

CHAPTER 3: SUSTAINABILITY AND SPATIAL PLANNING PRINCIPLES

Introduction:

Sustainability, sustainable development and spatial planning are inextricably intertwined. Layard, Davoudi & Batty (2001:1) argue that “references to the ideas, principles and policies underpinning sustainability are everywhere – from planning policy guidance to good practice guides to inclusions in development plans”. Despite this it is still broadly acknowledged that there is no one way in which to achieve sustainability.

Figure 3.1 provides a graphical overview of the organization and structure of this chapter.

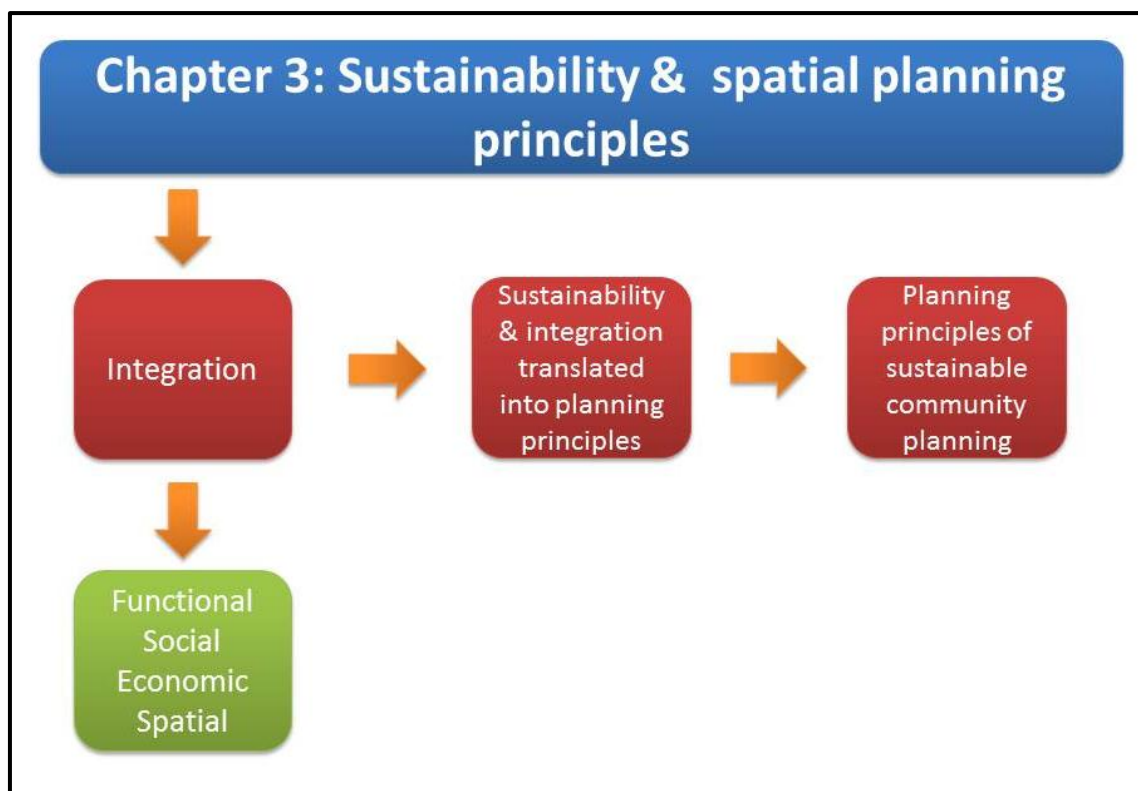


Figure 3.1: A concept map of Chapter 3

Source: Own construction

3.1 The sustainability and integration imperatives

The two most important factors impacting on sustainable community development are integration and sustainability. It is generally recognised that current and past planning methodologies and practice have not resulted in sustainable and integrated cities. Whilst it is widely acknowledged that spatial systems, such as cities, must strive toward greater sustainability the integration aspect of planning is especially relevant to South African cities due to the apartheid legacy that still has to be overcome. The central goals of sustainable community planning can be achieved by applying planning principles to development projects that promote and reflect the different dimensions of both sustainability and integration. (Nelson Mandela Bay Municipality, 2007:15)

3.2 Integration

Integration can be divided into four main components: Functional integration, social integration, economic integration and spatial integration, as illustrated in **Figure 3.2**.

