007; Booth 2009; Hirt 2014) and creating a large bureaucracy with the attendant costs and time delays (Healey 2010). Although spatial plans are intended to provide guidance, they are not binding: other ‘material issues’ must also be taken into consideration, creating both flexibility and uncertainty (Booth 2009; Harris 2010), leading to concerns about consistency, transparency, community participation and the accountability of decision-makers (Lloyd and Peel 2007; Booth 2009; Hirt 2014). The system relies heavily on specialist skills of technical advisors and professional planners.

Not only will the low capacity of many municipalities dismiss a discretionary system, but so will concern regarding the low levels of genuine community participation and transparency and the high levels of corruption prevalent in local government (Department of Cooperative Governance and Traditional Affairs 2014; Oranje 2014; van Wyk and Oranje 2014).

A Functional System

From the above analysis, it appears that no single system or tool is appropriate for South Africa. Some tools, such as land use zoning, restrictive title conditions or master plans are too rigid and pay insufficient attention to urban design and functionality, while strategic plans and discretionary systems are flexible, yet the lack of detail may produce confusion and conflict. There is a risk that the technical nature of performance criteria or form-based codes can confound non-specialists. Although simple tools (zoning and master plans) tend to be transparent, others such as restrictive title conditions are not. Land management systems that contribute the most to sustainable, inclusive and attractive environments such as performance zoning and form-based codes, require planners and other professionals to evaluate and decide on applications. These skills are generally lacking in local municipalities. A new approach is required.

Criteria for a Land Use Management System

From the above discussion, it can be deduced that there are a number of criteria that a more apposite land use management system should meet. Firstly, it should address South Africa’s challenges of spatial fragmentation and exclusion and promote inclusion and integration. Secondly, it must promote environmental, social and economic sustainability and resilience, minimising risks of disasters (Healey 2010; Thomas 1997). Thirdly, it should provide opportunities for local livelihoods and support diversity (Jacobs 1961). Fourthly, in order to address the capacity challenges of municipalities (The Presidency 2014), it should be self-regulating as far as possible and focus on what is essential for health, safety, amenity and investor confidence (Oranje 1995). The

system should thus be relatively simple and transparent, acceptable to most communities and capable of adaptation to specific circumstances or needs.

A Functional Model

Given that SPLUMA requires zoning, perhaps the South African land use management system should revert to a simple zoning system, such as the original Prussian version (Fischel 2004; Ben-Joseph 2005; Hirt 2013a), or the French system described in Hirt (2014:69–71). These land use management systems have only a few zones, and these include mixed uses. Only activities deemed to be a nuisance or incompatible with the use and urban fabric are excluded. This attitude similar to the South African Manual for Outdoor Advertising Control (SAMOAC) (Department of Environmental Affairs 2010) that identifies three types of landscape: natural, rural and urban. Within urban areas, three areas of control are applicable, namely areas of maximum control, partial control and minimum control, while rural and natural areas are subject to maximum control.

Furthermore, this simpler zoning system can be combined with the transect approach (Duany and Talen 2001; Talen 2002a; Centre for Applied Transect Studies s.a.), which advocates a differentiated and graded continuum from natural conservation areas to urban cores. Different types of control are applicable to each area with increased density and complexity from rural to urban. Thus, in natural areas, the emphasis will be on environmental management, biodiversity and conservation of resources. Rural agricultural areas will also require environmental management, protection of high quality and productive agricultural land as well as stimulating economic development and sustaining rural livelihoods. The nature and extent of control in urban areas will depend on the size, complexity and nature of the settlements.

Small towns may not require much control: what control there is should be limited to activities that may have a high nuisance value, large environmental impact or create a hazard. Consequently, it may only be necessary to have a single ‘urban’ zoning that permits most activities found in a small town. Environmental and health regulations will be applicable to most noxious activities controlling odours, noise, emissions or effluent; thus, additional provisions would be extraneous.

The level and detail of the control will increase as the size and complexity of the settlement grows. Thus, there would be more zones. These could be along the lines of the traditional land use zones, or along more functional zones such as ‘residential’ (where a mix of residential types and local amenities is permitted and even encouraged), ‘urban cores and corridors’ and ‘industrial’. In these zones, the emphasis should be on what is not permitted, rather than a narrow focus on what is permitted. Furthermore, these functional zones will permit a closer alignment with the spatial plans for the area. In the most densely developed areas, the broad zones can be supplemented by form-based codes, for example, to protect historic districts.

With broader functional zones that permit both a mix of housing types and densities as well as ancillary activities, integration and inclusion can be promoted (Talen 2008). Furthermore, with small-scale retail and related service functions, local livelihoods can be supported and the need to commute can be reduced. Unregistered land such as that in informal settlements can also be accommodated as can areas under traditional authority. Thus, the proposed system meets the SPLUMA principle of spatial justice as well as that of spatial resilience.

The protection of natural, heritage and agricultural resources is explicitly included in the proposed system while the nature and extent or intensity of development permitted in any area should be directly linked to the capacity of the infrastructure, in line with the principle of spatial sustainability. The proposed concept also meets the efficiency principle in that it is simple to administer and designed to enable development without detrimental environmental impacts. Provided the processes are transparent and in line with the principles of administrative justice, the proposed land use management system will also be consistent with the principle of good administration.

Conclusion

The newly enacted Spatial Planning and Land Use Management Act (SPLUMA) is intended to create a single spatial planning and land use management system that deals with challenges of justice, access, sustainability and efficiency facing South Africa. However, as this paper demonstrates, the traditional zoning system mandated by the act contradicts its own normative spatial principles.

An alternative, more functional concept has been proposed. The proposal is based on the Transect principle with broad zones of control ranging from maximum to minimum control and functional activity zones. As this system will promote sustainability, flexibility and encourage diversity, it can meet both the SPLUMA principles and the first three criteria for an appropriate land use management system. Furthermore, as the level of complexity of the land use management system is directly related to that of the urban environment, it can be applied in the South African local government context where urban planning capacity is unevenly distributed, meeting the fourth criterion.

Not only could this concept be applied in South Africa, but it potentially has application in any place that is seeking to move from standard zoning to more flexible or design-oriented land use management regulation. However, this concept does need to be refined and developed to take into account the diversity of environments—from areas under tribal authority to metropolitan regions—and the challenges of poverty, exclusion and sustainability.

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