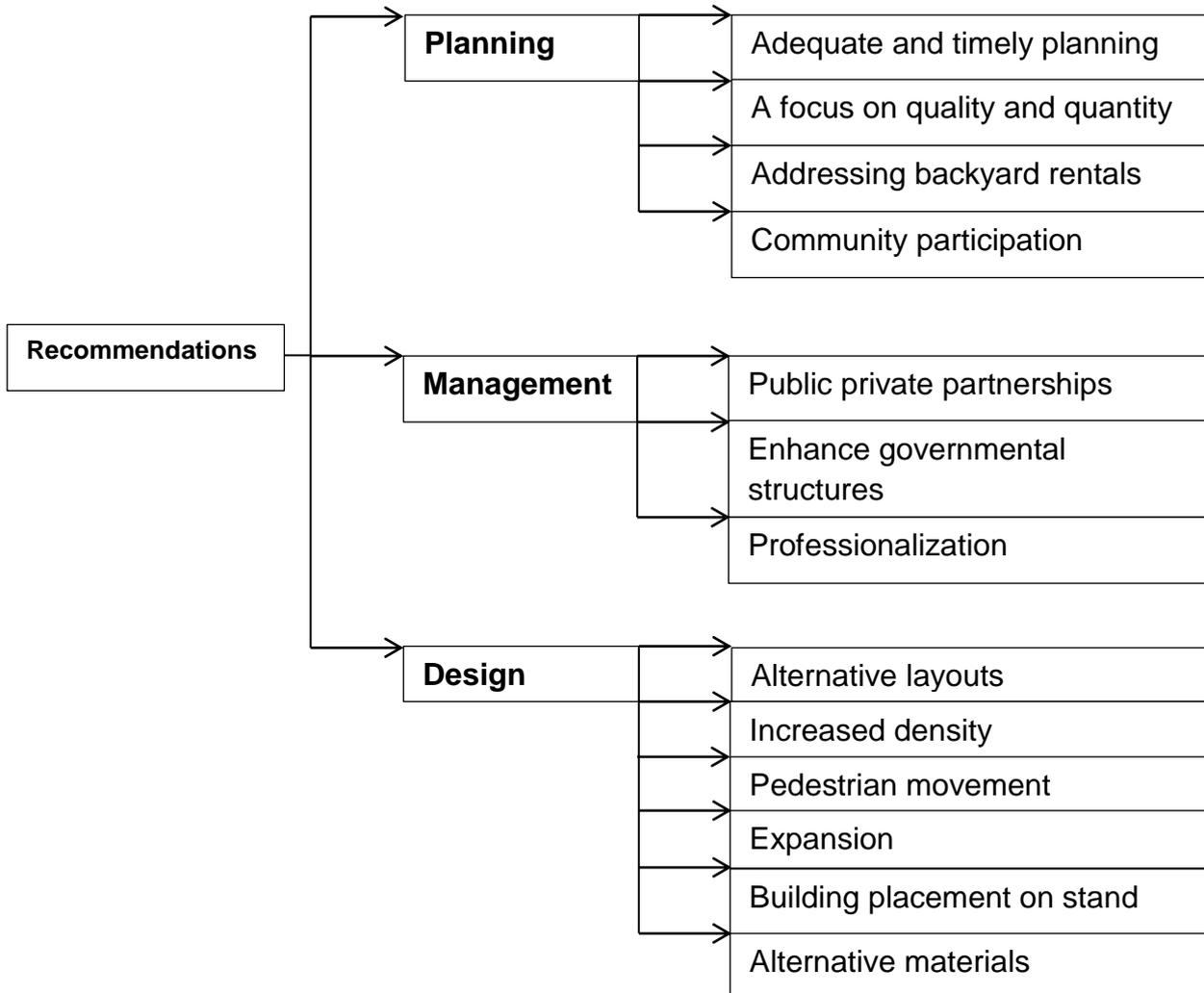


## CHAPTER FOURTEEN: RECOMMENDATIONS



**Figure 71: Summary of Chapter 14: Recommendations**

Source: Own construction (2012)

Chapter 14 will aim to make recommendations for implementation according to the conclusions drawn in the course of the research conducted (See Chapter 13). These recommendations will focus on what needs to be altered and accepted in the hopes of creating more sustainable and liveable human settlements. It should be noted that the recommendations made will be further investigated in a PhD study to be initiated in 2014.

The recommendations made will be divided into three categories, as the issues captured in this study can be better structured under these categories, which form the core components of the low-cost housing provision process, namely:

14.1 Planning: Which will address issues regarding predevelopment considerations.

14.2 Management: Which will address structures and activities of importance to improve delivery.

14.3 Design: Which will address matters pertaining to physical design considerations.

### **14.1 Planning**

The Planning section will discuss recommendation related to the importance of adequate and timely planning, a focus on both quality and quantity, recommendations on the backyard rental sector, the importance of community participation and maximising the role of low-cost housing in local economic development.

### **14.1.1 Planning: Adequate and timely planning**

It is recommended that an approach should always be followed which is informed by the physical, economic and socio-cultural boundaries of the specific area which is to be developed. It should be kept in mind that solutions are not always universal.

In this regard databases must be kept up to date in order to empower decision makers with sufficient data. Updating databases may involve extensive land-use studies and surveys to be spearheaded by municipal planners. Updating databases may be linked with the five year IDP cycle.

Planners should utilise site specific characteristics to inform design and planning, with specific reference to the needs and level of development possible within the community. This entails research and investigation well before physical planning and design is undertaken and implemented. It is of the utmost importance to provide realistically implementable designs and specifications by ensuring that plans fit the socio-economic context of the area and secondly, that capable and competent project managers are employed.

The faults ultimately experienced with the N2 Gateway Project can be traced back to inadequate planning and implementation. It is strongly recommended that time tables and schedules be carefully and realistically drawn up, competent professionals be utilised and committed contractors be employed. This seems like a logical and reasonable recommendation which should go without saying, but the state of the N2 Gateway Project reflects otherwise.

It is also made apparent that funding for the more final stages of development, such as the development of the public spaces planned, should be kept separate and should not be utilised to subsidise the building of more preliminary phases, as was seen in the N2 Gateway Project. It is thus recommended that funding for all stages

be well planned and procured. Funds should also be regularly audited by an independent auditing entity to combat corruption.

#### **14.1.2 Planning: A focus on both quality and quantity**

Only once an approach focussed on quality of life in conjunction with the quantity of units provided is followed, can one start to expect improved results. Planners should actively investigate all possible measures to improve the layout and functionality of housing developments, including the use of mixed housing typologies, alternative construction methods and aesthetic qualities. Where innovative planning and design occurs, quantity will not have to be sacrificed for quality.

The emphasis placed on urban design in this study is also motivated by the fact that aesthetically pleasing environments have positive effects on communities and the way in which low-cost housing beneficiaries perceive their own worth. Urban design has been proven to improve quality of life and satisfaction with the environments delivered; it is therefore recommended that aesthetic urban design principles be introduced as intensively as possible.

It is recommended that where possible the highest level of services be introduced, as this is an investment in the future and will ultimately reduce replacement and maintenance costs. Low-cost development should not imply low standards of delivery. A proactive planning approach is needed if housing quality and quantity is to be improved and increased. The importance of public/private partnerships as a source of funding to finance improved delivery should not be underestimated.

#### **14.1.3 Planning: Addressing the backyard rental sector**

Finding solutions to the country's backyard rental dilemma needs to become one of government's primary objectives. The facilitation of backyard renting should be seen as an opportunity to alleviate South Africa's growing housing backlog. Once it is

accepted that the backyard rental housing sector is a permanent state of residence, can realistic alternative measures be sought and put in place.

Strategies focused on a better facilitation of what is already happening, addressing the key faults within the sector, with a focus on health, safety and public services, should rather be followed. In this regard it is recommended that all provinces be required to adopt backyard rental management policies which should be translated to individual municipalities within IDP and SDF programmes.

It is recommended that infrastructure be planned and provided which can service both formal and informal dwellings. Where budget does not allow for immediate maximum provisions, infrastructure should be planned in a manner which will allow for easy and cost-effective extension in the future.