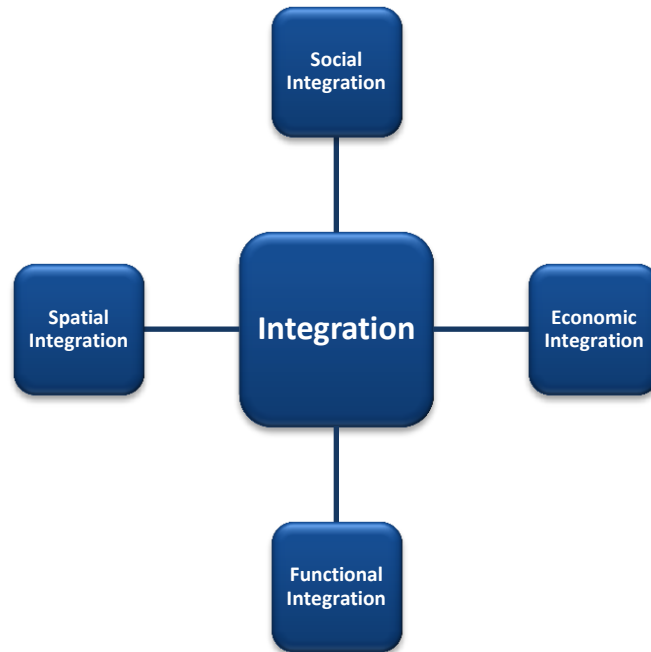


Figure 3.2: The components of integration

Source: Own construction

Integration does not only apply to the internal dynamic processes within a community, but also to the community and its surroundings. Abbott (2001:323) states that “a settlement is not an island; it is an integral part of the city of which it constitutes a physical part”. If a settlement, or community is isolated, it will be to the detriment of all who live there. This is why the concept of integration is imperative to the goal of sustainability.

The South African government has also adopted the concept of integration on multiple levels. One such instance is the New Housing Policy and Strategy for South Africa. The Policy (Department of Housing, 1994) states that “policies, administrative practice and legislation should promote efficient and integrated development”. The integration the Policy calls for encompasses all four main components of integration (as seen in **Figure 3.2**)

3.2.1 Functional integration

This component of integration involves creating a development that is not mono-functional or isolated and instead creates lively and interactive living and work areas. These functionally integrated areas focus on all dimensions of spatial and developmental activity, which includes cultural, educational and economic activity. Functional integration ensures the availability and accessibility of a wide range of services and facilities. The Department of Rural Development and Land Reform (2010:12) states that “the implementation of the walking distance principle to promote greater access to opportunities for all people will require the functional integration of urban activities”. This means that at least 50% of urban activities should be within walking distance of a person’s place of residence. A graphical representation of functional integration can be seen in **Figure 3.3**.

