

Section H

Housing and social facilities

The Neighbourhood Planning and Design Guide



Part II

Planning and design guidelines



More detailed information is provided about the issue under discussion



Important considerations to be aware of are highlighted



Relevant content from a complementing resource is presented

PART I: SETTING THE SCENE

- A The human settlements context
- B A vision for human settlements
- C Purpose, nature and scope of this Guide
- D How to use this Guide
- E Working together

PART II: PLANNING AND DESIGN GUIDELINES

- F Neighbourhood layout and structure
- G Public open space
- H Housing and social facilities
- I Transportation and road pavements
- J Water supply
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- M Solid waste management
- N Electrical energy
- O Cross-cutting issues
- Planning and designing safe communities
- Universal design

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human settlements

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Section H

Housing and social facilities

The Neighbourhood Planning and Design Guide

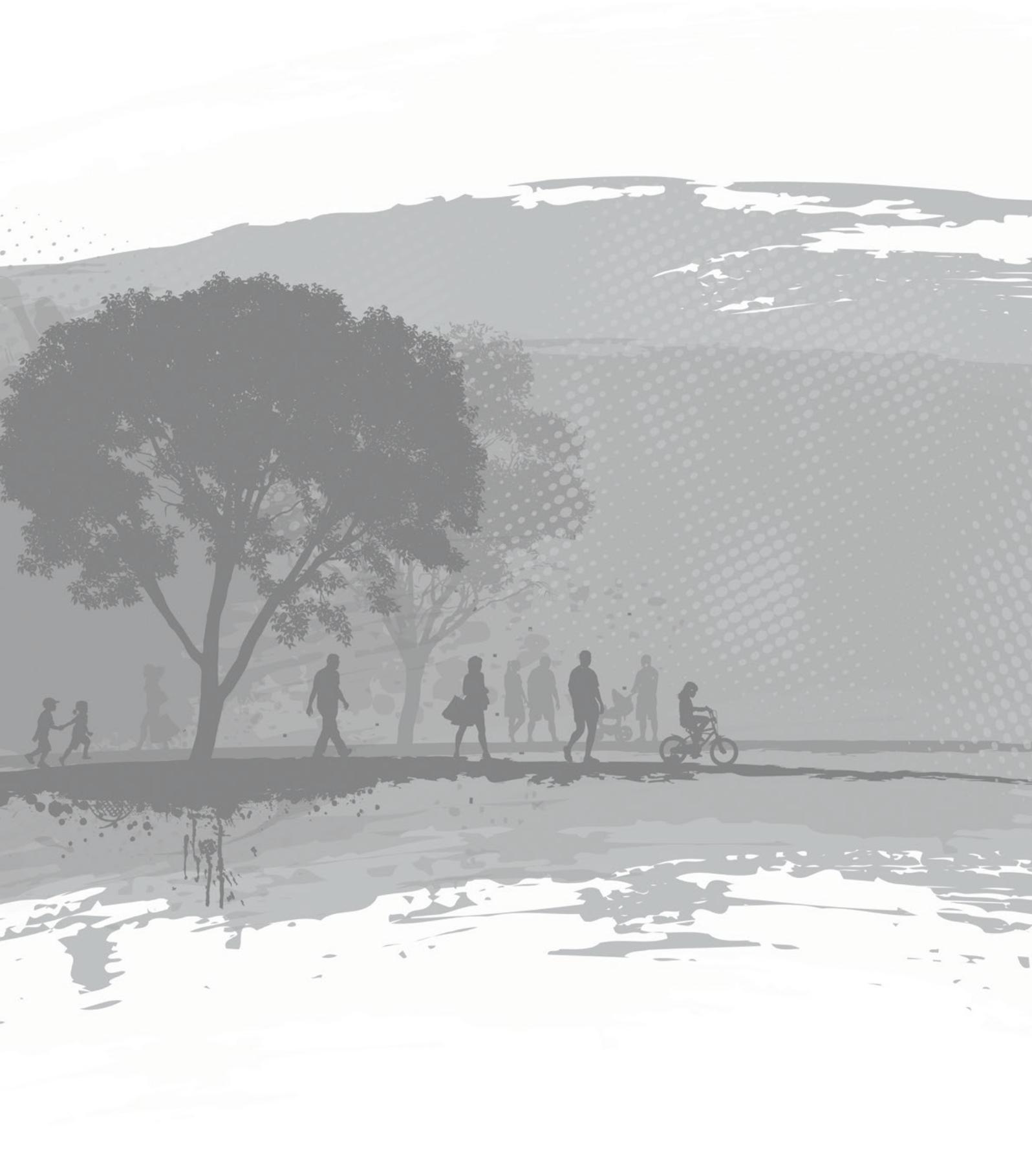


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H.1 Outline of this section

H.1.1 Purpose

Settlements (and neighbourhoods as the 'building blocks' of settlements) are integrated systems in which various components are interconnected, and this section highlights the role of housing and social facilities in this system. Information is provided to guide decision-making regarding the provision of an appropriate mix of different forms of housing, and also regarding various types of social facilities that could be provided.

It is estimated that housing accounts for more than 70% of land use in most cities¹, and therefore it is a structuring element that has a significant impact on the liveability and vitality of settlements. The range of housing options provided as part of a development, and their location, could contribute meaningfully to the quality of residents' living environments. The need for a differentiated response to the provision of housing that allows for, and responds to, contextual characteristics and locational challenges is emphasised in this section.

Access to social facilities is a key characteristic of positively performing neighbourhoods. A social facility is any place where a social (or public) service is offered by the government or private and non-profit organisations, including health, education, civic, recreation, cultural, security and safety, socialising and communication services. Social facilities are sometimes referred to as public facilities.

The aspects addressed in this section therefore play an essential role in achieving the vision for human settlements outlined in **Section B**, and relate in particular to **Section F** which deals with neighbourhood layout and structure, and **Section G** (Public open space).

H.1.2 Content and structure

This section (Section H) is structured to support effective decision-making related to the provision of housing and social facilities. The decision-making framework is outlined in Figure H.1, and the structure of this section is briefly described below.

Universal considerations

General aspects that should be taken into consideration when making higher level decisions regarding the provision housing and social facilities are highlighted, including the following:

- The regulatory environment, including key legislation, policies, frameworks and strategies
- The key objectives that should be achieved as a result of the application of the guidelines provided
- Local or international approaches, mechanisms, concepts and current trends that could possibly be utilised to achieve the key objectives
- Contextual factors specific to the development project to be implemented such as the development type and setting

Planning considerations

Factors to consider when making more detailed decisions regarding the provision of housing and social facilities are outlined, including the following:

Outline of this section

- The characteristics of the development, including the nature of the proposed neighbourhood, the anticipated number of residents and specific features that would have to be incorporated or requirements that would have to be met
- The existing features of the site and immediate surroundings (built and natural environment) as determined by the physical location of the proposed development
- Options related to housing and social facilities that are available for consideration

Design considerations

Guidelines to assist with the design of housing and social facilities.

Glossary, acronyms, abbreviations

A glossary, a list of acronyms and abbreviations, and endnotes (containing sources of information, explanatory comments, etc.) are provided at the end of Section H.

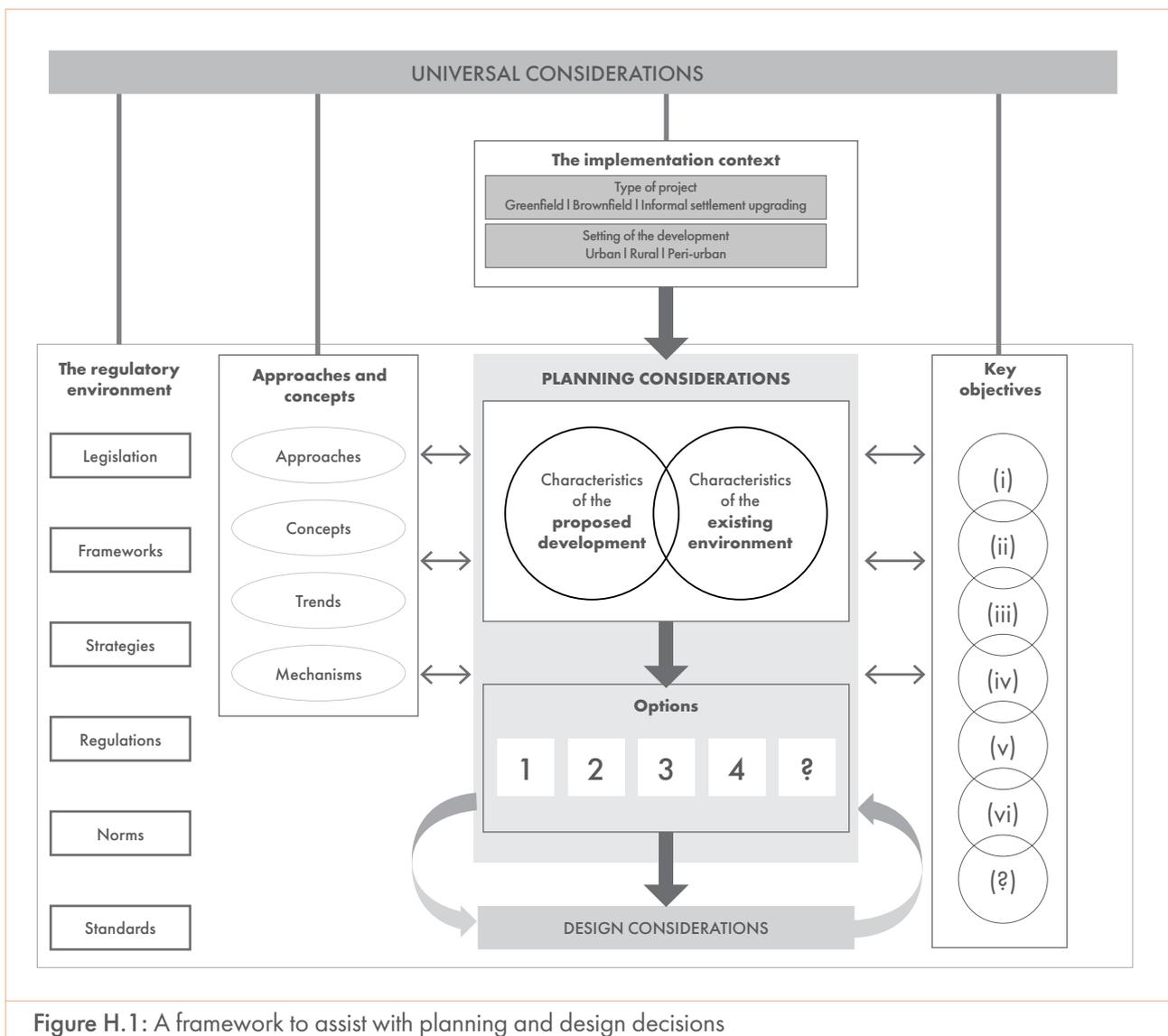


Figure H. 1: A framework to assist with planning and design decisions

H.2 Universal considerations

H.2.1 The regulatory environment

A range of legislation, policies and strategies guide the provision of housing and social facilities in South Africa. Some of these are listed below. Since they are not discussed in detail, it is vital to consult the relevant documents before commencing with any development. (Also see [Section D.1.](#))

All building and construction work in South Africa is governed by the National Building Regulations and Building Standards Act, 1977. Always refer to *SANS10400 - The application of the National Building Regulations (NBR)* available from the South African Bureau of Standards (SABS).² In addition, local municipalities may have guidelines, regulations and by-laws that may be applicable.