As always it is vital that solutions be tailored to the needs of particular communities, as generalised approaches may lead to dissatisfaction and revolt from both tenants and landlords. Land use surveys should be utilised in order to determine the magnitude of the existing backyard rental sector in every municipal area. Only once the scope of the demand and the quality of existing backyard structures are established, can the most appropriate course of action be decided.

Pilot programmes will allow for the opportunity to adapt and tweak strategies before the commitment of large scale implementation. These pilot programmes should be initiated and guided according to community specific requirements.

Where single storey units are to be delivered it is recommended that stands larger than 300 square metres be provided to accommodate backyard structures. This recommendation follows the conclusion that backyard structures are an integral component of the South African housing context. Provision should thus be made for enough space to allow for the establishment of at least two households on one stand.

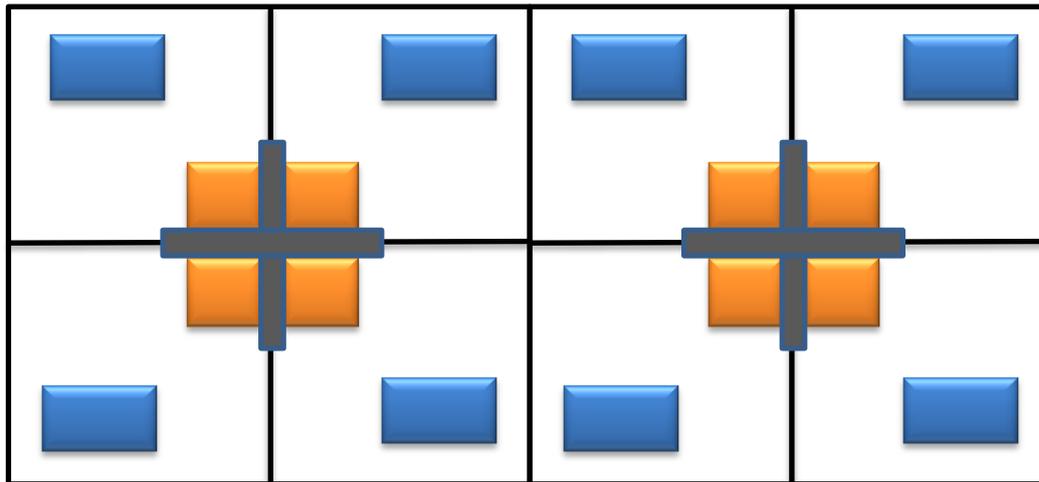
It is however strongly recommended that the provision of double storey starter units be preferred in order to:

- Increase densities.
- Reduce building footprints.
- Improve infrastructure efficiency and reduce costs.
- Allow for the possibility to provide rental rooms on second storeys.

In order to facilitate backyard structures more effectively, it is recommended that main dwellings be placed close to street boundaries in an attempt to enlarge backyard spaces. Main dwelling units should also be placed to accommodate ease of access to backyard structures. This may imply the placement of starter units closer to one side boundary.

The erection of a section of concrete walling to divide stands from one another could hold various benefits. Concrete walls would provide boundaries between stands, providing safety, privacy and a sense of formalisation. Walls would also provide fire-breaks between structures on different stands, as well as providing a form of support for backyard structures.

The costs associated with the provision of these walls, as well as problems related to durability and maintenance may be challenging. Figure 72 illustrates the establishment of four backyard structures in the corners provided by concrete walls.



Legend:			
	Unit		Erf boundary
	Backyard structure		Concrete wall

**Figure 72: Concrete walls and backyard structures**

Source: Own construction (2012)

The above mentioned and following recommendations will only be realistically implementable once the capacity of the local municipality is increased. Only once the local authority is capable of evaluating, reprimanding and generally administrating the backyard rental sector, can the following be considered.

It is recommended that more building inspectors and supporting staff be introduced in understaffed and overwhelmed municipal departments in order to more effectively regulate the backyard rental sector.

Capital subsidies can be applied to the construction of new residential units with rentable backyard components. A higher subsidy may be allocated to these stands to cover the higher costs of construction. It is suggested that where capital subsidies are implemented, fixed rent rates also be enforced to regulate the market and ensure that renters can still afford backyard accommodation.

It is recommended that certain minimum criteria be established according to which backyard structures are to be erected. Accordingly owners submit a building plan for approval, with the completed unit being subjected to inspection, and a capital grant paid out.

It is suggested that the concept of backyard structures be legalised. In new developments an indication that the construction of rooms for rental purposes will be allowed may be given to provide encouragement to potential landlords to improve the quality of backyard structures. Landlords may be encouraged to invest more once it is made clear that structures will not be deemed illegal (subject to minimum safety standards).

The relaxation of building controls may help to facilitate the supply of affordable rental accommodation. However most forms of building or planning control receives little recognition or compliance in the South African township. This may indicate that the relaxation of these controls may have little effect in reality. It is thus recommended that controls be more forcibly applied, implying a need for more building inspectors.

The provision of free or subsidised building materials for the construction of structures on rented land could be of benefit. In most South African townships it is common practice for renters to build their own structures (from own building materials) on rented land. It is recommended that prefabricated units or sufficient materials be subsidised and provided for the construction of safer and more liveable backyard structures.

#### **14.1.4 Planning: Community participation**

The most prominent recommendation to be made from the data collected from the Rose Valley questionnaires is the importance of facilitating the education and management of communities' perceptions. This is essential if developers wish to enjoy community buy in and satisfaction. It is recommended that more effective methods of communication such as visual aids and competent translators be used to convey new concepts in an understandable manner. The main conclusion to be drawn from this research is the fact that educating the community and swaying the negative perceptions often connected with alternatives, is of vital importance.

Planners should relate the cost-benefit ratio of alternatives in relation to traditional housing practises in an understandable manner. Community Participation is a vital step in the introduction of alternative construction materials and design models, as the community has to understand and accept the homes they are to spend their lives in. Only once the trade-off between cost and the benefits made deliverable by cost savings is explained, can beneficiaries be expected to consider these options.

Care should however be taken to ensure that the processes and stakeholders involved in participation are managed to arrive at the best possible outcome: a development which bares the needs of the community in mind and reflects their preferences and way of life. It should also be noted that planning professionals should use their professional expertise to guide the participation process and to manage expectations, thereby ensuring that the often ignorant community does not become the project leader. Care should thus be taken not to fall into the pitfalls and problems which participation can often bring.

Following the Ilette Swanevelder interview, it is recommended that public participation be facilitated by planners in a manner which utilises professional discretion in managing the community's needs and what sources are financially, practically and institutionally available to meet these needs.

The implementation and utilisation of prototype units as an educational tool is a further recommendation. Prototypes may prove very useful where alternative typologies and new materials are to be introduced in very traditional communities.

It is important to state that prototypes need to be as relatable to the final product as possible in order to provide communities with realistic expectations and insight, in order to empower them as participators in the planning process. Where resource restrictions prohibit the construction of life-size prototypes, models and visual demonstrations should be utilised.

#### **14.1.5 Planning: Maximising the role of low-cost housing in local economic development (LED)**

LED strategies should be constructed according to area specific parameters such as the availability of both human and natural resources and the characteristics of the specific communities involved. This must be done in accordance with best practice principles in order to maximise the ability to attract and retain investment and sustainable economic growth.

Planners play an important part in the establishment of relationships between authorities and communities regarding the strategies which will affect them, especially regarding strategies which impact spatially. It is thus recommended that planners utilise their professional expertise to influence the construction and implementation of LED strategies, especially with the use of community participation processes and involvement.

It is furthermore recommended that planners advocate the importance of spatial planning and supportive policy in order to maximise LED possibilities. This should include the provision of access to economic activities and employment as well as to important transportation corridors through effective spatial planning and design.

Planners should also ensure the sufficient provision of well-located civic institutions and adequate infrastructure in order to improve the attractiveness of specific neighbourhoods for investment from the private sector. This will also improve living conditions and community satisfaction which will improve local productivity.