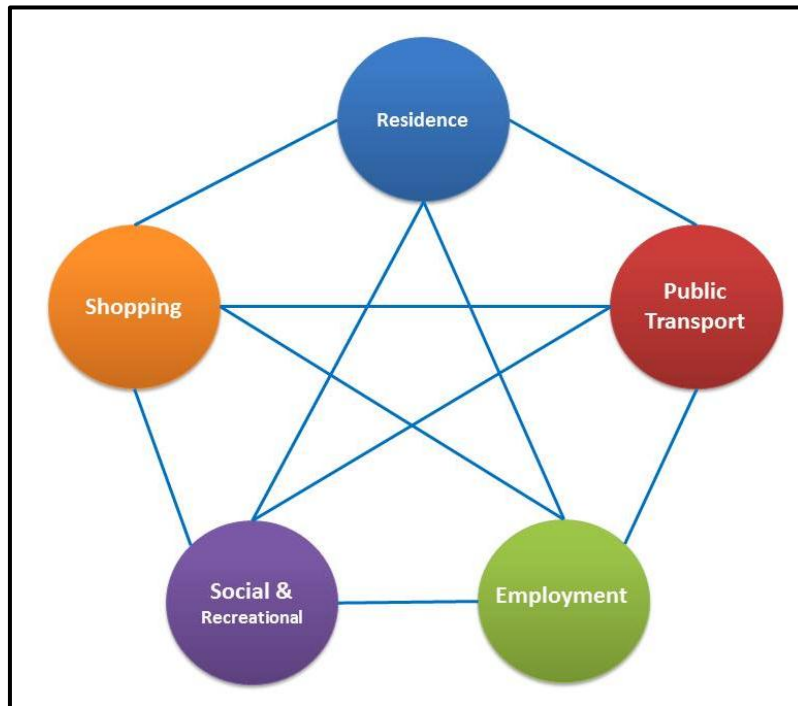


Figure 3.3: Functional integration

Source: Own construction from the Department of Rural Development and Land Reform (2010:12)

Functional integration can be achieved through implementing a mixed land use approach, enforcing higher densities, infilling, and co-locating living, working, service and recreational opportunities.

The benefits of functional integration include:

- Local income generation
- Accessibility of goods and services movement
- A reduced need to travel and transport goods
- A reduction in financial and environmental costs
- A diverse and dynamic urban environment
- A more efficient provision of infrastructure and services

The Sustainability Institute (2009:170) agrees with this by stating that “physical and functional integration include provision of essential services within a walking distance to limit the need for motorized transport, integration of private and public spaces and of the built and green environment”.

3.2.2 Social integration

The Department of Rural Development and Land Reform (2010:12) states that the principle of access and integration also requires socio-economic integration. Omidvar and Richmond (2003:10) maintain that in the 1980s the notion of social exclusion developed as a significant policy concept in Europe. Social inclusion developed as a response to this, but it does not, however, just apply to social exclusion.

A socially integrated development is one in which a diverse and vibrant population mix is found and where all population groups are catered for. All children and adults should be able to participate as treasured, respected and contributing members of society. According to the Department of Rural Development and Land Reform (2010:12) communities are often resistant to the integration of poor, middle and high income communities. The use of a socio-economic gradient, with relatively small difference in income and property value between communities, is suggested as mediation to this problem.

Abbott (2001:323) is of the opinion that community development and upgrading should take place “within a wider planning framework that seeks, ultimately, to achieve social integration and create a sustainable settlement”. He goes on to say that communities should achieve internal cohesion and be integrated into the surrounding areas. Social integration also involves catering for different cultural, age, ability and income groups when planning and developing communities.

Social integration is beneficial in many ways including:

- Social interaction, co-operation and understanding
- Heightened tolerance
- Creating cross-cutting interest groups
- Overcoming differences
- The enhancement of available human resources and capacities in communities.

According to Omidvar and Richmond (2003:10) social integration needs a proactive human development approach that requires more than the removal of barriers of risks. In order to achieve social integration mixed housing, different land tenure and financing options and a variation in erven and dwellings needs to be provided. Multi-purpose community centres and the strategic location of business centres, markets and institutions can also assist in achieving this goal. (Nelson Mandela Bay Municipality, 2007:17)

3.2.3 Economic integration

Economic segregation occurs when different economic classes are spatially divided. This can be seen in the outward migration of higher-income households to the suburbs, while a high concentration of lower income households remain in city centres (Cantor and Rosentraub, 2012:2). An economically integrated community is a community that accommodates a diversity of income groups. Communities such as these have a variety of economic scales of activity and possibilities as well as opportunities. The Sustainability Institute (2009:170) is of the opinion that neighbourhoods “are enriched by the integration of different social groups and income levels”.

Economically integrated communities are achieved through the provision of spaces and opportunities that accommodates the full range of economic requirements for a community. These economic requirements include:

- Urban agriculture
- Small-scale selling
- Markets
- Entrepreneurial centres
- Business support
- Commercial activity

Economically integrating a community is beneficial through increasing employment opportunities, increasing local buying power and creating a more economically successful community (Nelson Mandela Bay Municipality, 2007:17).