Housing

The provision of housing is governed by, among others, the following:

- The Housing Act, 1997
- The Social Housing Act, 2008
- The Rental Housing Act, 1999
- The Housing Consumers Protection Measures Amendment Act, 2007
- The Sectional Titles Schemes Management Act, 2011
 - Sectional Titles Schemes Management Regulations, 2016
- The Community Schemes Ombud Service Act, 2011
 - Regulations on Community Schemes Ombud Service, 2016
 - Community Schemes Ombud Service Regulations: Levies and fees, 2016
- The Home Loan and Mortgage Disclosure Act, 2000
- The Prevention of Illegal Eviction from and Unlawful Occupation of Land Act, 1998
- Breaking New Ground: A Comprehensive Plan for the Development of Sustainable Human Settlements, 2004
- The National Housing Code, 2009

Social facilities

The planning and design of certain social facilities are also subject to legislation and prescribed norms and standards, including:

- The South African Schools Act, 1996
 - Regulations Relating to the Minimum Uniform Norms and Standards for Public School Infrastructure, 2013
- The National Health Act, 2003
 - Norms and Standards Regulations in Terms of Section 90 (1)(b) and (c) of the National Health Act, 2003, applicable to Certain Categories of Health Establishments, 2015
 - National Environmental Health Norms and Standards for Premises and Acceptable Monitoring Standards for Environmental Health Practitioners, 2015
- The Children's Act, 2005
- Blue Print, Minimum Norms and Standards for Secure Care Facilities in South Africa, Department of Social Development, 2010

- Norms and Standards for Sport and Recreation Infrastructure Provision and Management, Volumes 1 and 2, Department of Sport and Recreation South Africa, 2011

H.2.2 Key objectives

Housing and social facilities should contribute to the creation of liveable neighbourhoods and settlements that enhance everyone's quality of life. The following objectives should guide decisions regarding the provision of housing and social facilities:

- Provide a range of dwelling types and tenure options that meet different needs and requirements and, where relevant and appropriate, make housing opportunities available to all, regardless of financial abilities.
- Design housing and social facilities such that they promote community wellbeing and strengthen social cohesion, by, for instance, creating an interactive relationship between buildings and open spaces, especially neighbourhood streets.
- Provide social facilities equitably and locate them such that they are within a reasonable distance from the people they are intended to serve.
- Use housing and social facility clusters to structure neighbourhoods in such a way that urban sprawl is minimised and more effective and efficient spatial patterns are promoted.
- Provide housing that includes basic services and infrastructure to ensure that the occupants have safe drinking water, adequate sanitation, and energy for cooking, heating and lighting.
- Ensure that housing provides the occupants with a safe space with structural integrity that affords them protection against the cold, heat, rain, wind as well as health hazards.
- Allow for changing needs and conditions by planning and designing housing and social facilities in such a way that, if necessary, they can be adapted when circumstances change over time.
- Design housing and social facilities such that they can be accessed by all, including people with disabilities, and regardless of age.
- Provide housing and social facilities in a manner that does not have a negative impact on the environment and reduces reliance on non-renewable resources.
- Provide housing and social facilities that are culturally accommodating and responsive to the local heritage setting.

H.2.3 Approaches and concepts

H.2.3.1 Incremental housing

The concept of incremental housing is referred to by different terms, and a range of different methods are, and have been, used to implement this approach to housing delivery. In essence, it involves the provision of a house in stages over an extended period of time rather than as a complete unit. It usually involves government providing a site with some service infrastructure, allowing owners the opportunity to provide some form of house themselves as and when they are able to do so. The intention is for the owner to take responsibility for building the initial structure and then expanding it over time.

The incremental housing approach could be challenging due to the more informal, less conventional nature of the delivery process. This approach relies on the active and committed involvement of owners and the community. It could be an appropriate way of providing more citizens with access to housing opportunities than would be possible with conventional delivery methods.



The incremental housing approach (NUSP³)

“Basically, incremental housing is a process whereby households build and extend their houses on an ad hoc basis in response to their needs and the availability of resources. Generally it is an approach used by households with low or irregular incomes, and limited or no access to credit and loans, who start by building a small affordable dwelling. Over time they expand and improve the house based on their needs and resources.”

H.2.3.2 People-driven housing

The people-driven approach involves community members (referred to as beneficiaries) in all aspects of the housing delivery process. Community members actively participate in decision-making regarding the housing process and the housing product, such as location, layout, services, tenure and house design.

Communities often drive the process and are involved in building their own houses and in organising and managing the building process. They make a contribution to the cost of the house, and if this is combined with a subsidy, the end product usually responds more appropriately to the needs of the residents.

H.2.3.3 Repurposing and retrofitting

Repurposing existing buildings, also known as adaptive reuse, is one strategy that can be used to minimise land costs. Adaptive reuse refers to the repurposing of existing vacant and/or under-utilised buildings for a purpose other than which it was originally built or designed for, either in part or in whole. Adaptive reuse is a key factor in resource conservation (land, energy and material), in optimising existing bulk infrastructure, and in containing urban sprawl. Adaptive reuse is often a preferred option for heritage conservation where a building that is conservation worthy is no longer financially viable in its original use.

Repurposing and retrofitting allow for the provision of housing and social facilities in buildings that may not originally have been designed for these functions. Abandoned buildings in the inner city, or unused office blocks may provide ideal opportunities for this type of adaptive reuse.

H.2.4 The implementation context

This section highlights the contextual factors that should be considered when making decisions regarding housing and social facilities, specifically related to the type of development and its setting. Also refer to **Section D.2.1** (Type of development) and **Section D.2.2** (The setting/location of the planned development).

H.2.4.1 The type of development

(i) Greenfield development

Greenfield projects can theoretically accommodate most housing types. The deciding factor would normally be the income level of the anticipated residents of the new development. Other factors that would influence the forms of housing that could be provided include the topography and geotechnical conditions. Greenfield sites often raise

concerns regarding urban sprawl. Decisions regarding housing types would play a role in determining densities and could therefore assist in addressing these concerns.

The provision of social facilities needs to be based on a thorough assessment of the surrounding area to understand what is available and the extent to which these facilities will be accessible to the residents of the planned neighbourhood.

(ii) Brownfield development

The types of housing that could be provided on brownfield sites would be influenced by the nature of the existing physical and socio-economic environment within which the development will be located. For instance, infill developments, retrofitting and the subdivision of large residential stands will require different types of housing options. A brownfield site may have existing structures that may be vacant or derelict and could be repurposed as residential units. Decisions regarding housing types will also be influenced by the availability and capacity of engineering infrastructure, such as electricity supply and sanitation services. In certain cases, the features of the built environment may provide design clues that could influence the physical appearance of the houses provided.

Since brownfield sites are normally part of the fabric of an existing city or town, some social facilities may be readily accessible. However, this should not be assumed, and new facilities should be incorporated into the planning if required. Care should also be taken to ensure that the upgrading or redevelopment of an existing area does not put additional strain on social facilities in the surrounding neighbourhoods.

(iii) Informal settlement upgrading

Informal settlement upgrading projects are usually complex undertakings that require extensive community participation, specifically with respect to the housing to be provided. Options may have to be developed to address specific requirements, for instance by providing a site with access to water and sanitation services, while allowing for the incremental development of the house itself. Acceptability and perceptions may be important factors to address when making decisions regarding housing options.

The provision of social facilities should be an important component of an informal settlement upgrading project. It could contribute to the creation of a liveable and well-functioning new neighbourhood. Informal settlements could be located close to an established part of a city or town or on the periphery, removed from existing services and amenities. Access to existing social facilities therefore needs to be taken into consideration and new facilities should be planned for as part of the upgrading initiative if needed.

H.2.4.2 The setting of the development

(i) Urban

Urban settings can take on different forms, and therefore developments will vary in nature. Urban areas include central business districts, residential suburbs, informal settlements, and what used to be referred to as townships, and this will influence the type of housing to be provided. In some cases detached housing may be a suitable option, while semi-detached or attached housing may be better suited, for instance for an infill development. The social facilities to be included in an inner-city development will also differ from those required in, for instance, a suburban setting.

(ii) Peri-urban

Given the transitional nature of peri-urban areas, the nature of developments will vary considerably, and so will the types of housing and forms of social facilities to be provided.

(iii) Rural

Development sites in rural areas will vary in nature depending on the location, for instance whether it is situated in a rural town or a dispersed settlement. The housing types appropriate to the setting will therefore also vary and the nature of the housing options provided will be dictated by a range of factors. In some cases the housing form may be influenced by cultural considerations, the ownership of the land and tenure arrangements (for instance if it is under the control of traditional leadership).

Due to lower population densities, the provision of social facilities in rural areas may sometimes require an approach that differs from that taken in cities or towns. It may have to be accepted that some facilities cannot be provided, while other facilities may be absolutely essential even though they may serve relatively few people.

H.3 Planning considerations

This section deals with the planning of the provision of housing and social facilities. In this context, the term 'planning' means making informed decisions regarding the type or level of service to be provided, and then choosing the most appropriate housing and social facility options based on a thorough understanding of the context within which the planned development will be implemented.



The decisions regarding the provision of housing and social facilities must be informed by a clear understanding of the features and requirements of the proposed project. This would require an assessment of the characteristics of the proposed development. Furthermore, the characteristics of the environment in which the new development will be located need to be examined and possible existing services and infrastructure that could be utilised must be identified.

This section outlines a range of questions that should be asked and factors that have to be considered to inform decisions regarding housing and social facilities to be provided as part of a development project.

H.3.1 Characteristics of the proposed development

Decisions regarding housing and social facilities need to be guided by an assessment of the characteristics of the proposed development and an understanding of the requirements or needs that will have to be met. Aspects that should be considered are briefly discussed below.

H.3.1.1 The nature of the proposed development

Various factors related to the nature of a development could influence decisions regarding the provision of housing and social facilities. For instance, smaller projects may not be able to accommodate a wide range of housing options and it may not be necessary to include social facilities in the project. Large (or mega) projects may have to include a wide range of housing types and require the inclusion of various social facilities. Mixed-use, mixed-income projects and projects that are primarily residential in nature would also need different approaches to the provision of housing and social facilities. Similarly, inner city infill projects would be different from, for instance, an informal settlement upgrading project. The nature of a project therefore needs to be understood to make informed decisions regarding appropriate housing options and social facility provision.

H.3.1.2 The residents of the area to be developed

Decisions related to the types of housing and social facilities that should be provided in a development need to be guided by information regarding the potential residents and users of the planned facilities. Usually, the identities of the actual occupants of the houses to be provided are not known when a development is planned and designed. It is also difficult to predict who will make use of social facilities, either as service providers or as the beneficiaries of services. It may be possible to make assumptions regarding the possible nature of the future residents and users of social facilities by assessing the surrounding neighbourhoods or similar developments in comparable locations or contexts. It is important to establish the following:

- The total number of residents that would have to be accommodated. Actual numbers may be higher than anticipated due to the fact that the provision of houses and services may attract more people than originally planned for.
- The number of households, the range of household sizes and their composition, for instance, whether there is likely to be child-headed or single-parent households. This will indicate which types of housing would have to be provided and which types of social facilities may need to be considered.
- The range of residents with special needs that would have to be accommodated, e.g. people living with HIV/Aids and with disabilities, including physical, dexterity and sensory impairment. Housing types and social facilities should, as far as possible, be accessible to all residents and users.
- Age and gender of residents and those that may visit social facilities (i.e. gender ratios or age profile). An ageing population might, for example, require access to housing or social facilities at a ground level, as opposed to walk-ups or apartments. It could also indicate the need for specific types of social services aimed at the youth or the elderly.
- Income and employment levels and spending patterns. This would, for instance, indicate to what extent housing would have to be able to accommodate motor vehicles, and what types of social services would be most appropriate.
- Cultural profile. The mix of the target group is also important to consider, as the social structure could shape the demand for some housing types at the expense of others.