As housing development provides inhabitants with a fixed asset, it is recommended that all measures possible are taken to facilitate the use of these properties for income generation. This includes the possibility of renting rooms or backyard accommodation to the otherwise destitute. This will however call for advanced regulatory policies and innovative design applications in order to ensure a manageable, safe and healthy rental environment.

This principle also extends to the adaptation of local policies which will simplify rezoning processes. It should be made as simple and fast as possible for persons wishing to establish business sites, to do so. It is thus recommended that planners do whatever possible to give inhabitants of low-cost housing units the opportunity to establish legal small enterprises and home industries on their premises by streamlining cumbersome rezoning and other application processes.

It is furthermore recommended that where low-cost housing development takes place, local suppliers and contractors be utilised as extensively as possible. This will increase local employment and will also make better use of local natural resources which may be applied as building materials.

It is however also recommended that contractors and suppliers not be appointed solely because they are of local origin. Only where contractors and suppliers have proven that they will be able to meet the demands of large scale housing development, may their tenders be considered. Where local expertise is not sufficient, contractors and suppliers must be sought from as nearby as possible in order to improve the economy of the region as a whole.

When contractors are appointed from further afield, they should be required to utilise as much local labour as possible. This refers to both skilled and unskilled labour, in an attempt to inject spending from their income into the local economy. Contractors should thus commit to the employment of a sustainable percentage of their labour from the local labour force.

Housing development projects of substantial size may also provide the opportunity for skills transfer to take place. Local labourers may thus gain valuable experience which can be applied to new projects in future. This may also lead to the establishment of new enterprises by labourers who wish to apply new skills in their own businesses. It is recommended that skills training programmes be introduced before construction starts as well as during construction in order to attempt the maximum opportunity for skills transfer. In this regard it is furthermore recommended that supportive programmes be provided to guide and support emerging businesses in order to contribute to sustainable economic growth.

It is furthermore recommended that it be kept in mind that substantial housing development may cause a greater need for employment opportunities in the area by attracting newcomers. Opportunities for further employment creation should thus, as always, be sought.

## **14.2 Management**

The management section of the recommendations made will focus on the importance of public private partnerships, addressing current governmental structures, the central role of the local authority and the professionalization of the planning field and effective management.

### **14.2.1 Management: Public private partnerships**

It becomes clear that with adequate funding much is possible. It is therefore important that government funding be well administered and managed and that alternative sources of funding and collaboration with the private sector and international investors be secured. This will lead to a development of an overall higher quality as seen in Cosmo City.

The Rose Valley Settlement's lack of public private collaboration implies that partnership will be more likely established in areas with strong economic sectors. It is thus recommended that regional or provincial partnerships be encouraged. Funding may thus be procured at a provincial level and directed to local projects in areas where a strong local economy is absent.

Collaboration between different governmental agencies, local and provincial, and the private sector as in Olievenhoutbosch is the approach which should be applicable to all future developments. It is thus recommended that internal governmental structures and coordination be better managed and strengthened to promote public/private partnerships and internal governmental collaboration between different spheres and departments.

It is furthermore recommended that developers be required by government to maintain an active presence in the communities developed after top structures have been completed. This will create a sense of accountability, improved management and performance and a generally more sustainable community. The continued involvement of Basil Read Developers in Cosmo City reveals the benefits of maintained developer activity.

Partnerships should especially extend to private construction firms in order to ensure that they are committed to providing quality products and services. Effective screening and fair tender allocations by government are necessary in order to employ only responsible and accountable contractors. It is recommended that contractors with a track record of efficient, reliable and accountable delivery be favoured above emerging contractors with limited experience. Instead emerging contractors should be given the opportunity to work under established (hired) contractors in an attempt to encourage skills transfer.

#### **14.2.2 Management: Governmental structures**

A study of SA's low-cost housing development approach clearly indicates the need for better management and administration at all levels of government. It is recommended that national, provincial and local governmental structures be evaluated and restructured in order to better delegate and outline the tasks, responsibilities and levels of performance expected by each agency and authority. This will prove crucial in the insurance of accountability and the promotion of innovative thinking without the current restrictions imposed by a lack of accountability and responsibility.

It is furthermore recommended that the realistic implementation possibilities and restrictions to governmental literature such as the White Paper on a New Housing Policy and Strategy of 1994 and the Breaking New Ground Initiative of 2004 be further investigated. These documents point to a step in the right direction, but are ultimately still unable to drastically improve the delivery process and the end products delivered in a significant manner.

#### **14.2.2.1 Management: The central role of the local authority**

It is recommended that the bulk of responsibility related to housing delivery be transferred to the local municipality, wherever possible.

It is strongly recommended that the distortion between provincial and local responsibilities be minimised or at least be more effectively administrated.

#### **14.2.3 Management: The professionalization of the planning field and effective management**

Following the Ilette Swanevelder interview, it is recommended that a better screening process for planners hired in local municipalities be followed, focussing on candidates with good references and a track record of reaching targets in past projects. Candidates should never receive contracts on the basis of their political connections.

The professionalization of the public planning sector by only employing qualified and registered professionals in key positions is recommended to ensure accountability and competency. This recommendation relates to reserving work for registered professionals who are qualified and can be held accountable by a body such as the South African Council for Planners (SACPLAN).

It is also recommended that municipal planners be trained in the disciplines of project management and effective administration in order to increase efficiency rates and competency.

It is strongly recommended that all existing housing departments in local authorities be thoroughly evaluated in order to determine the greatest restrictions to effective delivery. Only once restrictions have been identified, can appropriate steps be taken to improve capacity and efficiency.

In municipalities where a housing department is completely absent, it is recommended that a department be established. Where resources are extremely restricted, a department could be established which consists of only one housing manager, responsible for the administration of the housing process and liaising with province. This will reduce the pressure on municipal departments which have been left to deal with the burdens of housing delivery on top of their other responsibilities. The sheer size of the housing backlog in virtually every South African municipality merits this recommendation.

It is recommended that government make further funding available for the education and training of project managers and building inspectors to be placed in local municipalities. This will require the commitment of extensive funding from government in an attempt to increase local capacity.

A clear division between the roles and responsibilities related to housing delivery in both the local and provincial sphere is to be established to prevent duplicity and ineffectiveness. In this regard a clear housing mandate needs to be established for both province and local municipalities which clearly identifies objectives and which sphere of government may be most suited to meet these objectives. Housing mandates may need to be suited to local capacities.

It is recommended that, as part of the community participation process, communities be made thoroughly aware of who is responsible for the delivery process in their area to prevent misplaced aggression and protests. This relates to the fact that in most cases local municipalities are not responsible for housing provision in their areas of jurisdiction, but are perceived by communities as the primary housing developer.

## **14.3 Design**

The design section of the recommendations made will focus on alternative layouts, socio-economic integration, the value of aesthetic urban design initiatives, facilitating increased densities, providing for future expansion, pedestrian movement, building placement on stand and the value of alternative construction materials.

### **14.3.1 Design: Alternative layouts**

It is suggested that a set of proposals solely focussed on layout and construction be drafted to guide the design and delivery process more effectively. These guidelines may be informed by the CSIR's Guidelines for Human Settlement Planning and Design, but should incorporate the use of alternative layout options and the integration of new design concepts and models.

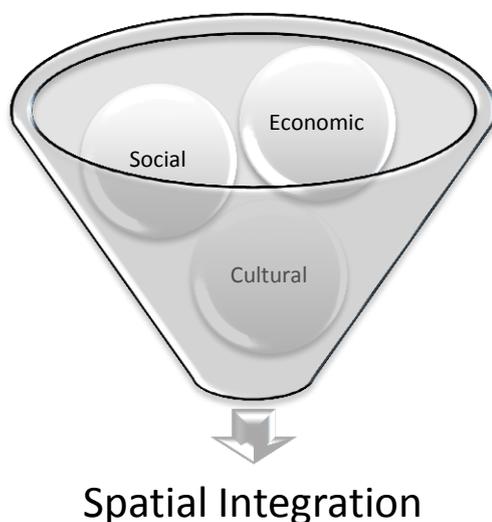
It is recommended that layouts be favoured which integrate different housing typologies of varying heights in order to meet the different needs of inhabitants and to create a less monotonous area. Alternative layouts to the grid iron approach, utilising courtyards, clusters and cul-de-sacs should be investigated and favoured, as suggested by the Ethikweni Municipal Study (See Chapter 10).