Cantor and Rosentraub (2012:2) state that “numerous researchers have underscored the importance of educated and younger human capital for economic development”. They are of the belief that building communities that are vital and attractive draw educated workers. It is important for an area to retain these types of resident to ensure that it is economically integrated. Cantor and Rosentraub (2012:5) further state that “attracting and retaining individuals employed in sectors of the economy where more advanced skills and education are needed enhances the attractiveness of a region to businesses”. Attracting businesses creates jobs which in turn reduces unemployment and poverty. This all aids sustainable development.

3.2.4 Spatial integration

According to Abbott (2001:325) spatial integration in a nutshell is the integration of a settlement or a community into the surrounding areas. He writes about a settlement in Cape Town that was not accessible to the outside and was therefore seen as a potential base for criminal activity. Spatial integration is especially relevant in South Africa due to our struggles during the apartheid years regarding racial and class segregation. Bwalya (2011:5) argues that the history of spatial integration in South Africa stems from “struggles and relationships between classes”. Bwalya (2011:7) goes on to state that “in view of this deep spatial and social fragmentation, integration has been one of the most fundamental goals in the democratic and non-racial South Africa”.

Adebayo & Musvoto (2010:1128) says that in a bid to support the transformation of South African cities the Government adopted the Development Facilitation Act (1009), the Local Government Transition Act Second Amendment (1996) and the Breaking New Ground plan of 2004. All of these aim to create more integrated South African cities.

De Boe, Grasland, & Healy (1999:8) are of the opinion that “territorial disparity, spatial imbalance and lack of coherence across border” might undermine the objective of economic and social integration. De Boe et al (1999:8) further state that spatial integration can be positively influenced by:

- High levels of connectivity between transport systems
- The presence of a capable administrative body
- Physical and functional complementarity between areas
- The lack of cultural and political polemics.

3.3 Sustainability and integration translated into planning principles

Sustainable community planning relies on defining the planning principles that are needed to promote integration and sustainability and then applying them in planning. These principles are:

- Poverty alleviation and the satisfaction of basic needs
- Focus on special needs groups
- Gender equality and equity
- The environment – physical, social and economic
- Participation and democratic process
- Local economic development
- Accessibility – public transport and pedestrian focus
- Mixed use development
- Corridor development
- Safety and security
- Variation and flexibility
- Densification
- Reducing urban sprawl (Nelson Mandela Bay Municipality, 2007:21-25; Department of Housing, 1994; Department of Rural Development and Land Reform, 2010:14)