H.3.2 Characteristics of the existing environment

Decisions regarding housing and social facilities need to be guided by an assessment of the context within which the development will be located. Issues that should be considered are discussed below.

H.3.2.1 The physical location of the proposed development

Constraints and opportunities posed by the site could influence the types of housing and social facilities to be provided.

(i) Topography

The topography of the project site is a key factor when making decisions regarding the layout of the development, and as such it will also guide decisions regarding the provision of housing and social facilities. The topography will influence the micro-climate of the site and have a significant impact on the provision of municipal engineering services. The following questions need to be asked:

- Does the site slope? Are there significant changes in level such as embankments or retaining walls? A sloping site could mean that additional costs would have to be incurred when constructing houses and other buildings. It may also be difficult to provide certain housing types on very steep sites.
- How will the slope or level changes affect the site layout and the positioning of buildings? It may be difficult to position houses and other buildings facing north, or it could be difficult to provide vehicle access to the plot.
- Can the development be oriented to make the most of attractive views? Sometimes the view (prospect) and sun (aspect) are in conflict, and compromises will have to be made.

(ii) Climate

The micro- and macro-climates of the site will affect on aspects such as street layout and plot orientation. It is imperative that the site be physically inspected and that this occurs at different times of the day, preferably even different times in the year. A site that is warm in summer may be cold in winter, because of, for instance, the topography. A physical inspection will provide clues about where the building would be best located. The following questions need to be asked:

- Is the site exposed to prevailing winds? Is the wind direction seasonal? This information would assist in positioning a building on a plot to, for instance, make use of the wind to cool the interior, to ensure that outside living spaces are protected from the wind and to promote natural ventilation for the prevention of airborne contagion.
- Where does the sun rise and set in summer and winter? There may be external features that influence sun penetration on the site, such as a nearby mountain or hill, tree, or building.
- Does the site fall in a declared natural disaster zone? Is there a risk of seasonal flooding, earthquakes, tremors, veld fires, and landslides? Do disaster management plans exist? For assistance with the development of actions to adapt settlements to the impacts of climate change, consult the *Green book: Adapting South African settlements to climate change*⁴.

(iii) Geotechnical characteristics

The ground condition of a site can sometimes necessitate the use of specialised construction methods or materials or it can mean that certain areas of the site might not be suitable for construction. The ground conditions could also have implications for the population density or housing density that can be accommodated on the particular site. The following questions need to be asked:

- What is the soil condition and quality?
- Are there any aggressive chemicals or minerals present?
- Is the site part of or close to a dolomitic area?
- Was the site used for mining and exploration in the past?
- Are there large rock outcrops on the site? Are there gullies or other ditches on the site?
- Is there ground water present? What is the height of the water table?
- Did dumping – legal or illegal – ever occur on the site?

(iv) Landscape and ecology

The physical features of the landscape could have a substantial impact on the types and positioning of housing and social facilities that can be provided. A thorough analysis of the landscape and ecology should be conducted to determine if there are certain parts of the project site that would not be suitable for development. If the site is located in or near an ecologically sensitive area, there may be restrictions that could influence the positioning (and ease of construction) of houses and other buildings. Gain an understanding of how the landscape is continuously evolving and changing, either through natural or human-induced processes, to assist in developing the site in the most ecologically sensitive manner. Gather information about the following:

- The position of any telephone poles, overhead or underground power cables, rock outcrops, water features, dongas, etc. that could restrict building work or may require involvement (especially permission) from various government departments.
- Wetlands, surface water bodies or other ecologically sensitive areas on or near the site. Information on Critical

Biodiversity Areas (CBAs) and Ecological Support Areas (ESAs) is available on the website of the South African National Biodiversity Institute (SANBI)⁵.

- Endangered or protected plant or animal species on or near the site.
- Existing vegetation, especially trees, and whether they are deciduous or evergreen, indigenous or alien.
- Natural features that may have cultural significance.

(v) Existing buildings on the site

If there are existing buildings on the proposed development site, they can be viewed as either presenting opportunities or constraints. In certain cases, existing buildings could be incorporated into the development by converting them into housing or social facilities. To determine the most appropriate course of action, the following questions can be asked:

- Do the buildings have features of historic or conservation interest? (See **Section F.3.1.1 (v)**)
- Do the buildings have cultural significance? May these buildings be demolished?
- Should these buildings be refurbished? Can these buildings be repurposed and reused? Can these buildings be integrated into the new development?
- What are the character and form of these buildings? Should this influence the remainder of the development?

(vi) Adjacent land uses and edge conditions

Adjoining properties have an impact on each other. Therefore, it is important to be aware of the land uses adjacent to the development site as well as the edge conditions that affect the site. Some of the questions that need to be asked include the following:

- What are the adjacent land uses and how could that potentially influence decisions regarding the housing and social facilities to be provided as part of the proposed development?
- Are there neighbouring buildings where privacy needs to be respected?
- Are there unattractive neighbouring uses from which the new development needs to be screened?
- Are there existing streets and spaces adjacent to the site to which new development should relate?
- Are there noise problems from road traffic, railways or adjoining buildings?
- Is there neighbouring vegetation that may be affected by the development of the site?
- Are there neighbouring buildings that have cultural significance?

(vii) Access to the site

Residents and visitors should find it easy to access housing and social facilities. The positioning of housing and social facilities in a development should therefore be influenced by the location of access points, existing footpaths and routes on the site, and public transport facilities. The following questions need to be asked:

- What are the existing and potential vehicular, cycle and pedestrian access points to the site?
- Are there existing footpaths or routes (desire lines) across the site? Can the existing footpaths or routes be accommodated in the new development?
- Where are public transport facilities located in relation to the site? How can these be linked to the proposed housing and social facilities?
- What are the local destinations (such as shops, schools, bus stops) that occupants of the new project will be wanting to access? How can the new development best be linked to these to encourage walking and cycling?

H.3.2.2 Available engineering infrastructure and transportation facilities

Developments create additional demand for services (engineering and transportation) and therefore have a potential impact on existing engineering infrastructure (e.g. water pipelines, electricity cables, sewerage pipes) and transport infrastructure (e.g. streets, sidewalks, crossings, cycle paths). Infrastructure provision and the provision of housing and social facilities are intrinsically linked, therefore the following needs to be established:

- What engineering infrastructure (bulk and local) is available close to the new development?
- Does existing engineering infrastructure have enough capacity to accommodate the new development?
- Can the new development be linked to existing engineering infrastructure?
- Are there public transport routes close to the site? Are there bus stops, railway stations or taxi ranks close to the site? Is there sufficient public transport capacity in the area?
- Are there cycle and pedestrian facilities available?

H.3.2.3 Existing socio-economic features

The planning and design of a development have to be guided by the potential needs of the residents of the new and existing neighbourhoods. If an existing community will move into the proposed development, it is critical to understand the community and involve them in the decision-making process from the outset (see **Section E**). It is also important to acquire information regarding the socio-economic features of the neighbouring communities. This may provide some indication of the housing types that may be required and the social facilities that may have to be provided. The following questions should be asked with respect to the existing community (if known) and the adjacent neighbourhoods, especially those that are functionally linked to the development:

- How many people live there? This information will be used to calculate population thresholds for the provision of social facilities.
- What is the average size of households in the area? Different household sizes may affect issues such as the size of the dwelling units that will be provided.
- What is the age profile of the residents? Residents at different life stages might have different needs regarding social facilities and housing types.
- What is the income profile of the residents? Do residents have access to private cars? This will inform decision-making on issues ranging from parking provision to the maximum distances that people are able to travel to reach social facilities.
- What is the employment profile of the residents? This may have an impact on the provision of certain social facilities, e.g. Primary Health Care clinics.

H.3.2.4 Access to existing social facilities

To determine the requirements for social facilities in the proposed development, it is important to know the number of existing facilities in the neighbourhood, the services they offer, as well as the capacity of these facilities. The following questions could be asked:

- How many social facilities are available in the neighbourhood, in adjacent neighbourhoods and in the settlement?
- What types of social facilities, for instance schools, police stations and clinics are available in neighbouring areas? How far are these facilities from the development site? Are the routes linking the development site with

existing social facilities suitable for non-motorised transport or serviced by public transport? Do these facilities have spare capacity?

- What services are offered at the existing social facility? Is the facility over-utilised or under-utilised? Is there space for the increase of service delivery capacity at the existing social facility?
- Will the community be using public or private facilities? This may be relevant to healthcare, education or recreation facilities.

H.3.2.5 Legal / administrative considerations

Legal issues relating to the site can influence the development and may cause considerable delays if not dealt with pro-actively. For the development of housing and social facilities, it is important to consider the zoning of the development site as it might be necessary to apply for a rezoning, a consent use or another departure from the scheme (e.g. through a building line relaxation) to accommodate the proposed development. In addition to the zoning of a property, conditions in the title deed or in the township establishment scheme or the presence of servitudes may influence decisions regarding the provision of housing and social facilities.

H.3.3 Housing options

H.3.3.1 Factors to consider when choosing housing types

Decisions regarding housing types are influenced by a range of factors as highlighted in the previous section, including the type, setting and location of the development, socio-economic conditions, legal or town planning requirements or restrictions, topography, ecology and geotechnical conditions. In turn, the types of housing provided have an impact on the characteristics of the development with respect to, for instance, layout and structure, physical appearance, aesthetics, safety, security and density.



It is important to adopt a differentiated response with respect to the types of housing to be included in a development. This means that a range of housing types should ideally be accommodated in development projects to allow for some measure of individual choice.

The different housing options provided as part of a project would depend on a number of factors. In some cases, residents have the freedom to make significant decisions regarding their own residences and may have the opportunity to appoint architects and other professionals to help them create their ideal homes. In other cases, residents may be able to choose from a selection of standard house designs, or they could choose to live in cluster developments such as townhouse or apartment complexes and flats. Low-income developments, specifically subsidy-linked projects, require a particular way of dealing with housing type and choice, while informal settlement upgrading projects present their own set of challenges when it comes to housing decisions.

Some of the key factors to consider are briefly outlined in this section.

(i) Context-specific options

In general, the sensible approach is to, as far as possible, provide prospective residents with sufficient options to allow them to choose a house type that would adequately satisfy most of their needs. This is not always practical or feasible, but if it is realistically possible, a mix of housing types should be made available to meet the varying needs, requirements and aspirations of the intended residents. Some aspects that should be considered when deciding on the options that should be provided include the following:

- How can potential occupants with varying needs, e.g. children, the elderly, and people with disabilities, best be accommodated?
- Should space be allowed for vegetable gardens, backyard rental accommodation or an additional unit that can, for instance, be used as a granny flat, a home-based business or sub-let for an extra income?
- Is it feasible to incorporate retail space in a housing development, for instance on the ground floor of an apartment complex?

(ii) Density

Density is not an end in itself, but rather a means to an end. For instance, the reasons why relatively high population densities are required in certain areas are often to reach population thresholds that will ensure that a feasible public transport system can be operated in a particular area, to justify the provision of certain types of social facilities and amenities, or to justify investment in infrastructure. Similarly, the motivation behind medium (dwelling) density developments could be to reduce urban sprawl, to increase population densities so as to reach population thresholds, or to ensure the economic viability of a development project.