In order to facilitate the widespread introduction of alternative layout concepts, municipalities should demand at least three layout options from design consultants before accepting a specific layout choice.

### 14.3.1.1 Design: Socio-economic Integration

The Cosmo City model reveals that integration may only be effective in the form of creating different cells or neighbourhoods within a development, each containing a different level of housing and society. It would be practically and economically unacceptable to place bonded housing directly in the middle of or next to subsidised units given the role of bonded units as private investments and assets. This form of integration is thus recommended as the model to be followed where integration is sought.

Planners should attempt to design and approve developments which promote economic, social and cultural integration (See Figure 73) through the utilisation of building placement and innovative layout. In this regard spaces should be provided which encourage socio-economic interaction and exchange between different income groups.



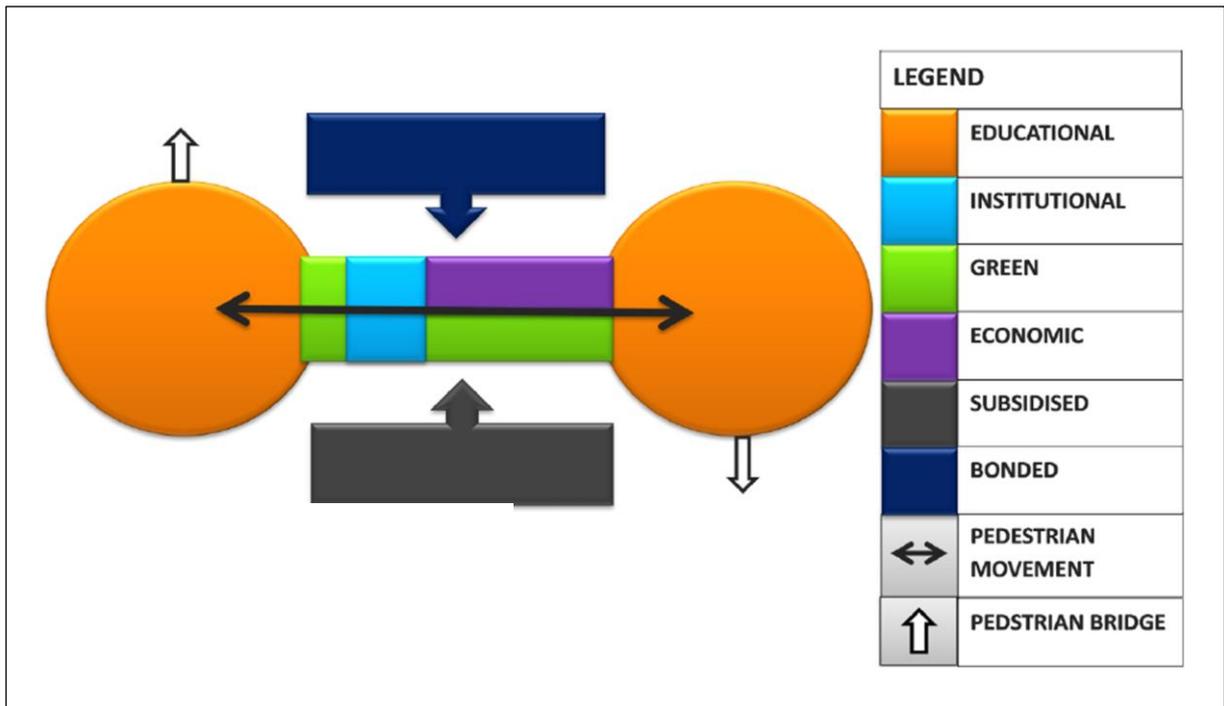
**Figure 73: Integration for sustainability**

Source: Own construction (2012)

It is thus recommended that institutional, economic and green use buffers be utilised as cushions between different economic groups in order to protect bonded assets, whilst providing a space for interaction and community integration.

A proposed model to be followed is illustrated by Figure 74, in which:

- Educational uses are preferably used as anchors, connected by a pedestrian safe linkage system, which
- Introduces institutional uses such as churches and community halls, green spaces such as parks and sports fields and economic uses such as demarcated trade venues or formal shops.
- Provides bonded units on one side of the network and subsidised units on the other in an effort to promote socio-economic interaction and exchange whilst protecting the value of private bonded homes as assets.
- The strategic placement of pedestrian bridges may extend pedestrian safe movement.



**Figure 74: A concept for a model which promotes socio-economic integration and access to facilities through pedestrian movement**

Source: Own construction 2012

#### 14.3.1.2 Design: Aesthetic urban design Initiatives

Following the Ethikweni Municipal Study, it is recommended that the value of good aesthetic urban design be recognised as an essential tool and not simply as an additional measure to receive attention if budget permits.

Urban designers should be involved from the earliest planning phase to ensure that their models are seamlessly incorporated into layout concepts. In many cases urban design principles can inform and influence the entire layout design.

Cost-effective urban design principles should always be implemented in order to create unique and pleasant low-cost residential developments. It is recommended that variations in paint colours, two dimensional patterns, intelligent landscaping, alternating facades and sight lines be incorporated when considering residential development concepts.

It is further recommended that where possible, urban design Initiatives which can create employment by utilising unskilled workers from the community be advocated. This may relate to the incorporation of labour intensive paving, landscaping and painting.

Aesthetically pleasing environments and structures will furthermore increase property values. This is important seen in the light of any home as an asset to its owner. By providing units which will increase in value and become more desirable in the market place, low-cost housing provision can be implemented as a tool for financial growth.

### **14.3.2 Design: Increased densities**

Where possible higher density development should be introduced in order to combat the urban sprawl phenomenon, reduce construction and land costs, reduce building footprints and improve the level of services provided.

Providing tall and impersonal high-rises is not recommended. Instead medium and high density typologies which still promote interaction between beneficiaries and their surrounding community is suggested. In this regard it is recommended that a combination of the following be provided according to specific community contexts:

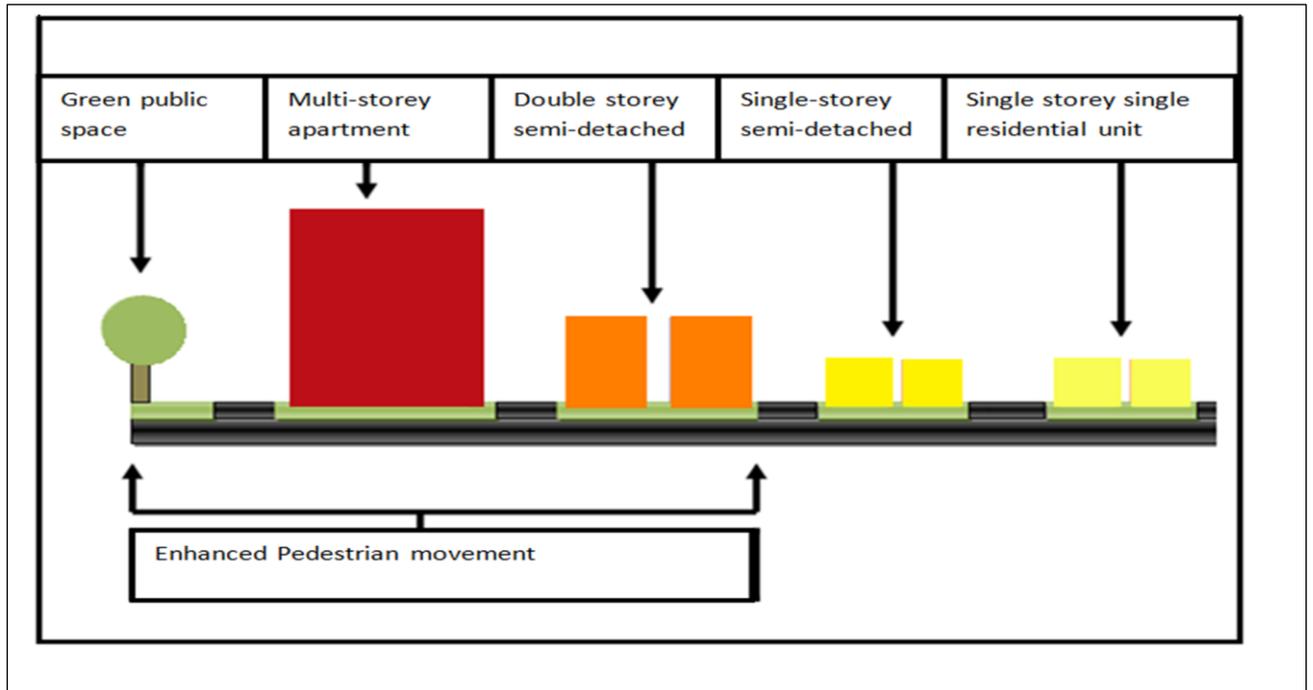
- Five storey walk-ups
- Row housing options
- Semi-detached units
- Single residential units

These typologies should be delivered in varying heights, with two storey units receiving preference in order to increase high density benefits.