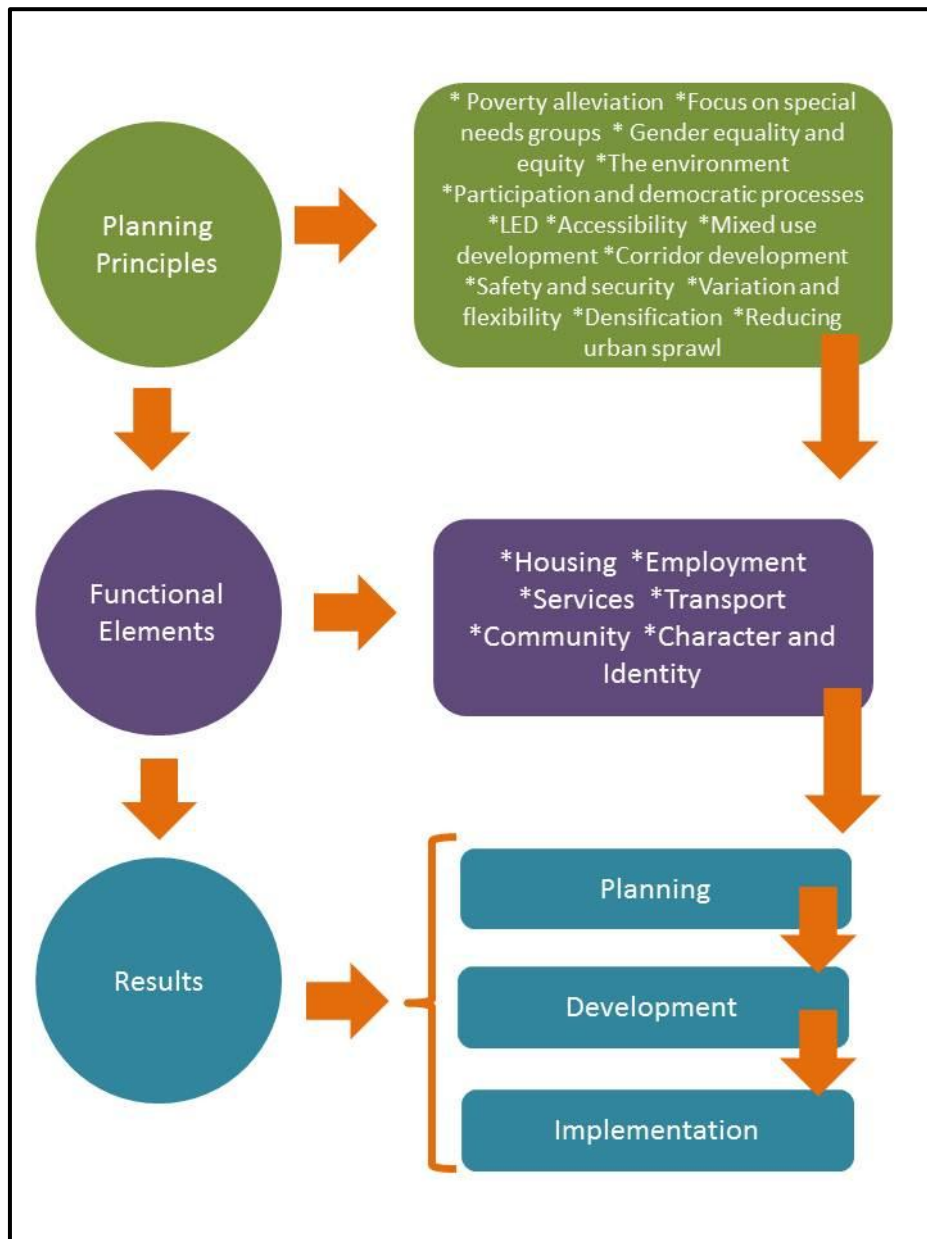


Figure 3.4: Planning principles of integration and sustainability and the implementation thereof

Source: Own construction

These principles already exist, and are implemented, in international arenas as good practice and are also reflected in the development legislation and policy of South Africa. All the principles are interrelated and should be applied as a whole in the planning process as to enhance the overall sustainability and integration of developments. (Nelson Mandela Bay Municipality, 2007: 21)

In **Chapter 5** further descriptions of planning principles as they relate to the functional elements of sustainable communities are given. The application and results of these principles will also be discussed.

3.4 Planning principles of sustainable community planning

Table 3.1 lists the planning principles that need to be implemented in order to achieve sustainable communities. As always these principles should be seen as a broad guideline to planning as each situation poses unique problems. **Table 3.1** also lists the application instruments that can be used to realise the relevant planning principles.