Various factors influence dwelling, occupancy or population density. (See **Section F.4.2.4** for more information on density measurement.) Housing type is one of the factors, but it is not the only determinant and it should be carefully considered together with other factors, taking into account the context of the relevant existing neighbourhood or planned development. It is important to remember that one specific house type could result in different densities, depending on building configuration and design, plot size, the layout of the neighbourhood and other factors.



Photo credit: Hannelie Coetzee (R) - www.brandsouthafrica.com

Figure H.2: Examples of housing types generally associated with low densities

In general, there is a relationship between housing types and dwelling (residential) densities, which is measured in dwelling units per hectare. Certain housing types, such as single detached (freestanding) housing, are usually associated with low densities, while attached housing such as walk-up apartments and townhouses are often described as medium-density housing (see **Section H.3.3.2** for a description of housing types). Figures H.2 to H.4 illustrate this broad relationship between dwelling densities and housing types.



Housing types and dwelling densities

The numbers of dwelling units per hectare linked to low-, medium- and high-density levels differ according to country, city and local context. In South Africa, the description of low, medium and high dwelling densities vary (see **Section F.4.2.4**), but the following ranges are often used:

- Low density: less than 40 du/ha (gross)
- Medium density: 40 - 100 du/ha (gross)
- High density: more than 100 du/ha (gross)

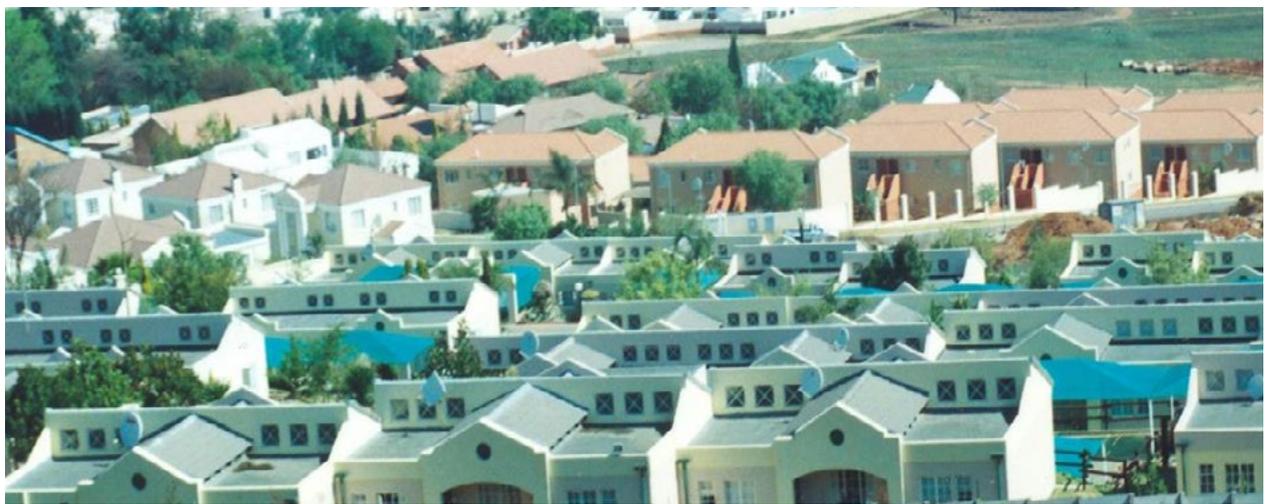


Photo credit: Chris Kirchhoff (T) - www.brandsouthafrica.com

Figure H.3: Examples of housing types generally associated with medium densities

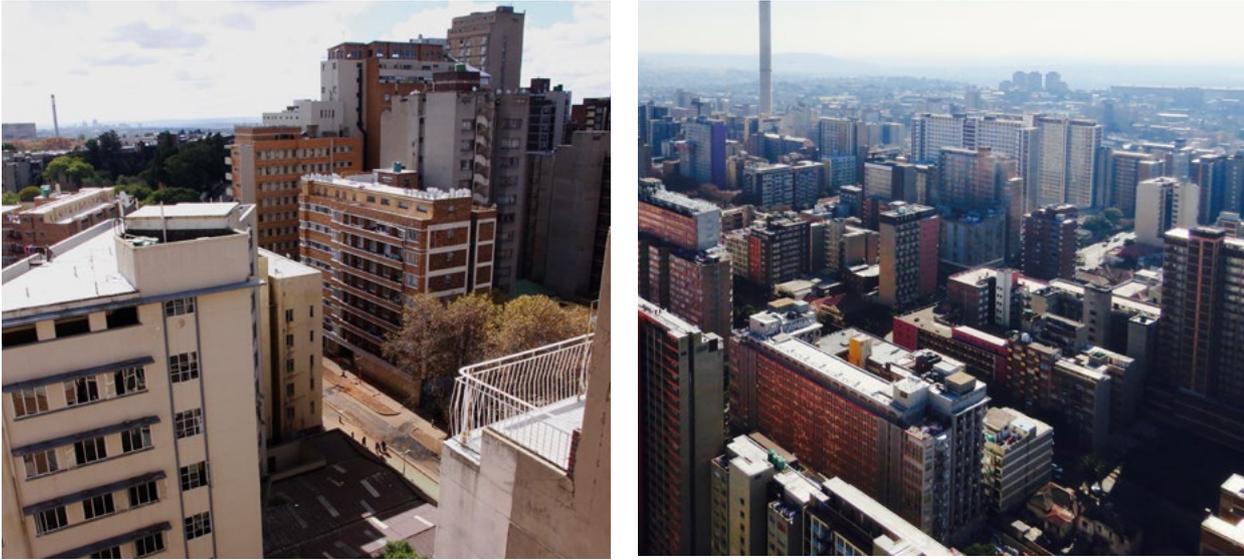
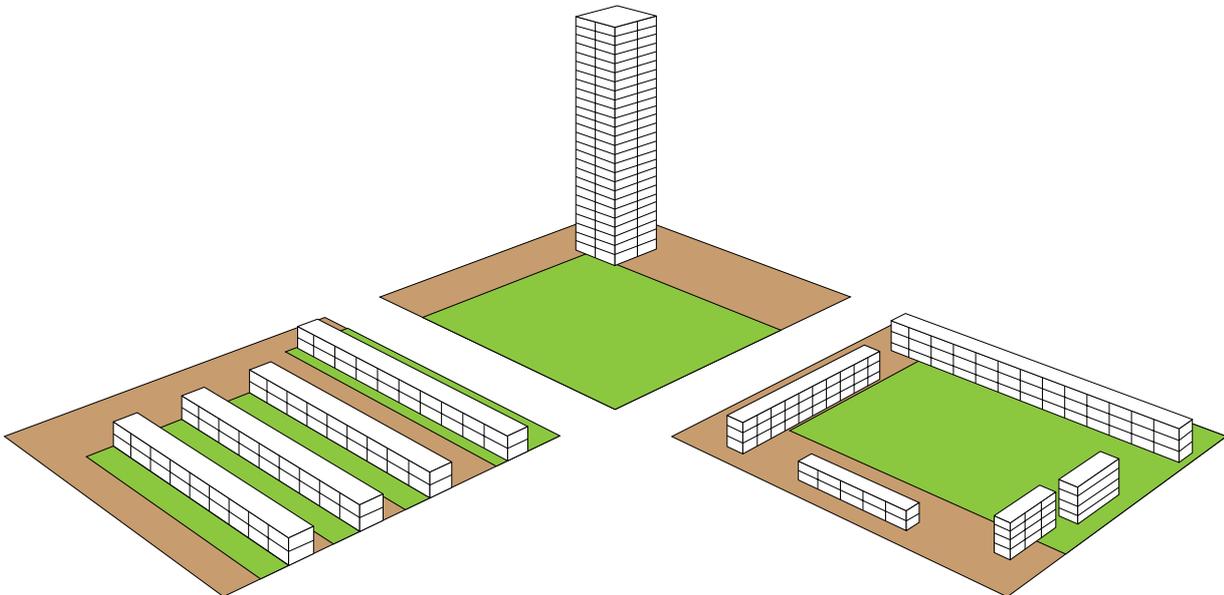


Photo credit: Suzanne Loois

Figure H.4: Examples of housing types generally associated with high densities

Many factors can influence dwelling densities, and therefore different housing types may result in the same density depending on the way in which the dwelling units are configured. A housing development could take on different forms on a plot of a certain size and yet yield the same density, as demonstrated in Figure H.5. Aspects that could influence dwelling density in addition to the housing type include the design and size of the unit, shared spaces, circulation areas, gardens and parking spaces.



Three different types of housing with the same number of dwelling units per hectare.

Figure H.5: Different housing types could result in the same density

Housing types are, in principle, also linked to occupancy density (the number of people per unit). Certain housing types, such as single detached houses, can comfortably accommodate more people per unit than others, such as flats in a high-rise building. However, this is not always the case, and factors such as overcrowding may result in actual occupancy density levels that are higher than anticipated. For example, flats are sometimes occupied by more people than each unit was designed for, and small single dwellings (such as subsidised houses) may be occupied by more people than they were intended for. Conversely, some single dwellings may be occupied by only one or two people, even though they may be intended to house many more people.

Given the links between housing types and dwelling and occupancy density, it follows that there would also be a relationship between housing type and population density (the number of people per hectare). Certain housing types, such as blocks of flats, are more likely to result in higher population densities than detached dwellings. However, very high population densities are also often encountered in informal settlements due to overcrowding. In many cases, the informal dwellings are crammed close together and inhabited by far more people than they can comfortably accommodate (Figure H.6).



Figure H.6: Dwellings in informal settlements are often erected very close to each other, resulting in high densities



The types of housing included in a development will, to various degrees, influence the dwelling, occupancy and population densities that can be achieved. If a certain density needs to be achieved, the combination of housing types that should be provided has to be carefully considered. However, despite apparent correlations between density and housing type, it would be unwise to make assumptions without a clear understanding of the various other factors that could influence densities.

Dwelling and population densities do, and should, vary across different parts of a city or town. There is no ideal density that could be applied across a settlement. Certain densities are more suitable for particular land uses or types of neighbourhoods. For instance, activity or transport nodes, spines or corridors would require relatively high densities to ensure the infrastructure and services provided operate effectively and efficiently. Low-density development might be appropriate in areas where there are constraints such as topography, vegetation, character and heritage or where the installation of sewerage is restricted, requiring on-site wastewater disposal.

Decisions regarding densities and housing types should be guided by the context. Various factors should be considered, for instance:

- Low-density developments consisting of single detached houses on a plot may not contribute to the creation of more compact settlements, but in certain cases this type of housing may have to be provided to meet the needs of potential owners.
- Medium- to high-density housing such as three- to four-storey apartments or multi-storey flats may be appropriate in some cases, but they may not be suitable for families that need to utilise their dwellings for income-generating purposes such as informal businesses or the sub-letting of back-yard dwellings.
- Higher-density housing requires careful management and maintenance, otherwise it may increase the risk of overcrowding and could result in unsafe living conditions (Figure H.7).