The highest density units may be primarily provided as subsidised housing due to the cost savings and subsequent improvement in service delivery and finishes made possible by higher density development. This indicates that lower density units such as single residential units may primarily be provided as bonded homes as the stands required to house detached units require increased capital investment.

It is further recommended that a gradual transition in building height be utilised as a tool to delineate between and shift towards different densities and neighbourhood units (See Figure 75). The highest densities should be introduced next to communal use areas with a gradual decrease in height and density towards higher income bonded units. This is done in order to establish low-income beneficiaries, who are primarily pedestrians, within walking distance of institutional, economic and green uses.

As stated, the highest densities should surround communal and institutional uses in order to provide the maximum number of residents with pedestrian access to these facilities. Heights should then decrease toward both subsidised and bonded single residential units. This concept is illustrated by Figure 66. The placement of higher density typologies in proximity to public spaces is especially applicable where institutional, economic and green use buffers are not used to separate different economic groups.



**Figure 75: Proposed unit placement**

Source: Own construction (2012)

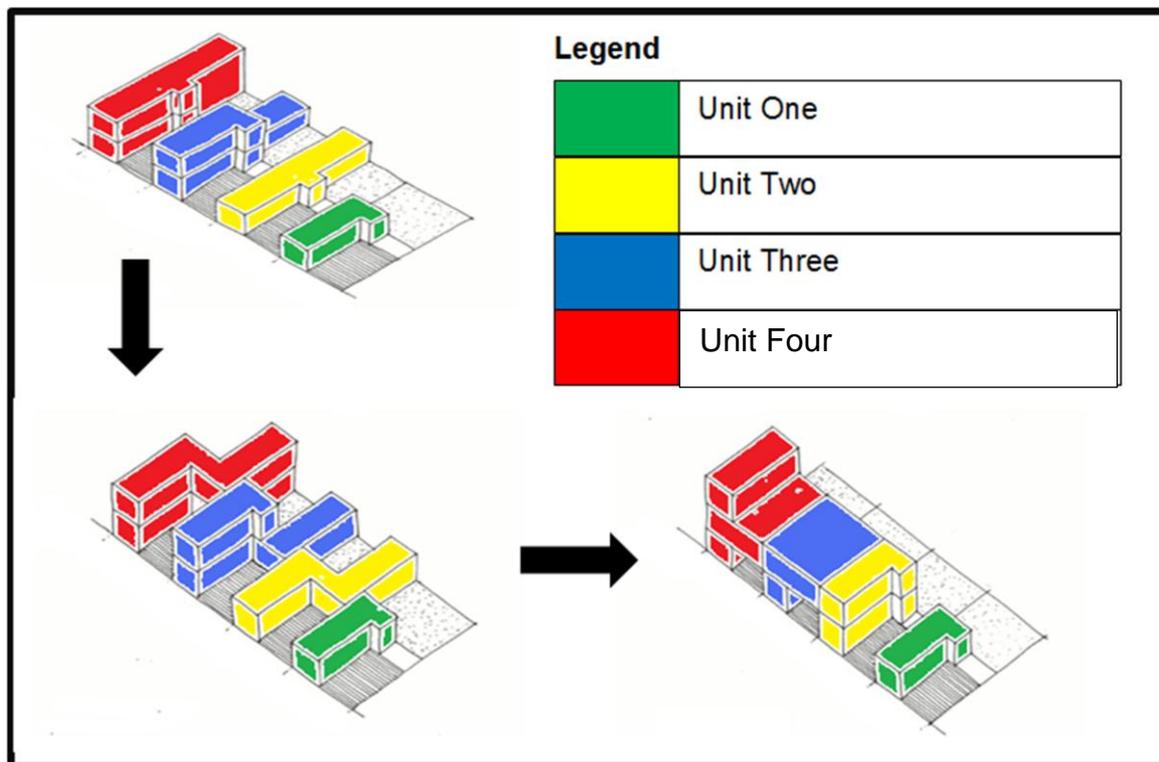
### 14.3.3) Design: Expansion

In light of the Ethekewini Municipal Study it is strongly recommended that top structures and stands be designed in order to accommodate regulated and orderly expansion according to the evolving needs and circumstances of beneficiaries. It is important to make provision for expansion in the preliminary phase of planning through the allocation of stand size and the use of building lines to control development.

In this regard it is recommended that preapproved extension options be drafted which can be made available to beneficiaries wishing to extend their homes. This will provide home owners with standardised options which have already been approved by municipal building inspectors.

The use of these standardised extension templates may encourage the construction of legal and safe additions and the use of building plans, streamline building plan approval, save costs and improve the visual appeal of the area.

The additions made possible by pre-approved plans may be applied for a variety of uses, such as home spaza shops or backyard rental accommodation. Possible extension options are illustrated by Figure 76.



**Figure 76: Suggestion for the layout of approved extensions to promote freedom of choice, variety and safe and aesthetically pleasing additions**

Source: Adapted from Silverman (2005:7)

Figure 74 illustrates how starter units can be extended with pre-approved additions. Additions may be used for rental accommodation or as business premises. This will provide renters with safe and approved rental rooms, either on the first, second or even third storey, according to the rooms provided by the homeowner.

#### **14.3.4 Design: Pedestrian movement**

Clarence Perry's and Clarence Steins' approaches to the importance of pedestrian movement are key concepts to be introduced in South Africa. It is recommended that pedestrian movement be seen as the primary mode of transport to public facilities in low-cost housing developments where fewer inhabitants make use of private motor vehicles. In this regard layout should accommodate and place preference on pedestrian movement by separating pedestrian and vehicular traffic.

The introduction of high density apartment buildings, row-housing and semi-detached units will place a larger number of persons close to public facilities, thereby promoting pedestrian movement. Increased pedestrian movement also implies a diminished amount of vehicular traffic around central activity nodes.

The use of institutional and green spaces as pedestrian corridors as intended with the community spine concept (NuPlan Africa, see Chapter 11), promotes pedestrian movement and a link between different institutional uses and members of different tiers of the community. A recommendation relating to this fact is the introduction of pedestrian walkways and sidewalks within these corridors.

Where possible pedestrian bridges should be introduced at strategic locations where the effects of community spines and institutional networks can be expanded.

#### **14.3.5 Design: Building placement on stand**

The placement of units closer to the street, as advocated by NuPlan Africa and the Ethikwini Municipal Study, is strongly recommended. This provides home owners with adequate space to extend existing units to the back, as well as preserving the aesthetic quality of the streetscape, by discouraging the addition of unwanted structures on building facades. Placing buildings closer to the street furthermore promotes street safety by ensuring activity and interaction between street life and home owners.

A specific distance for the placement of units from street boundaries cannot be universally applied. Distance may be influenced by the following:

- The class of road adjacent to residential units. Higher order roads may imply greater placement distances.
- The choice of infrastructure provision. Above ground and subsurface infrastructure provisions may imply different placement distance requirements.