Table 3.1: Planning principles of sustainable communities

Planning Principle	Aim	Implementation	Application instruments
<p align="center">Poverty alleviation and the satisfaction of basic needs</p>	<p>Poverty alleviation and satisfying at least the basic needs of a community, such as water and sanitation, is always necessary, but especially important in poor communities. The aim of planning intervention here is to ensure that basic services are provided so that at a minimum everyone has access to facilities that do not compromise their health and safety. There must also be realistic and practical mechanisms to overcome poverty.</p>	<ul style="list-style-type: none"> • Provision of basic services • Local economic development • Expanded Public Works Programme • Access to education at all levels 	<ul style="list-style-type: none"> • Microfinance for alleviating poverty • Reconstruction and Development Plan • The Housing Act 107 of 1997 • The Rental Housing Act 50 • Water Services Act • The National Development Agency Act of 1998 • Constitution of the Republic of South Africa, Act 108 of 1996 • The Social Assistance Act 13 of 2004 • National Development Plan 2030 • National Urban Development Framework
<p align="center">Focus on special needs groups</p>	<p>In all communities there are special needs groups that have to be catered for. Special needs groups range from HIV/AIDS sufferers, the disabled, the aged and children. Identification of the needs groups must be done before identifying any planning solutions.</p>	<ul style="list-style-type: none"> • Solutions will differ according to the particular situation. • Community participation is necessary as communities will be able to identify their special needs groups more easily. 	<ul style="list-style-type: none"> • Community participation taking into account the special needs of disadvantaged groups • Skills development through Skills Development Act 97 of 1998 • Easy and convenient access to services • Constitution of the Republic of South Africa, Act 108 of 1996 • The Social Assistance Act 13 of 2004 • The Labour Act of 1995 • The Employment Equity Act 55 of 1998 • Promotion and provision of Unfair Discrimination Act 2 of 2000 • National Development Plan 2030

Planning Principle	Aim	Implementation	Application instruments
<p style="text-align: center;">Gender equality and equity</p>	<p>Gender equality and equity promotes social integration and is needed for both social and economic sustainability. Because of present inequalities this principle requires a specific focus on empowering women. Community participation is crucial in order to ensure gender sensitivity.</p>	<ul style="list-style-type: none"> • Preferential treatment, encouragement and promotion of women. • Appropriate location and timing of consultation is needed to ensure involvement in community participation. • Improvements in housing provision, outdoor play facilities, safety and security and accessibility of services. • Create opportunities for home-based work. 	<ul style="list-style-type: none"> • Community-Based Environmental Planning • Skills development through Skills Development Act 97 of 1998 • South Africa's Population Policy (1998) • SADC Gender and Development Protocol (2008) • Constitution of the Republic of South Africa, Act 108 of 1996 • Reconstruction and Development Programme • The Restitution of Land Rights Act of 1994 • The Social Assistance Act 13 of 2004 • The Housing Act 107 of 1997 • The Rental Housing Act 50 • The Water Services Act • The Basic Conditions of Employment Act 57 of 1997 • The Employment Equity Act 55 of 1998 • The Labour Act of 1995 • The National Development Agency Act of 1998 • Preferential Procurement Policy Framework Act 63 of 2003 • Promotion and provision of Unfair Discrimination Act 2 of 2000 • National Development Plan 2030

Planning Principle	Aim	Implementation	Application instruments
The environment – physical, social and economic	The environment comprises physical, social and economic concerns. It implies protection as well as sustainable utilisation and management of resources.	<ul style="list-style-type: none"> • Incorporate environmental aspects into all urban development. • Provision of green areas and public open spaces. • Sense of togetherness, stability and security to be provided in the planning process and in the urban structure. • Make provision for informal business, small-scale economic activities and self-help development. 	<ul style="list-style-type: none"> • Community-Based Environmental Planning • Constitution of the Republic of South Africa, Act 108 of 1996 • National Urban Development Framework • National Development Plan 2030 • Environmental Impact Assessment (EIA) • Social Economic Analysis (SEA)
Participation and democratic process	Sustainable community planning enables communities to influence and participate in the planning for development in their area in tangible ways. Community participation is needed to ensure transparent and accountable democratic processes.	<ul style="list-style-type: none"> • Administrative systems should allow for participatory approaches at all levels. • Structure of committees and teams should encourage participation. 	<ul style="list-style-type: none"> • Community-Based Environmental Planning • Constitution of the Republic of South Africa, Act 108 of 1996
Local economic development	Local economic development (LED) is needed to improve living conditions and promote sustainability. LED contributes to local income earning, local markets and improvement of informal businesses. This initiative will provide work within convenient distances. LED has a particular impact on the role of women and poverty reduction.	<ul style="list-style-type: none"> • Provision for informal business, urban agriculture, small scale business support, job creation and enterprise development. • Home-based and communal food gardens, informal business sites, local markets, mixed land use, business parks. 	<ul style="list-style-type: none"> • Urban Agriculture • Skills development through Skills Development Act 97 of 1998 • Constitution of the Republic of South Africa, Act 108 of 1996 • Broad Based Black Economic Empowerment Act 53 of 2003 • National Development Plan 2030 • National Framework for LED in South Africa 2006-2011