Figure H.7: Higher-density housing may increase the risk of overcrowding and could result in unsafe living conditions

Photo credit: Alexandra Renewal Project (R)

An aspect that also plays a role when determining densities is known as the Floor Area Ratio (FAR). It refers to the relationship between the size of a particular plot and the floor area of all buildings on that stand. The ratio is calculated by dividing the gross floor area of all storeys of the buildings by the total area of the erf. The ratio is usually used by local authorities as a factor that determines the maximum floor area allowable on a particular plot in terms of a land use scheme. For instance, if a FAR of 0.5 is attributed to a site of 1 000m², the gross floor area allowable on the plot is calculated by multiplying the plot size by the factor, which in this case would be 500 m².

(iii) Tenure

In general, certain types of housing lend themselves better to a specific type of tenure than other types. For instance, single detached (freestanding) housing is suitable for rental, full title as well as sectional title ownership, while attached housing is usually associated with sectional title ownership or the social housing option.

When decisions are made about housing types to be included in a development, more than just the physical characteristics of the different types should be considered. Depending on the context, some tenure options may be more suitable than others. For instance, if the potential occupants of the housing to be provided are not expected to be able (or inclined) to purchase a property, housing types that would be suited to other tenure options such

as rental should be made available. Often it would make sense to provide a range of housing types that would accommodate different tenure options to suit different levels of income and preferences.

(iv) Plot shape and size

Subdivision and housing type are interrelated, and therefore the housing types to be provided in a development would influence the shape and size of the residential stands as well as the layout and structuring of a development (see **Section F.4.2.3**).



It is important to, if at all possible, first determine the types of housing to be provided and to then decide on the shape and size of the stands that would be needed to accommodate these housing types. The shape and size of the stands will also be influenced by other factors such as topography, so the process to decide on subdivision and housing type should be iterative.

(v) Character of the neighbourhood

The type of housing provided in a development plays a key role in defining the character of the neighbourhood and adjacent areas (Figure H.8). The design of the building, its positioning on the plot and its relationship with the street and open spaces and other buildings around it all contribute to the image of an area and the appearance of the local urban landscape in general (see **Section H.4.2**).

For instance, rows of detached or semi-detached houses could easily result in monotonous, impersonal and dreary neighbourhoods. Townhouse complexes, cluster developments and security villages often have the same effect on an area. In many cases, such developments are walled in, negatively affecting the quality of the streetscape and potentially creating unsafe areas for pedestrians. Such developments also reduce the permeability of certain parts of a settlement and inhibit the creation of integrated settlements.

Photo credit: Chris Kirchhoff (L); Graeme Williams (R) - www.brandsouthafrica.com



Figure H.8: Houses could be impersonal and dreary (L) or they could add character to a neighbourhood (R)

H.3.3.2 Housing typology

Housing typology involves the classification of housing into different types based on specific characteristics. The different types can be grouped together in a number of ways, but for the purpose of this Guide they have been categorised according to physical criteria as follows:

- Single detached housing
- Semi-detached housing
- Attached housing
- Flats/apartments

There is not always a clear distinction between the different categories of housing (Figure H.9). For instance, some of the characteristics of semi-detached and attached housing are sometimes combined, resulting in a hybrid housing type. Similarly, a building form that may be described as a walk-up by some people may be regarded as a block of flats by others. In practice, the four types manifest in various forms, permutations and combinations, as discussed in the following sections.



Figure H.9: The different categories of housing may manifest in various forms, permutations and combinations

(i) Single detached housing

Single detached, or freestanding, housing is found in medium to high-income suburban neighbourhoods as well as low-income developments (Figure H.10). Despite the apparent popularity of this housing type, it is also often criticised, for instance for not utilising land efficiently. It could include anything from a small, single-storey dwelling provided as part of a subsidy-linked development to a large multi-storey house on a lifestyle estate.

This type of housing is sometimes referred to as single family homes, but in reality they can be occupied by an extended family or even different families. It is also known as the 'one-house-on-one-plot' approach. However, a number of detached houses could also be grouped on a single large plot that used to have only one house on it. This type of development often takes place on large stands in established residential areas, increasing the neighbourhood density. The houses are freestanding units, but they usually have relatively small gardens and they share certain common areas, services and infrastructure. These developments are most often referred to as cluster developments, security villages or lifestyle estates, and the ownership mechanism could be full or sectional title.

Characteristics of single detached housing

- This housing type requires more land than most other types, thereby resulting in relatively low neighbourhood densities and contributing substantially to urban sprawl.
- Providing municipal services infrastructure to this housing type is usually relatively expensive.
- The surface area of external walls exposed to the external environment is relatively large, which could make it difficult to regulate the temperature inside the house.
- The cost of maintaining a detached house may be relatively high and could place financial strain on the occupants.
- The cost of building a freestanding house is relatively high. However, the cost per unit may be reduced in larger developments when the same house form is mass produced.
- Single detached houses afford residents a substantial level of privacy and a sense of independence.
- This type allows for outside living spaces, yards and garden areas, often all around the house, and often with a fair level of privacy.
- Occupants of detached houses have direct contact with the natural ground level and usually have easy access to the street.
- Detached houses normally allow for additions (extensions to the existing structure).
- A single house on a plot often provides income generation possibilities, e.g. it may be able to accommodate a home-based enterprise. It may also allow space to build an extra room or flat on the property, or space for a vegetable garden, etc.
- Owners have the freedom to personalise their homes as they wish and maintain it at a level that they can afford or prefer.



Photo credit: Cape Town Community Housing Company (1)

Figure H.10: Single detached houses

(ii) Semi-detached housing

Semi-detached housing refers to two adjoining houses, built on one stand, that share a communal wall (sometimes referred to as a party wall). The two units often mirror each other, and they can be single or double storey (Figure H.11). This type of housing usually has open space, or garden area, to the front, back and one side of the house.

This may not be the preferred housing type for some, precisely due to the fact that two units are connected by a communal wall. The garden or yard may also not be as private as some may want it to be. However, semi-detached housing does play a role in reducing urban sprawl, and it is a very suitable option to include in a low-income development. It is also a useful housing type for infill developments in more established neighbourhoods, where it is usually referred to as a duet.

Characteristics of semi-detached housing

- This housing type makes more efficient use of land and can be accommodated on smaller stands more effectively than detached housing. This type is usually associated with medium-density levels.
- Providing municipal services infrastructure to this housing type is generally less expensive compared to detached dwellings.
- The surface area of external walls exposed to the external environment is somewhat smaller than for detached dwellings, which could make it a bit easier to regulate the temperature inside the house.
- The cost of maintaining a semi-detached house is usually less than that of a comparable detached house.
- The cost of building a semi-detached house could be lower than that of a comparable freestanding house. As for detached housing, the cost per unit may be reduced in larger developments when the same house form is mass produced. If houses are provided on two floors, there could be further cost savings.
- Sound and fire proofing between two units may need special attention.
- Semi-detached houses afford residents a fair level of privacy and some sense of independence. The entrance door to each unit is separate, unlike with some forms of attached housing.
- This type allows for (usually semi-private) outside living spaces, yards and garden areas around the house, usually on three sides of the house.
- Occupants of semi-detached houses have direct contact with the natural ground level and usually have relatively easy access to the street.
- Semi-detached houses often allow for additions (extensions to the existing structure).
- This type of housing could provide income generation possibilities, e.g. it may accommodate a home-based enterprise, it may allow space to build an extra room or flat on the property, or space for a vegetable garden.
- Owners have some level of freedom to personalise their homes.



Photo credit: Cape Town Community Housing Company (1), City of Cape Town (B)

Figure H.11: Semi-detached houses

(iii) Attached housing

A row of more than two houses joined together by shared walls is known as attached housing. Units can be single or double storey (simplex or duplex). Two units could be built on top of each other; therefore the row of houses could be between one and four storeys high (Figure H.12).

Also known as row housing, attached housing can be configured in a number of ways and take on various forms. Row housing could be found in townhouse complexes where each unit will often have a parking space for a motor vehicle associated with it. Some attached housing developments are referred to as walk-ups. Walk-up apartment blocks are normally three to four storeys high, and each unit is directly accessible from the ground by means of a staircase. Attached housing could also be arranged around a semi-private courtyard (courtyard housing) or as small blocks of flats, sometimes referred to as maisonettes. Rental and social housing developments usually take on the form of attached housing.

Characteristics of attached housing

- This low-rise housing type makes very efficient use of land and can result in relatively high densities.
- Providing municipal services infrastructure to attached housing may in certain cases be less expensive compared to other housing types.
- The surface area of external walls exposed to the external environment is somewhat smaller than for detached and semi-detached dwellings, which could make it easier to regulate the temperature inside the house.
- The cost of maintaining some forms of attached housing could be less than that of comparable detached houses.
- The cost of building certain forms of attached housing could be lower than that of a comparable freestanding house. As for semi-detached housing, the cost per unit may be reduced in larger developments when the same house form is mass produced. If houses are provided on two floors, there could be further cost savings.
- Sound and fire proofing between units may need special attention. Noise from communal areas may be problematic.
- Attached houses afford residents lower levels of privacy and independence than offered by detached housing. The entrance door to each unit may be separate, but in some forms of attached housing an open walkway (gallery), landing or staircase may have to be shared.
- Private outside living spaces, yards and garden areas are limited. If a backyard is provided, the only access is usually through the house, which could be problematic. In some cases semi-private open spaces such as courtyards are provided, while individual units may have private balconies.
- Occupants of attached houses have some degree of direct contact with the natural ground level.
- Attached houses generally do not allow for additions (extensions to the existing structure).
- This type of housing does not normally provide ideal income generation possibilities within a unit, but it does allow opportunities for integrating commercial space into the residential development by, for instance, using the ground floor level of the building for retail or other types of businesses.
- Owners usually do not have much freedom to personalise external aspects of their units.

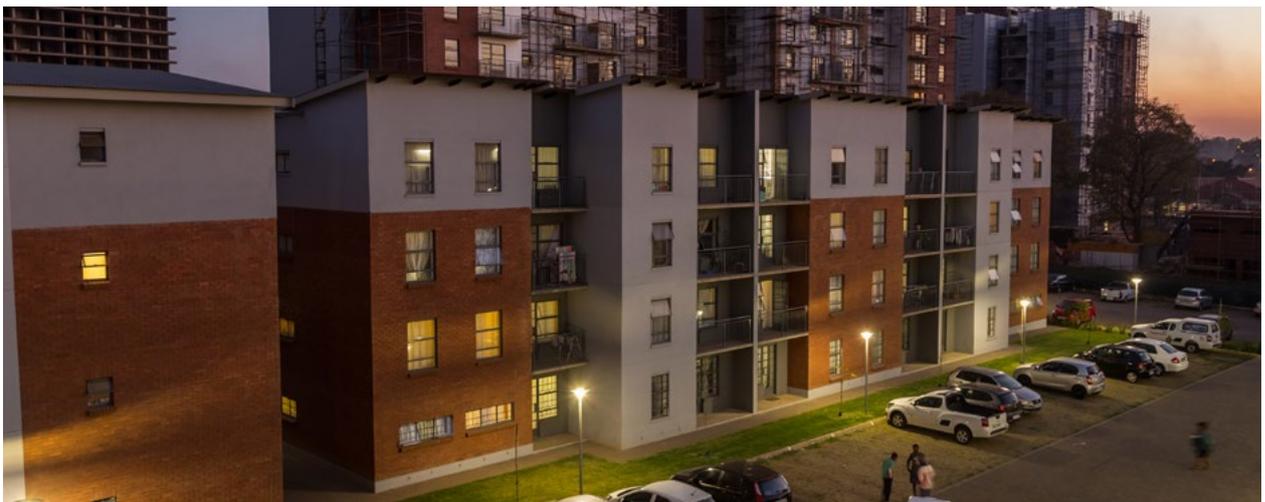


Photo credit: City of Cape Town (TR, MR)

Figure H. 12: Attached houses

(iv) Flats/apartments

Blocks of flats or apartments are multi-storey buildings that are usually more than four storeys high (medium to high-rise developments). The building often has a central, shared entrance that provides access to corridors or walkways that connect the individual living units. The entrance doors to each flat, or apartment, could be located off a corridor (indoors passageway) or off a walkway (open gallery). A block of flats or apartments is usually serviced by one or more elevators, has shared open areas (e.g. for recreation, vegetation or washing lines), and may have parking spaces for motor vehicles on the ground floor, in the basement or elsewhere on the property (Figure H.13).