#### **14.3.6 Design: Alternative construction materials**

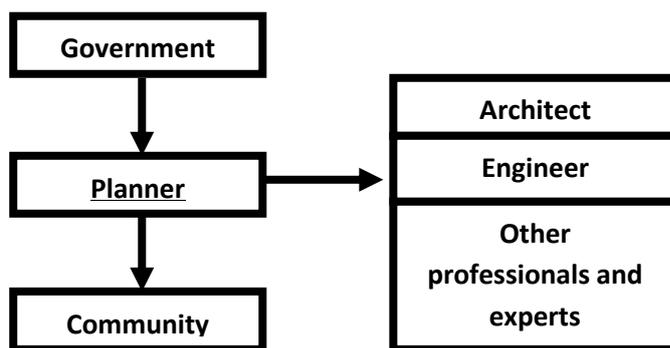
The most important factor when considering alternatives is a commitment from government to actively research and implement these options. Where possible planners should advocate the benefits of these alternatives in conjunction with architects, engineers and urban designers. Only when planners understand the concepts involved in alternative construction, can informed design decisions be made.

It is furthermore recommended that government starts actively investigating and educating its officials regarding the benefits related to alternatives. Once officials are educated and informed the implementation and acceptance of alternatives in government can be expected.

It is important that the responsibility for the implementation of alternative materials and techniques be clearly defined and assigned to a specific provincial department, given that housing development is currently a provincial mandate.

It is recommended that planners be educated regarding the benefits and requirements posed by alternative construction, as the implementation of these methods and materials may influence layout, budget and scheduling.

Figure 77 illustrates the central role of the planner in the delivery of units constructed from alternative materials. The planner should guide the process and utilise input from various experts and professionals such as architects and engineers. The role of government as instigator is also evident.



**Figure 77: The Role of the urban planner in implementing alternatives**

Source: Own construction (2012)

## **14.4 Recommendations for the Rose Valley Extension**

### **14.4.1 Rose Valley: Planning**

#### **14.4.1.1 Rose Valley, Planning: Adequate and timely planning**

The Rose Valley Extension potentially provides the opportunity for the development of a low-cost residential showcase which can serve as an example to future housing development in South Africa. In this regard the traditional RDP approach to housing development should not be seen as the only viable option.

The main development objective should be providing housing options to the maximum number of beneficiaries which improves quality of life and access to socio-economic opportunities. A focus on both quantity and quality should be guide development. In order to meet this objective, alternatives need to be investigated and advocated if improved living conditions are to be realised.

Alternatives should be introduced within the existing framework provided in current policies in order to streamline the delivery process and provide substantial support for the options considered. It is recommended that the Rose Valley Extension be planned and delivered according to the objectives provided by the BNG Initiative. These objections should however be adjusted according to Rose Valley's context and ability to accommodate BNG principles, as seen in Olievenhoutbosch.

A detailed delivery plan and budget should be planned well in advance. The delivery plan should provide for delivery in phases according to logical and viable stages of succession or where possible simultaneous development to decrease costs and timeframes. Care should be taken not to duplicate the mistakes made in the development of the N2 Gateway Project.

In order to execute the strategies planned, it is further recommended that external project managers be appointed in an attempt to increase municipal capacity and promote accountability and timely delivery. This should be done in the planning phase to ensure that project managers are well acquainted with the development parameters and project goals.

A detailed strategy should also be drafted which clearly outlines the manner in which residents will be relocated according to a new layout concept and how the social repercussions of this move will be managed.

#### **14.4.1.2 Rose Valley, Planning: Local Economic Development**

In an attempt to stimulate local economic development through the development of the Rose Valley Extension, the following is recommended:

- Promoting access to existing economic nodes by providing access to existing public transportation facilities such as taxi ranks.
- Encouraging the establishment of legal small enterprises and home industries such as spaza shops and hair salons by simplifying application processes and providing spaces for these uses. Space may be provided by offering predesigned extension options or by regulated backyard structures.
- Providing quality infrastructure which can service business uses and lure private investment.
- Developing a backyard rental strategy which allows beneficiaries to use homes as assets and income-generators by facilitating regulated backyard renting.
- Making use of local contractors and suppliers who have proven their ability to meet the needs of large scale development. Contractors should be required to employ a percentage of future residents.
- Establishing programmes to facilitate skills transfer to the residents involved in construction and development in conjunction with supportive programmes on entrepreneurship which may provide sustained economic growth.

- The introduction of more labour intensive methodologies such as the use of alternative construction materials which encourage on-site production or urban design Initiatives such as labour intensive paving and painting.

#### **14.4.1.3 Rose Valley, Planning: The backyard rental sector**

It is furthermore recommended that a backyard rental management strategy be drafted in order to manage future backyard structures and existing backyard components. This strategy may include the following:

- Evaluating the scale of the backyard sector in the Oudtshoorn area by conducting surveys and studies. Given the number of current Rose Valley settlers who were previous backyard settlers, it is important to determine the number of temporary residents who may need permanent housing in future.
- Increasing municipal capacity to regulate backyard structures. This requires the appointment of more building inspectors or assistants to monitor the backyard sector.
- Providing adequate infrastructure to service possible backyard settlers on all stands, or providing the option for future infrastructure extension as need arises.
- Providing rental rooms on the second storeys provided by double storey semi-detached and row housing units with the option to extend these rooms with predesigned and approved extensions. The option should also still be given to erect safe structures in backyards.
- Placing semi-detached starter units close to street boundaries to provide space for backyard structures and ensured street access.
- Granting capital subsidies on application to beneficiaries who wish to construct safe and legal backyard structures. These subsidies may be used to cover the costs of materials or for prefabricated units.
- Legalising the backyard rental concept on the condition that backyard structures comply with minimum construction, health and safety standards.

#### **14.4.1.4 Rose Valley, Planning: Community participation**

Further development of the Rose Valley Extension should incorporate public participation in an intensive manner, especially when higher density typologies, stand sizes, aesthetic qualities and alternative construction techniques are considered. In this regard planners need to constantly communicate with the community and provide for meaningful interaction in order to facilitate local needs and manage perceptions.

Since a main development concept for the Rose Valley Extension proposed by this study entails the delivery of double storey semi-detached and row housing units, community participation and endorsement will prove vital in the establishment of sustainability.

Concepts should be communicated to community members with the use of visual representations and understandable concepts which are fitted to the community's education level.

The distribution of questionnaires in Rose Valley clearly provided proof that community engagement can only be effective where the time is taken to thoroughly explain development concepts and answer questions from concerned community members. Many of the answers to questionnaire questions which endorsed the use of higher densities and alternative construction were given as a result of careful explanation and discussion with settlers.

The value of preliminary and continued community engagement is provided by the success of the Cosmo City and Olievenhoutbosch developments.

## **14.4.2 Rose Valley: Management**

### **14.4.2.1 Rose Valley, Management: Public private partnerships**

In light of the current lack of public/private partnerships and investment, it is recommended that investment from the broader region be sourced by the introduction of regional investment policies. These policies should provide additional benefits to private investors and consultants who offer their services and capital for development in the Oudtshoorn area, which has a weak local private economic sector.

### **14.4.2.2 Rose Valley, Management: Enhanced governmental structures**

The Oudtshoorn Department of Housing currently enjoys ample authority in the management of housing delivery for the Rose Valley Extension. It is however recommended that communication and collaboration between the Housing and Planning Departments be encouraged in order to streamline the delivery process and increase the quality of the environment provided.

### **14.4.2.3 Rose Valley, Management: Professionalization of the planning sector**

The Oudtshoorn Municipality currently employs planners who are already registered or are candidates for registration at SACPLAN. It is however recommended that where private consultants in the planning, engineering and project management fields are used, only registered professionals be employed. This recommendation relates to the Ilette Swanevelder interview and to the N2 Gateway Project case study.

### **14.4.3 Rose Valley, Design**

#### **14.4.3.1 Rose Valley, Design: Alternative layout**

It is recommended that a layout which introduces a layout concept which deviates from traditional approaches more than the use of cul-de-sacs seen in the current revised Rose Valley layout plan, be considered. The Oudtshoorn Municipality should as part of the project tender guidelines demand a variety of alternative layout options from consultants.

The layout plan should also take the topography of the project area and providing connections and access to existing adjacent neighbourhoods and roads into account.