Planning Principle	Aim	Implementation	Application instruments
<p>Accessibility – public transport and pedestrian focus</p>	<p>All parts of the city must be well connected and be easily accessible through public transport. The movement of goods and people are necessary for the city to function economically and socially. Accessibility is an important step towards integration. Public transport is especially important for poorer communities that have fewer private vehicles. Accessibility to different parts of the city increases the range of social, recreational, cultural and work opportunities available to the community.</p>	<ul style="list-style-type: none"> • Focus on pedestrian movement in planning phase. • Provide the requirements for daily life within walking distance. • Safety of pedestrian network is essential. It must be safe at day and night. • Provision should be made for cycling. 	<ul style="list-style-type: none"> • Bus Rapid Transport • Reconstruction and Development Programme • National Urban Development Framework • National Development Plan 2030 • Integrated Transport Plan (ITP) • National Transport Master Plan (NATMAP)
<p>Mixed use development</p>	<p>This principle directly provides for functional and social integration. Location of different uses in proximity to each other should promote efficient urban development. Mixed use development will have a positive impact on the character of communities and provide for a more dynamic and lively environment</p>	<ul style="list-style-type: none"> • Combination of housing, businesses, commercial, social, recreational and educational services and work places. • Co-location and institutional cooperation. • Higher densities. • Located along activity corridors. • Adjacent to central service nodes. 	<ul style="list-style-type: none"> • The Rental Housing Act 50 • Housing Act 107 of 1997 • Reconstruction and Development Programme • National Urban Development Framework
<p>Corridor development</p>	<p>Promotes corridors with higher residential densities, mixed use and public transport viability. Land use and transport reinforce each other.</p>	<ul style="list-style-type: none"> • High concentration of land uses alongside transport corridors. 	<ul style="list-style-type: none"> • National Development Plan 2030 • National Urban Development Framework

Planning Principle	Aim	Implementation	Application instruments
Safety and security	Safety and security addresses violence, crime, fear, vulnerability, traffic and occupational accidents.	<ul style="list-style-type: none"> • Design should be based on surveillance and social contributions to safety. • Priority should be given to pedestrians. • Create a sense of togetherness and encourage community cooperation. • Housing associations, street committees and tenant associations can help. 	<ul style="list-style-type: none"> • Constitution of the Republic of South Africa, Act 108 of 1996 • Reconstruction and Development Programme • National Development Plan 2030
Variation and flexibility	This planning principle involves different housing types, heights, densities and land uses. Different land tenure options should be available within the community. Variation and flexibility allow for changes over time. The aim is to create attractive, diverse, pleasant and well-functioning communities.	<ul style="list-style-type: none"> • Different solutions and flexibility in land use rights are needed. • Phasing of development and reduction of project sizes allow for different designs. 	<ul style="list-style-type: none"> • The Rental Housing Act 50 and Housing Act 107 of 1997 • National Urban Development Framework • National Development Plan 2030
Densification	By creating more compact structures access to work, services and public transport is improved.	<ul style="list-style-type: none"> • Reduction of erf-size. • Alternative housing types. • Mixed development. • Infilling and redesign. 	<ul style="list-style-type: none"> • Reconstruction and Development Programme • National Urban Development Framework • National Development Plan 2030
Reducing urban sprawl	Urban sprawl needs to be limited in order to improve integration, sustainability and infrastructure provision. Reducing urban sprawl also protects farming land.	<ul style="list-style-type: none"> • Determine an urban edge. • Promote agricultural production outside the urban edge. 	<ul style="list-style-type: none"> • Reconstruction and Development Programme • National Development Plan 2030 • National Urban Development Framework