Characteristics of flats/apartments

- This housing type makes very efficient use of land and can result in fairly high densities.
- The cost of providing municipal services infrastructure to this type of housing would vary depending on the building height and other factors.
- The surface area of external walls exposed to the external environment could in some cases be considerably smaller than for other types of housing, which could make it easier to regulate the temperature inside the house.
- The cost of maintaining a flat or apartment would vary depending on the type of building, but it may be less than that of a comparable detached house.
- The cost of building this type of housing would depend on a number of factors, including the height of the building and the construction method.
- Sound and fire proofing between units may need special attention. Noise from communal areas may be problematic.
- Flats or apartments afford residents lower levels of privacy and independence than offered by detached housing. The entrance doors to different units may be separate, but they open up onto shared spaces such as corridors or walkways.
- Private outside living spaces, yards and garden areas are limited. Usually semi-private open spaces such as courtyards are provided, while individual units may have private balconies.
- The majority of those living in a block of flats or apartments do not have direct contact with the natural ground level.
- This type of housing does not allow for additions (extensions to the existing structure).
- It does not normally provide ideal income generation possibilities within a unit, but it does allow opportunities for integrating commercial space into the residential development by, for instance, using the ground floor level of the building for retail or other types of businesses.
- Owners usually do not have much freedom to personalise external aspects of their units.



Figure H.13: Flats

H.3.4 Social facility options

Social facilities contribute to the liveability of a neighbourhood by offering various services to those living in and around the neighbourhood. Most individual social facilities cannot be sustained by only one neighbourhood, and it is therefore important that facilities are placed throughout a settlement in such a way that they can be shared equitably by all residents. Not all facilities have to be in close proximity to all residents, but some, such as schools, health services and police stations need to be reasonably accessible to all communities. It is important that the locations of such facilities are chosen carefully. Some of the issues to consider are summarised below.



Decisions regarding the types and sizes of social facilities to be provided and their placing throughout a settlement should be carefully coordinated at a municipal level. At this level, a holistic view of the needs of an entire municipal area and the locations of existing facilities throughout the settlement is possible. This would assist in providing appropriate facilities in an efficient manner. For instance, it often makes sense to provide one large facility rather than a few smaller ones, and a municipality would have access to the information required to make this type of decision.

H.3.4.1 The equitable provision and distribution of social facilities

Various issues have to be considered when decisions have to be made regarding the provision of social facilities that would serve present and future needs. These issues include the availability and capacity of existing social facilities, the population thresholds required for viable social facilities, the distances that residents have to travel to reach social facilities, the cumulative demand for social facilities in the broader area, government's priorities for social service delivery and the demographic profile and specific needs of the community.

(i) Availability and capacity of existing social facilities

Residents use social facilities that are located within their own neighbourhood, in adjacent neighbourhoods or elsewhere in the settlement. Information on the number, capacity and location of existing social facilities in and around the proposed development has to be considered (see **Section H.3.2.4**). There might be no need for new facilities as there may be sufficient service capacity at existing facilities within an acceptable distance from the proposed development. It is also possible that some facilities (such as schools) are within reach of the proposed development, but that they are utilised at full capacity. The additional demand will then require the expansion of the existing facilities or the construction of new facilities. Another possibility may be that existing facilities are out of reach of the residents of the proposed development. This may require the construction of new facilities depending on whether there is sufficient cumulative demand in the area (see **Section H.3.4.1 (iii)**).

Fixed social facilities can be supported by a range of additional and complementary mobile, satellite, outreach and periodic services. This should be taken into consideration when assessing the availability and capacity of social facilities.

(ii) Population thresholds, access distances and population densities

Three inter-related aspects should be considered when making decisions regarding the size and distribution of social facilities, namely population thresholds, access distances and population densities. (see **Section F.4.2.4** for more information on density measurement.)

Population threshold refers to the size of the population that could be effectively served by a specific social facility. More specifically, the population threshold indicates the minimum number of people living in a specific area (catchment area) that would possibly necessitate (and be able to sustain) the provision of a particular social facility. Therefore, the population size of a proposed development is one of the factors that would influence decisions about the number, the size and the range of social facilities that may have to be provided.

Population thresholds differ depending on the type of social facility (see Tables H.1 to H.6). In general, facilities that are visited often by many people (e.g. schools) would have a lower population threshold than those that are visited less frequently but by more people (e.g. offices of the Department of Home Affairs). For all social facility types, the population threshold increases with the level of service specialisation provided by the facility. The reason for this is that the higher the level of specialisation, the less often community members are likely to visit the facility thus the bigger the size of the community needed to support it. For instance, a Primary Health Care clinic would be used regularly by many people, while few people will visit a more specialised facility such as a hospital on a regular basis.

A further aspect that needs to be considered is the access distance, which is the distance that people need to travel to reach a social facility. Access distances differ depending on the type of facility (see Tables H.1 to H.6). The area within the polygon created by these distances around a particular facility is regarded as the service catchment area. Population thresholds are directly linked to catchment areas, hence access distances are closely related to population thresholds. Access distances are influenced by a range of factors including the topography (e.g. flat or hilly terrain), street layout (e.g. permeable or impermeable for pedestrians), the availability of public transport, and the setting of the area (urban, peri-urban or rural). Social facilities that are accessed frequently by a large portion of the community should ideally be located relatively close to the target population to ensure short travelling distances and walkability for potential users of the service (refer to **Section F.4.2.2** for a discussion on walkable neighbourhoods).

Population density should also be considered when making decisions regarding the provision of social facilities. Population density refers to the number of people in an area (see [Section F.4.2.4](#) and [Section H.3.3.1 \(ii\)](#)). It has an impact on population thresholds and access distances and should influence the spatial distribution and size of social facilities.



Making decisions regarding the type, size and location of social facilities to be provided

Detailed information regarding population thresholds and access distances related to various types of social facilities is provided in the *CSIR Guidelines for the Provision of Social Facilities in South African Settlements*.⁶

The guidelines are supported by a web-based decision-making tool, the *CSIR Space Planner*.⁷ Once a set of requirements (standards) for social facility provision has been agreed, this tool can be used to determine the impact of a specific development on the social facility demand and calculate the space requirements of the facilities. Impact estimates are calculated for the range of facilities to be provided as well as the size (capacity) of the different facilities and the land area required for the provision of the said social facilities.

For guidance on the application of differentiated social facility provision standards in non-metropolitan areas (delivering social services to rural areas), make use of the *Social Facility Provision Toolkit*⁸ of the Department of Rural Development and Land Reform, which is populated with predefined facility standards. With this toolkit facility demand can be calculated for any population size or for 1 328 predefined regional service catchment areas in South Africa for which population statistics are provided.

(iii) Cumulative demand for social facilities

The service catchment areas of social facilities vary depending on the type of service provided. In some cases, the facility primarily serves the needs of those living in close proximity to the facility, but often a facility is also used by people who live in parts of the settlement that are quite a distance away. The calculation of demand for social facilities in a neighbourhood is therefore influenced by the cumulative demand and supply of social facilities for the whole settlement or an area that consists of a number of neighbourhoods. The demand created by one or more new (housing) projects (often spread across different neighbourhoods) should be added to the existing demand for social facilities (in the area surrounding the new development) to calculate the cumulative demand for the entire area. Where possible, neighbourhoods should be planned in a coordinated way so that each contributes equitably to the provision of land or facilities for social service delivery. This is best coordinated by the local municipality.

(iv) Government social service delivery priorities

The provision of social facilities is not regulated by a single government department or the responsibility of only one of the three spheres of government (national, provincial or local). It is therefore not always possible to identify specific government priorities that may assist in guiding decisions regarding the provision of social facilities as part of a development project. Consult domain-specific guidelines, policies, norms, standards or regulations of all the relevant government departments and their entities when making decisions regarding the provision of social facilities.



It is essential to involve relevant government departments from the outset when a development project is planned to ensure they are aware of the possible impact of the development on service delivery and to assist them with planning their services. For instance, it is important to collaborate with the South African Police Service (SAPS) to enable them to manage possible changes in crime patterns due to the addition of potential targets (people, property, etc.), locations (streets, parks, facilities, etc.), and even offenders. The development may place additional pressure on the existing resources of the local police station, and they need to be made aware of this as early on in the development process as possible.

(v) Demographic profile of the residents

Another aspect that might influence the provision of social facilities is the demographic profile of the residents of the area to be developed and of nearby neighbourhoods. Different groupings (e.g. retired people, families or single people) do not necessarily use the same social facilities with the same frequency. A clear understanding of the differentiated needs that exist will contribute to appropriate supply of services relative to the demand and lead to more informed provision and distribution of social facilities. However, the composition of the residents living in an area will change over time, with the demographic profile also likely to change. For instance, while it may be necessary to plan for an ECD centre in a neighbourhood when it is developed, this need may disappear as the community changes over time and the facility should be repurposed.

Socio-economic status and income levels also have an impact on the type and location of social facility provision. For instance, shorter travel distances to social facilities should be prioritised in lower-income areas, as residents often have to walk (costs may prohibit them from using private or public transport). Certain social facilities, e.g. Primary Health Care clinics respond directly to the needs of lower-income communities and will usually have to be accommodated in such developments. People with higher incomes may select to use social facilities provided by the private sector, even if these facilities are not conveniently located.

(vi) Community-specific needs

If the residents of a greenfield development are known, they could be included in the development process and could potentially inform decisions regarding the provision of social facilities (see **Section E**). The residents of neighbourhoods surrounding a proposed development could also provide useful information to guide decisions regarding social facilities. Information regarding social facility needs may also be included in the IDP.

H.3.4.2 Types of social facilities

The following social facilities typically require physical infrastructure at a neighbourhood level and land may have to be set aside or rezoned to accommodate them in some development projects:

- ECD centres (including day-care centres, nursery schools, play schools and after-school care facilities)
- ECD Resource Centres/ Hubs
- Primary schools
- Secondary schools
- Primary Health Care clinics
- Community Health Centres (CHCs)

- Libraries
- Community halls
- Multi-purpose centres
- Government departments' offices and/or service points (including Home Affairs offices, Labour centres, Social Development offices, SASSA offices, social grant pay points)
- Police stations
- Fire stations
- Homes for the aged
- Child and Youth Care Centres (CYCCs) (including children's homes)
- Post offices/ postal agencies/ post boxes
- ICT access hubs/ Information centres

Tables H.1 to H.7 provide brief descriptions of each of these facilities and give a broad indication of typical population thresholds and access distances. A range of population thresholds is presented to allow for adjustments in facility sizes, contexts (urban, rural, peri-urban), different settlement types and other issues.