It is furthermore recommended that the layout make provision for construction in predefined and well-timed phases whilst providing space for the temporary resettlement of residents waiting for their top structures to be completed. This should entail a detailed strategy on how residents will be moved and how the social repercussions of this move will be managed.

#### **14.4.3.2 Rose Valley, Design: Socio-economic integration**

The Rose Valley Settlement is located adjacent to previously developed low-cost housing projects which are adjacent to higher income neighbourhoods. This fact, paired with a development concept which only delivers subsidised units, leaves the concept of socio-economic integration as a secondary consideration. It is however recommended that public transport connections and facilities be provided in order to link Rose Valley with the Oudtshoorn CBD and other economic nodes and corridors as well as social amenities.

#### **14.4.3.3 Rose Valley, Design: Institutional uses as central**

It is recommended that the establishment of central institutional, green and economic use spaces be provided in order to provide pedestrian safe movement corridors as seen in the concepts of NuPlan Africa.

The focus placed on educational uses (primary and secondary schools) as anchors between institutional, green and economic use linkages may not be applicable in Rose Valley. Given the current availability of educational facilities in the area and the size of the Rose Valley Extension, it is recommended that anchors be provided in the form of churches, community halls or trade centres.

#### **14.4.3.4 Rose Valley, Design: Increased density**

Single residential units should not be considered as the only housing typology to be delivered in Rose Valley. The restrictions to future development and extension provided by a lack of suitable land in the Oudtshoorn area and the general acceptance of denser living arrangements by Rose valley settlers (as proven by questionnaire results) merits this recommendation.

Given the limited land available for future expansion and the growing demand for low-cost housing in the Oudtshoorn area, it is recommended that typologies of increased density be provided. In this regard semi-detached and row housing units which vary between one and two storeys should be provided.

The highest densities, referring especially to two storey units should be placed next to communal, institutional and green uses in order to maximise pedestrian access.

#### **14.4.3.5 Rose Valley, Design: Pedestrian movement**

It is recommended that layout encourage safe pedestrian movement with the introduction of small scale community spine concepts as intended for the N2 Gateway Project by NuPlan Africa and as seen in the pedestrian friendly concepts of Clarence Stein and Clarence Perry.

Furthermore the provision of safe sidewalks and well defined walkways which incorporate natural movement patterns should be introduced. These pedestrian corridors should provide safe and efficient access to public facilities and should in this regard be well lit and designed in order to promote an 'eyes on the street' approach.

#### **14.4.3.6 Rose Valley, Design: Expansion**

It is strongly recommended that preapproved extension options be provided which provide beneficiaries with a number of extension options to suit evolving needs and family sizes, as advocated by the Ethekewini Municipal Study. This recommendation is made in order to both preserve aesthetic qualities and encourage safe and legal extension. It should therefore be kept in mind that extension options should provide realistic possibilities which can be implemented by residents over time. This recommendation compliments the concept of providing housing which becomes an asset which will increase in value over time.

#### **14.4.3.7 Rose Valley, Design: Building placement on stand**

Following the NuPlan Africa interviews and the Ethekewini Municipal Study, it is recommended that starter units be placed as close to street boundaries as possible in an effort to improve street side aesthetics and social interaction and increase backyard area and privacy.

A standard distance for the placement of units may be established according to the class of road adjacent to residential units and the choice of infrastructure provision.

Units should also be placed close to one side boundary in order to provide sufficient access to backyards.

#### **14.4.3.8 Rose Valley, Design: Alternative construction materials**

It is recommended that alternative construction materials and techniques which suit the Oudtshoorn area be investigated and implemented on a small scale. In this regard it is recommended that public facilities such as churches and a community hall be constructed using alternative materials such as mud bricks. This will provide the opportunity to explore and showcase the benefits of alternatives to sceptical community members.

Alternative materials may then be more widely introduced in future development phases after community members have experienced the benefits and authorities have learned best practice development lessons.

In this regard planning, housing and engineering departments should investigate alternatives and liaise with province and development agencies such as ASLA on the possibility of implementing these options.

#### **14.4.3.9 Rose Valley, Design: Aesthetic urban design**

Given the location of the Rose Valley settlement on a main access road to the town of Oudtshoorn, increased consideration must be given to aesthetic qualities and the development of a unique identity which portrays the character of the area. Rose Valley will be the first sight many tourists and travellers see of Oudtshoorn and in this regard should be developed as a welcoming gateway which showcases a thriving Klein Karoo community.

Cost effective urban design principles should be included as a measure to improve the quality of the environments provided. In this regard it is recommended that a variation in paint colour, two-dimensional pattern on walls and paving, alternating facades and greening Initiatives be introduced. Making the optimum use of sightlines in order to maximise views of the surrounding mountains, may be used as an effective instrument to enhance spatial qualities.

As a further summary of the most prominent recommendations made, Table 20 is provided below.

**Table 21: Summary of recommended guidelines for future delivery**

<b>From</b>	<b>Recommended guidelines for future delivery</b>
<b>Theory</b>	<ul style="list-style-type: none"> <li>-The unique physical, economic and socio-cultural characteristics of a project area should inform planning and development concepts.</li> <li>-Databases should be updated regularly which may coincide with the IDP cycle.</li> <li>-A focus on quality and quantity should be facilitated through alternative approaches.</li> <li>-Aesthetic urban design Initiatives should be introduced as intensively as possible.</li> <li>-Community participation and stakeholder engagement should entail the following: <ul style="list-style-type: none"> <li>&gt;The use of visual aids and simplified concepts.</li> <li>&gt;The use of prototypes to illustrate concepts in a tangible manner, or the use of scale models where prototypes are economically unjustifiable.</li> <li>&gt;Relating the cost-benefit ratio of alternative concepts in comparison with traditional approaches.</li> <li>&gt;Managing perceptions with professional expertise to ensure that certain stakeholders do not become project leaders.</li> <li>&gt;Applying professional discretion as to which practices supported by stakeholders can be realistically applied given available resources.</li> </ul> </li> <li>-It is recommended that governmental structures be re-evaluated, with a focus on local authorities as main housing developers.</li> <li>-A set of national proposals focused on layout and construction should be drafted, focussing on alternative layouts and configurations.</li> <li>-Higher density development should be advocated by introducing a mix of housing typologies.</li> <li>-Higher densities may be provided as subsidised units, whilst lower densities may be reserved for bonded units.</li> <li>-It is recommended that higher densities be introduced next to communal use areas with a decrease in density and a shift towards bonded units as distances increase.</li> <li>-It is recommended that layout accommodate and place preference on pedestrian movement.</li> <li>-Government should actively investigate and educate its officials regarding the benefits related to alternative construction materials, this should extend to educating urban planners.</li> </ul>
<b>Legislation</b>	<ul style="list-style-type: none"> <li>-Backyard management strategies should be drafted for implementation which facilitate the development of safe and legal backyard structures.</li> <li>-Backyard strategies may promote:</li> </ul>