Source: Own construction from Nelson Mandela Bay Municipality (2007: 21-25), Microfinance Africa (2012), Lane and McDonald (2005:710), Department for Provincial and Local Government (2009:21-22; 2006:7), Molebatsi (2009:48), Department of Cooperative Governance and Traditional Affairs (2009:8-45)

3.5 Conclusion

Sustainability and sustainable development is a concern that planners have always had to consider in a spatial context. Planners have to balance social, economic, environmental and amenity issues, but with the new emphasis on sustainability there are many more interests that need to be mediated. It is to this end that the concept of sustainability has been translated into certain planning principles.

Integration has played a big role in urban planning since the democratisation of South Africa since 1994. It is widely agreed that sustainability won't be reached unless social, financial and economic integration is reached. Planning principles were created in order to facilitate the process of sustainability and integration in South Africa. The planning principles are then used to plan and develop sustainable communities. In **Figure 3.5** a graphical simplification of **Table 3.1** is shown. It demonstrates that the application instruments used for the relevant planning principles can be either principle specific or over-arching.

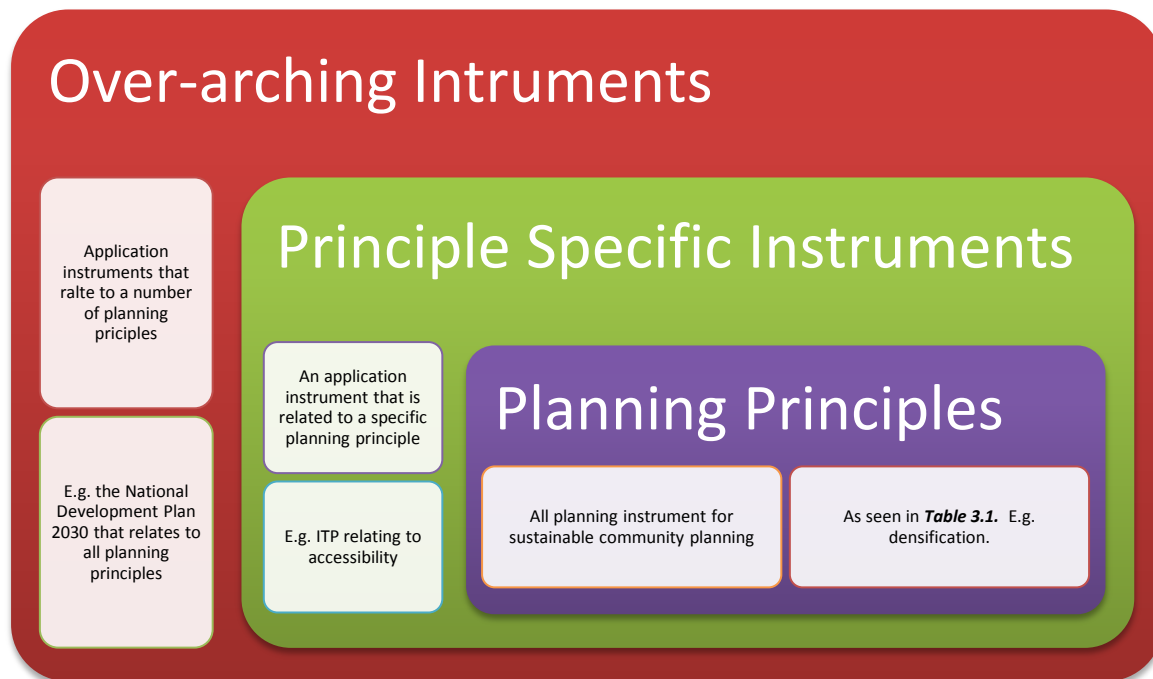


Figure 3.5: Simplification of application instrument relating to planning principles.

Source: Own construction

Planning principles alone won't ensure that the envisioned community is a sustainable one. In order to ensure the best implementation of these principles the community must first be divided into functional elements as will be discussed in **Chapter 4**.