Some government departments provide specific guidance on relevant facilities, e.g. the Department of Sport and Recreation's *Norms and Standards for Sport and Recreation Infrastructure Provision and Management*⁹ and the Department of Basic Education's *National Minimum Uniform Norms and Standards for School Infrastructure*¹⁰. More detail is also provided in the CSIR *Guidelines for the Provision of Social Facilities in South African Settlements* and the Department of Rural Development and Land Reform's *Social Facility Provision Toolkit*¹¹ (see **Section H.3.4.1 (ii)**). Guidelines for the provision and location of social facilities should always be considered within the context of the development project. The provision of public open spaces in neighbourhoods is discussed in **Section G**.

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
Early Childhood Development centres (including day-care centres, nursery schools, play schools and after-school care facilities). These facilities provide programmes for the care of more than six and less than 150 children younger than five years of age.	2 400 - 3 500	2 - 5
Early Childhood Development Resource Centres/ Hubs Large ECD facilities are equipped for the care and development of children younger than five years of age. They also provide outreach services to the community and surrounding smaller facilities, and act as a training and resource centre with respect to other ECD facilities and programmes in the community.	20 000	5

Table H.1: Population thresholds and access distances for typical facilities offering education services

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
<p>Primary schools</p> <p>Primary schools are education facilities for Grades R to 7 (age group 5 to 12). Three categories of school sizes (small, medium and large) are used for different contexts. Small schools (with a minimum population threshold of 1 000 people) should only be used in cases where no other options are available. Grade R classes should ideally form part of a primary school but can also be provided at a pre-school facility or be accommodated in a stand-alone facility.</p>	2 200 - 6 600	5
<p>Secondary schools</p> <p>Secondary schools are education facilities for Grades 8 to 12 (age group 13 to 17). Three categories of school sizes (small, medium and large) are used for different contexts. Small schools (with a minimum population threshold of 2 000) should only be used in cases where no other options are available.</p>	4 000 - 10 000	5

Table H.2: Population thresholds and access distances for typical facilities offering health services

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
<p>Primary Health Care clinics</p> <p>Primary Health Care clinics are permanent facilities (public or private) at which a range of primary health care services are provided, for at least eight hours per day and four days per week.</p>	5 000 - 60 000	5 - 10
<p>Community Health Centres (CHCs)</p> <p>CHCs are appropriately equipped permanent facilities that offer a broad range of primary health care services including observation beds, accident and emergency services, midwifery services, but not surgery under general anaesthesia. These facilities are operational 24 hours a day and seven days a week.</p>	60 000 - 150 000	10

Table H.3: Population thresholds and access distances for typical facilities offering community services

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
Libraries Public libraries of different sizes and grades provide resources and services to meet the needs of the general public for education, information and personal development. These facilities usually have study areas, meeting rooms, and may provide the public with access to computers and the internet.	Basic: 5 000 - 25 000 Branch: 50 000 - 150 000	Basic: 5 Branch: 10
Community halls Community halls (Grades B to E ¹²) are used for community activities such as public meetings, training and entertainment events. The halls usually have kitchens, toilet facilities and storage space. The size (and the available facilities) of halls can vary considerably. In sparsely populated areas halls are sometimes used as a venue from where periodic services can be provided e.g. pension pay-outs, mobile clinic services and periodic home affairs and other e-government services.	5 000 - 60 000	8 - 10 (urban) 10 - 30 (rural)

Table H.4: Population thresholds and access distances for typical facilities offering civic services

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
Multi-purpose centres These public service centres are 'one-stop' service centres where communities can access a multitude of government services and other community services. Typical services provided include SASSA offices, Home Affairs offices, Labour offices and police stations.	20 000 - 200 000	15 (urban) 25 (rural)
Government departments' offices Government departments (national and provincial) often provide local branches or service delivery points where the public can access department-specific services or information. These offices are often part of public service centres or may be part of a periodic mobile e-government outreach service. The following departments or agencies are typically establishing local facilities for this purpose:		
Department of Home Affairs offices Department of Labour offices	20 000 - 200 000	15 (urban) 25 (rural)
Department of Social Development offices	5 000 - 40 000	15 (urban) 25 (rural)
SASSA offices (for registration and administration of grants)	30 000 - 120 000	15 (urban) 40 (rural)

Table H.4: Population thresholds and access distances for typical facilities offering civic services

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
<p>Social grant pay points</p> <p>Social grant pay points are locations at which cash payments of various forms of social grants are made to grant recipients. No specific land requirement is necessary for these facilities and payments are often made from post offices, banks and supermarkets. Where a non-electronic cash service is still provided this is often at community halls or part of public service centres. These facilities should allow for the additional space requirements that accompany the payment of grants each month, e.g. the possibility of people queuing on certain days (provide toilets and seating) and for informal trading taking place in close vicinity.</p>	200 or more grant recipients	5

Table H.5: Population thresholds and access distances for typical facilities offering security and emergency services

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
<p>Police stations</p> <p>Police stations are buildings that accommodate police officers and other members of staff of the South African Police Service (SAPS) and may also accommodate the Metro police. These facilities usually contain offices, temporary holding cells and interview rooms and may provide living quarters for personnel on site.</p>	10 000 - 60 000 dependent on context and crime rates	≤ 8 (urban) 24 (rural, but dependent on context and crime rates)
<p>Fire stations</p> <p>Fire stations are facilities where firefighters are stationed and where fire-fighting apparatus (vehicles and other equipment) are stored. These facilities may include limited dormitory facilities and work areas such as meeting rooms, workshops, practical training areas, gymnasiums, etc.</p>	Context-dependent	The response times for fire stations are specified in <i>SANS 10090:2003 Edition 3</i> . It ranges from 8 minutes for high-risk land uses (including informal settlements) and CBD areas to 13 minutes for conventional brick residential areas and 23 minutes for rural areas.

Table H.6: Population thresholds and access distances for typical facilities offering social services

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
Homes for the aged These facilities provide housing for the aged and may incorporate frail care and nursing facilities. Their provision is not required by law.	20 000 - 60 000	25
Child and Youth Care Centres (CYCCs) A CYCC is a facility that provides residential care for more than six children not living with their biological families. Examples include children’s homes, places of safety, secure care centres, schools of industry, reformatories and shelters for street children. The population threshold and access distance indicated here are only applicable to children’s homes.	20 000 - 60 000 for children’s homes	25 for children’s homes

Table H.7: Population thresholds and access distances for typical facilities offering communication services

Social facility type	Typical population threshold (number of people)	Ideal maximum access distance (km)
Post offices/ postal agencies/ post boxes Service delivery facilities where the public can access post office services and information. No specific land requirement is necessary and facilities are commonly rented within retail facilities.	10 000 - 20 000	5 - 10
ICT access hubs/ Information centres A facility that provides community access to information and communication technologies (ICT), including internet access, computers and telephones. These facilities are often supported by free wifi hotspots at public facilities.	5 000	5

Privately owned commercial facilities such as shopping malls and petrol service stations often provide social services to the public, for example public toilets and gathering spaces. These privately owned facilities provide services that complement those delivered in social facilities operated by government. This role should be acknowledged where appropriate, and taken into consideration when making decisions regarding the provision of social facilities operated by government.

H.4 Design considerations

This section outlines the factors that need to be considered when incorporating housing and social facilities into the design of a development. It is closely linked to **Section F.4** that deals with the design of the street and plot layout of a neighbourhood.



When designing and constructing housing and social facilities, it is important to remember that buildings need to adhere to some or all of the following regulations, norms and standards:

- All buildings have to be designed and constructed in accordance with the National Building Regulations, applied in accordance with *SANS 10400*.
- As stipulated in the Housing Consumers Protection Measures Act, 1998, all home builders must be registered with the National Homebuilders Registration Council (NHBRC). In addition, every home should be registered with the NHBRC before construction commences.
- Stand-alone houses provided in terms of the National Housing Programmes should be designed and constructed in accordance with the National Norms and Standards as approved by the Minister of Human Settlements.¹³

H.4.1 Locating housing and social facilities in a neighbourhood

Where appropriate, neighbourhoods should be developed to incorporate a mix of land uses, income levels, and housing types. Such mixed neighbourhoods would usually result in medium densities and allow a range of housing options that potential residents can choose from (Figure H.14).

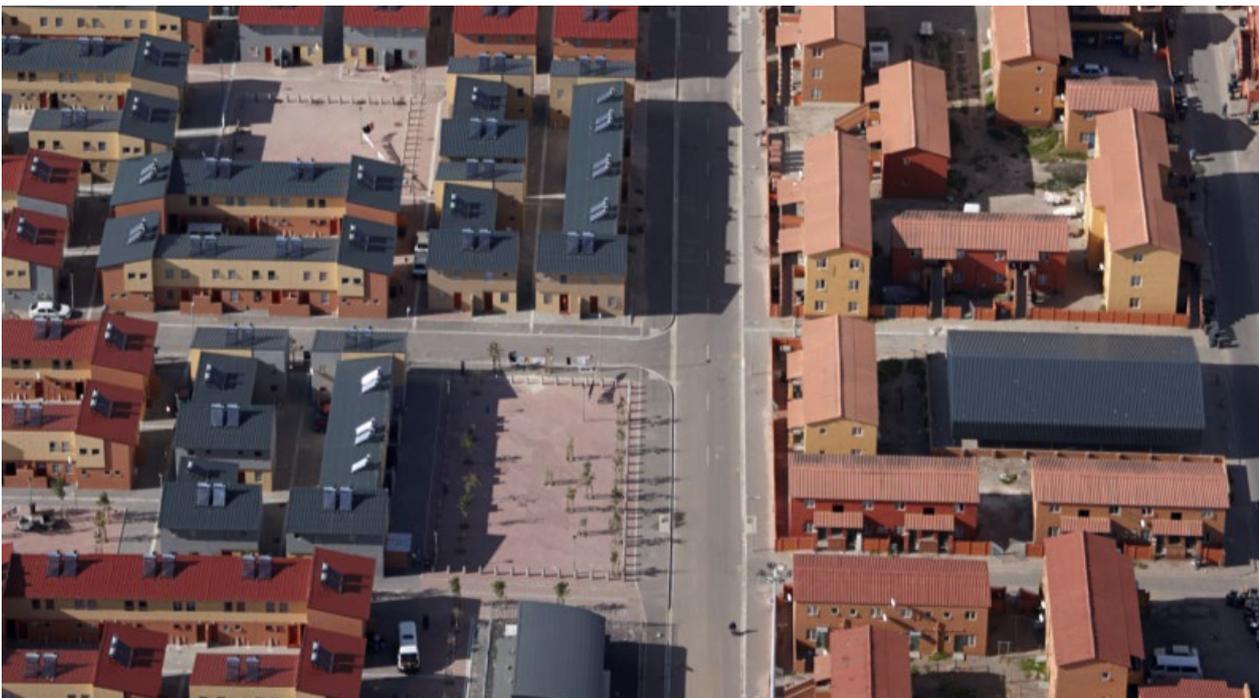


Figure H.14: A mix of land uses and housing types

If possible, locate medium to higher-density residential and retail buildings along higher-order, or 'main' streets (Figure H.15). Social facilities should be located to be accessible to their service populations. Social facilities that serve a broader community (and have a higher population threshold), or that are likely to outlive the current community usage, should be "externalised" in the sense that they should be located on the edges of the neighbourhood or at places where they can be accessed with relative ease from surrounding neighbourhoods. See [Section F.4.5](#) for a discussion on the planning of social facilities as part of the neighbourhood layout and structure.

As far as possible, concentrate social facilities at central locations together with other public facilities, amenities and service points adjacent to public spaces (e.g. squares, transport facilities or parks) to create clusters or service precincts. The clustering of social facilities is discussed in [Section H.4.4](#).