	<ul style="list-style-type: none"> <li>&gt;Infrastructure provision which can deliver to both formal units and backyard components.</li> <li>&gt;Stands equal to or larger than 300 square metres.</li> <li>&gt;Double storey starter units which may house rental rooms on second storeys.</li> <li>&gt;The placement of main dwellings close to street boundaries and one side boundary to facilitate space and access for and to backyard structures.</li> <li>&gt;The erection of concrete walling to support backyard structures.</li> <li>&gt;Increasing local capacity to inspect and manage the backyard sector.</li> <li>&gt;Capital subsidies to cover costs of improved backyard structures in conjunction with fixed rent rates.</li> <li>&gt;The establishment of minimum standard criteria for backyard structures.</li> <li>&gt;The legalisation of the backyard structure concept.</li> <li>&gt;Relaxation of building controls to facilitate backyard structures.</li> <li>&gt;Providing free/subsidised building materials or prefabricated units for backyard living.</li>   <li>- LED strategies and urban planners should take the following into account: <ul style="list-style-type: none"> <li>&gt;The scope of area specific human and natural resources and community characteristics.</li> <li>&gt;The value of spatial planning in support of LED.</li> <li>&gt;Utilising the professional expertise of the urban planner in facilitating stakeholder endorsement for strategies which impact spatially.</li> <li>&gt;Providing well located civic institutions and adequate infrastructure to entice private investment.</li> <li>&gt;Providing the opportunity for housing beneficiaries to use homes as assets and a source of income by facilitating renting.</li> <li>&gt;Simplifying rezoning and other development application processes to simplify the establishment of small enterprises and home industries.</li> <li>&gt;Utilising local contractors and suppliers where housing development takes place.</li> <li>&gt;Contractors and suppliers should be primarily selected on their ability to meet large scale needs. Where local expertise and capacity is not sufficient contractors and suppliers must be sourced from as nearby as possible.</li> <li>&gt;When contractors are appointed from further afield, they should be required to utilise as much local labour as possible.</li> <li>&gt;Facilitating skills transfer throughout the housing development process.</li> <li>&gt;Establishing supportive programmes to promote the establishment and growth of new enterprises from the skills acquired during the development process.</li> </ul> </li>   <li>-Realistically implementable strategies should be drafted to facilitate the enactment of the objectives advocated by policies such as the White Paper of 1994 and the BNG Initiative.</li> </ul>
<p><b>Structured Interviews</b></p>	<ul style="list-style-type: none"> <li>-The professionalization of the public planning sector by only employing qualified and registered professionals in key positions is recommended.</li>   <li>- Municipal planners should be trained in the disciplines of project management and effective administration.</li> </ul>

	<p>-It is recommended that all existing housing departments in local authorities be thoroughly evaluated in order to determine the greatest restrictions to effective delivery.</p> <p>-In municipalities where a housing department is absent, it is recommended that a department be established.</p> <p>-It is suggested that government make further funding available for the education and training of project managers and building inspectors to be placed in local municipalities.</p> <p>- Institutional, economic and green use buffers should be utilised as cushions between different economic groups to protect bonded assets, whilst providing a space for community interaction and integration.</p> <p>-The introduction of pedestrian walkways and sidewalks within these community spine corridors will promote pedestrian friendly movement.</p> <p>-Where possible pedestrian bridges should be introduced at strategic locations where the effects of community spines and institutional networks can be expanded.</p>
<p><b>Case Studies</b></p>	<p>-Public private partnerships should be encouraged and facilitated through policy intervention.</p> <p>-It is recommended that private developers be required by government to maintain an active presence in the communities developed after top structures have been completed.</p> <p>-Socio-economic integration should be facilitated by creating different cells or within a development, each containing a different level of housing and society.</p> <p>-As in Olievenhoutbosch the highest possible level of services should be provided.</p> <p>-Regional or provincial public partnerships should be encouraged.</p> <p>-It is recommended that qualified contractors be favoured above emerging contractors with limited experience.</p> <p>-Emerging contractors should be given the opportunity to work under established (hired) contractors in an attempt to encourage skills transfer.</p> <p>-Alternative layouts to the grid iron approach, utilising courtyards, clusters and cul-de-sacs should be investigated and favoured.</p> <p>-It is recommended that the value of good aesthetic urban design be recognised as an essential tool and not as an additional measure to receive attention if budget permits.</p> <p>-Top structures and stands should be designed in order to accommodate regulated and orderly expansion according to the evolving needs and circumstances of beneficiaries.</p>

	<p>-It is recommended that preapproved extension options be drafted which can be made available to beneficiaries wishing to extend their homes.</p> <p>-It is suggested that starter units be placed as close to street boundaries as possible.</p> <p>-Urban designers should be involved from the earliest planning phase to ensure that their concepts are seamlessly incorporated into layout concepts.</p> <p>-It is recommended that variations in paint colours, two dimensional patterns, intelligent landscaping, alternating facades and sight lines be incorporated when considering residential development concepts.</p> <p>- Where possible, urban design Initiatives which can create employment by utilising unskilled workers from the community should be advocated.</p> <p>- Effective predevelopment planning and the appointment of competent professionals should be followed.</p> <p>-Funding for all development stages should be secured in the planning phase, funding for one phase should not be used to temporarily subsidise the activities of coinciding or future phases.</p>
<p><b>Rose Valley</b></p>	<p><b>Planning</b></p> <p>-The main objective should be providing quality in quantity by delivering alternatives to the RDP approach which meet BNG objectives.</p> <p>-A detailed delivery plan and budget which addresses development in phases and the temporary relocation of residents whilst construction takes place, should be drafted.</p> <p>-Strategies should be implemented by external project managers in conjunction with municipal officials.</p> <p>It is recommended that the Rose Valley Extension be utilised in LED by providing:</p> <ul style="list-style-type: none"> <li>&gt;Adequate infrastructure.</li> <li>&gt;Access and connections to existing economic nodes.</li> <li>&gt;Opportunities for small businesses, trading and renting on residential stands.</li> <li>&gt;Opportunities for local contractor, supplier and labour involvement.</li> <li>&gt;Programmes to facilitate skills transfer, education and entrepreneurial support.</li> <li>&gt;Labour intensive methodologies.</li> </ul> <p>-It is recommended that the backyard sector in the Rose Valley Extension be addressed by:</p> <ul style="list-style-type: none"> <li>&gt;Surveying the backyard sector in the greater Oudtshoorn area.</li> <li>&gt;Appointing more building inspectors/ assistants to regulate backyards.</li> <li>&gt;Providing infrastructure which can service both starter units and backyard structures.</li> </ul>

- >Providing rental accommodation within starter units or providing opportunity for rental extensions through starter unit design and placement.
- >Granting capital subsidies for the construction of safe and legal structures from approved materials or prefabricated components.

-Community participation should inform development concepts including unit design, site layout, building materials, densities and aesthetic considerations.

-Concepts must be demonstrated understandably with visual presentations, models, prototypes and unpretentious terminology.

### **Management**

-It is recommended that regional investment schemes be introduced to entice investment from further afield.

-Enhanced communication and collaboration between the different governmental departments in the Oudtshoorn Municipality is strongly recommended.

-Where private consultants are used in support of the Rose Valley development, registration with a professional body should be mandatory.

### **Design**

-It is recommended that the merits of alternative layout concepts such as courtyards and clusters be considered for Rose Valley.

-Layout should provide for development in phases and should provide space for the temporary resettlement of residents during the construction phase.

-It is recommended that public transport connections and facilities be provided in order to link Rose Valley with the Oudtshoorn CBD and other economic nodes and corridors.

- A network of institutional, green and economic use spaces should be provided. Given the scale of the development churches and community halls may be provided as anchors between these networks instead of educational uses.

-Semi-detached and row housing units which vary between one and two storeys should be provided. The highest density units should be placed next to institutional, green and economic networks.

-It is recommended that small scale community spine concepts be introduced which will encourage safe pedestrian movement. This should be accompanied by the provision of sidewalks and walkways which take natural movement patterns into account.

-Preapproved extension options should be provided which provide beneficiaries with a number of extension options to suit evolving needs.

	<p>-It is recommended that starter units be placed as close to street boundaries as possible according to the class of road adjacent to residential units and the choice of infrastructure provision.</p> <p>-Units should also be placed close to one side boundary in order to provide sufficient access to backyards.</p> <p>-It is recommended that location- appropriate alternative materials be used to construct churches and a community hall in an attempt to showcase benefits and learn best practice approaches in order to implement alternatives more extensively in future.</p> <p>-In this regard planning, housing and engineering departments should investigate alternatives and liaise with province and development agencies such as ASLA on the possibility of implementing alternatives.</p> <p>-It is recommended that aesthetic qualities receive primary consideration given Rose Valley's prominent location.</p> <p>-Cost effective urban design principles such as variations in paint colour, two-dimensional pattern on walls and paving, alternating facades and greening Initiatives should be included as a measure to improve the quality of the environment provided.</p>
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Source: Own construction (2012)

## 14.5 Conclusion to recommendations

In conclusion it is hoped that the recommendations made will be seen as preliminary efforts in the quest to improve the approaches followed and results delivered when developing low-cost residential neighbourhoods. In no way are these recommendations meant to provide the ultimate solution to the problems experienced in SA, but are rather intended as concepts to be explored by further research. In this regard more detailed development suggestions will be provided in a future PhD study.