Figure H.15: Locate medium to higher-density residential and retail buildings along higher-order streets

H.4.2 The relationship between buildings and the street

The relationship between buildings and the street play a key role in determining the character of the street. The nature of the boundary and the interaction between the building and the street or sidewalk could contribute to the creation of vibrant, active neighbourhoods. Houses and townhouse and security complexes surrounded by high walls, often incorporating electric fences, could create sterile neighbourhoods (Figure H.16). Alternative perimeter protection measures could be considered, such as fences that allow visual contact between the building and the street (Figure H.17). This allows for passive surveillance, which could reduce opportunities for crime (see [Section O.1](#)).



Figure H.16: Walls limit visual contact between houses and the street, potentially increasing opportunities for crime



Figure H.17: See-through fences and street-facing buildings allow for visual contact between buildings and the street

H.4.3 The placement of buildings on a plot

Siting refers to the location of a building on a plot, and to its relationship with adjacent properties and to the street. Where appropriate, buildings should be sited in such a way that it is possible to extend the building without too much difficulty should this be required at some stage. In particular, freestanding houses should be positioned such that additional rooms could be added as the need arises. The location of a building on a plot plays a key role in the relationship between buildings and the street (Figure H.18). Issues to consider include the interaction between the building and the sidewalk, and the treatment of the boundary and any walls or fences (see [Section H.4.2](#)).

Photo credit: Cape Town Community Housing Company (R)



Figure H.18: Placement of houses close to the street could contribute to the creation of an interesting streetscape

H.4.4 Clustering of social facilities

The clustering of social facilities can potentially be more convenient to users of the different facilities. By heading for a single destination, users of multiple facilities can save on travel time and cost. These clusters also become nodes and structuring elements within a neighbourhood (see [Section F.4.4](#)).

The clustering or grouping of different social facilities at accessible and central locations can improve the viability of the individual facilities and may have a number of financial benefits:

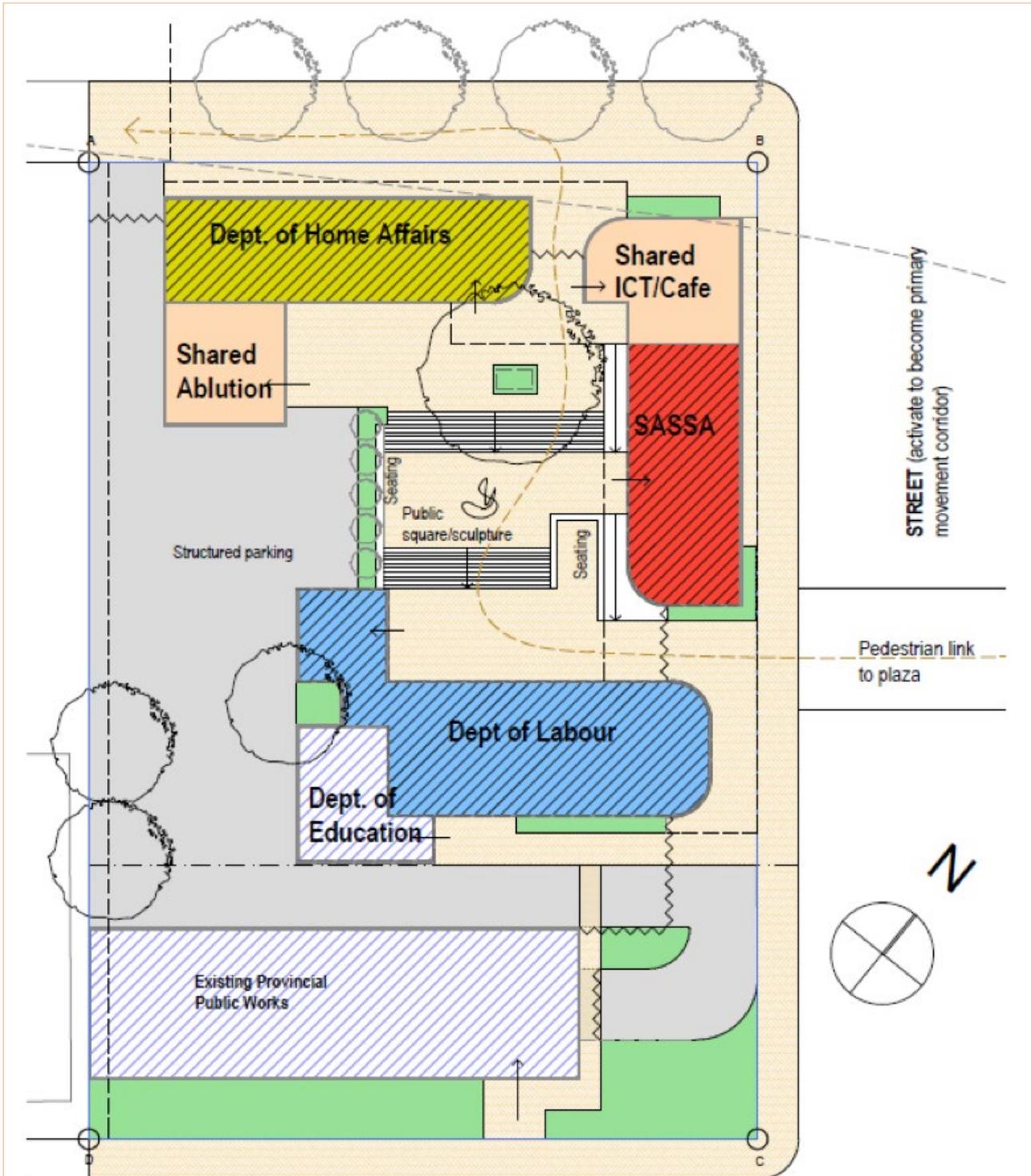
- If land has to be purchased and rights to build have to be secured (through for example a rezoning or a township establishment), the costs can be shared between different facilities.
- Certain elements of the social facilities can potentially be shared (e.g. waiting areas, public toilets, parking or cafeteria facilities). However, the nature of the different social facilities should be considered beforehand to ensure that these arrangements are workable and can be managed by the different entities. For instance, experience has shown that the waiting areas of health facilities should ideally not be shared with other facilities' waiting areas.
- Construction costs might be lower and even the land area required for the cluster may be less.
- Running costs of the different facilities that can potentially be shared include ICT services and infrastructure, administrative and secretarial staff and services, maintenance staff and services and security staff, services and installations. This would, however, require efficient and effective organisational and financial management to ensure that operational processes and responsibilities are clearly understood by all.

Complementary types of social facilities that could be grouped together include the following:

- ECD centre, primary school, library, recreational facilities
- Primary school, secondary school, library, community hall
- Fire station, police station, victim support centre, clinic



Key anchor facilities that could be included in a cluster include different offices of certain government departments (e.g. Home Affairs, Labour, and Social Development). Other facilities that could form part of these multi-purpose centres include pension pay points, clinics, libraries and ICT access hubs. These facilities can also be combined with public transport stops and open space such as public squares, parks and playgrounds.



Credit: Department of Public Works

Figure H.19: Clustering of social facilities - government precinct

Glossary, acronyms, abbreviations

Glossary

Access distance

The maximum distance that people should have to travel to reach a facility.

Building line

An imaginary line that defines an area within and parallel to the boundary of a plot within which no permanent structures may be built. The purpose of the building line is to prevent buildings from being erected too close to neighbouring properties or to the street. Building lines are defined in the local land use scheme and are not the same for all plots.

Consent use

Consent use means that a municipality allows additional land use rights on a particular property upon request. The zoning of the property will not be changed. The zoning category, as described in the land use scheme, usually makes provision for a pre-described number of uses that may be allowed for with the necessary consent.

Desire line

An imaginary line that links facilities or places, forming a convenient and direct route for pedestrians and cyclists. Desire lines become evident when watching people move through an area. These lines are often visible as informal footpaths across open space.

Land use scheme

A land use scheme forms part of a land use management system that regulates and manages land use within a municipality. The scheme confers legal rights to properties to develop and to erect and use buildings subject to certain stipulated conditions. A detailed description of the content of a land use scheme is provided in Chapter 5 of SPLUMA.

Plot

A measured piece of land, also known as an erf, stand or site that is registered at the deeds registration office or forms part of a municipal land use scheme.

Population threshold

The size of the population that could be served effectively by a specific facility. More specifically, the population threshold indicates the minimum number of people living in a specific area (the service catchment area) that would possibly necessitate (and be able to sustain) the provision of a particular facility.

Rezoning

A colloquial description of the process of making an amendment to a land use scheme (or any of its provisions), to change the land use rights and development restrictions applicable to a specific property.¹⁴

Servitude

A servitude is a registered right that a person or an entity has over the immovable property of another person. It usually means that a portion of land is set aside for a specific purpose, such as road widening, or provision for engineering infrastructure (e.g. water pipelines, electricity cables, sewerage pipes). The municipality might for example have the right to construct electricity cables over a privately owned property. The property owner is then restricted in what he or she can do within the servitude. The servitude is attached to the property and will continue to exist even if ownership of the land changes. The servitude forms part of the conditions contained in the title deed and can only be cancelled by agreement between both parties.

Site development plan

A plan that provides an overview of the intended development on a property, specifically indicating features such as the position of the proposed buildings, access provisions, parking, landscaping, adherence to the building lines and the position of servitudes.

Township establishment

Township establishment is a legal process whereby agricultural land is converted into proclaimed individual plots (with certain land use rights attached to them), which can be transferred to different owners. The process is regulated by SPLUMA.

Zoning

A property's zoning stipulates the purpose for which the land may be used and is described in the municipality's land use scheme. The zoning also stipulates restrictions on the building erected on the property in terms of floor area ratio, coverage, density, parking requirements, etc. In order to change the purpose for which the property can be used, an application for rezoning has to be submitted to the local municipality for consideration.

Acronyms and abbreviations

CBA	Critical Biodiversity Area
CBD	Central Business District
CHC	Community Health Centre
CSOS	Community Schemes Ombud Service
CYCC	Child and Youth Care Centre
DORA	Division of Revenue Act
ECD	Early Childhood Development
ESA	Ecological Support Area
FAR	Floor Area Ratio
FET	Further Education and Training
HLAMDA	Home Loan and Mortgage Disclosure Act
ICT	Information and Communication Technology
IDP	Integrated Development Plan
NBR	National Building Regulations
NGO	Non-Governmental Organisation
NHBRC	National Home Builders Registration Council
NMT	Non-Motorised Transport
SABS	South African Bureau of Standards
SANBI	South African National Biodiversity Institute
SAPS	South African Police Service
SASSA	South African Social Security Agency
SPLUMA	Spatial Planning and Land Use Management Act
TOD	Transport-Oriented Development

Endnotes

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- ² SANS10400 - *The application of the National Building Regulations (NBR)* is available for purchase from the South African Bureau of Standards (SABS) at <https://www.sabs.co.za/>
- ³ Shisaka Development Management Services (Pty) Ltd, University of Witwatersrand and Jill Schlachter HRD and Performance Consulting. 2015. *The National Upgrade Support Programme (NUSP) Introduction to Informal Settlement Upgrading course*. Department of Human Settlements, Pretoria.
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- ¹² Refer to *Social Facility Provision Toolkit* for different grades of community halls
- ¹³ Department of Human Settlements. 2009. *National Housing Code*.
<http://www.dhs.gov.za/content/national-housing-code-2009>
- ¹⁴ South African Association of Consulting Professional Planners (SAACPP). <https://www.saacpp.org.za>



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