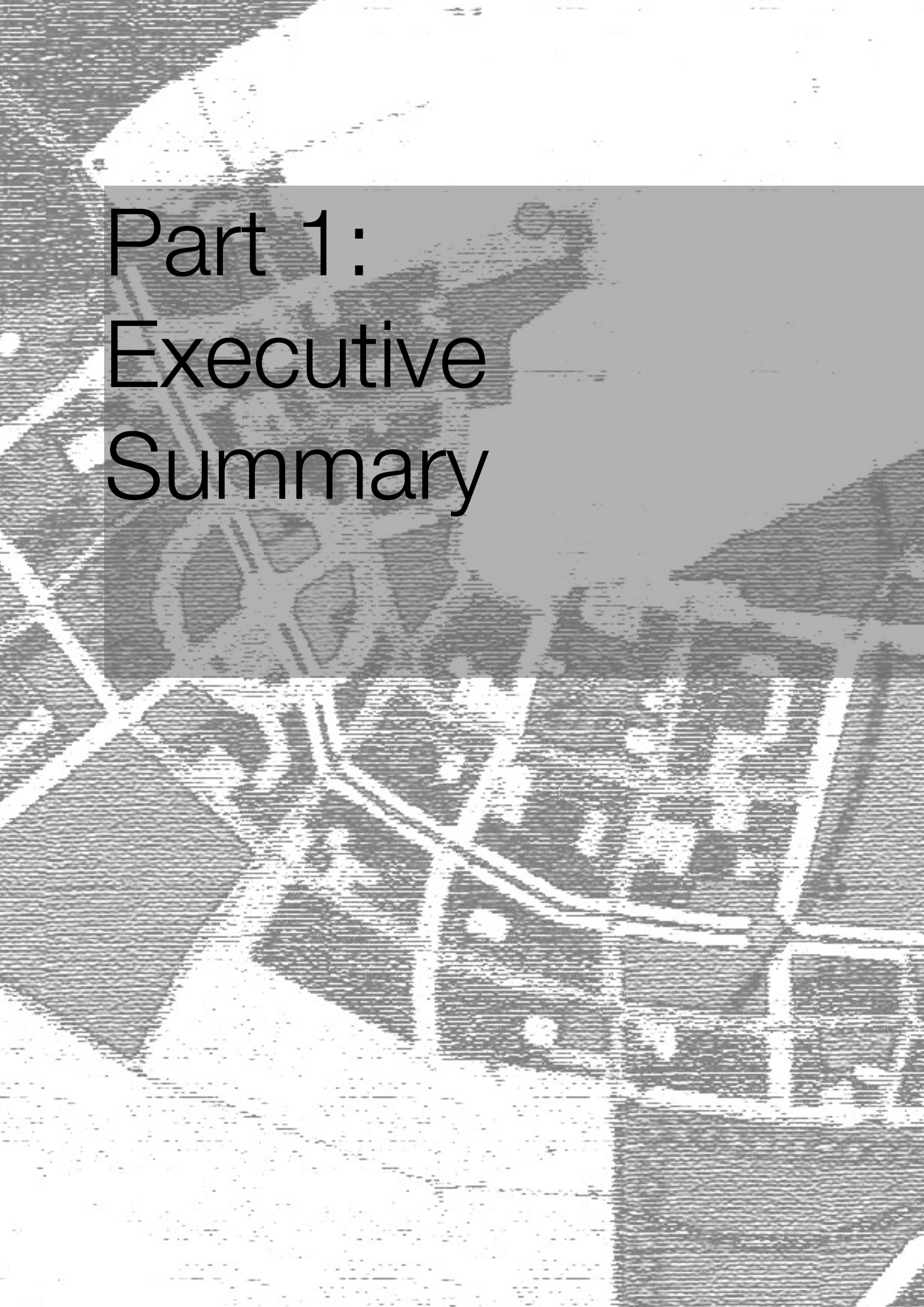
National Planning Guidance: Urban Design (Draft)

Department of Physical Planning and Housing

February 2014

Contents



Part 1: Executive Summary

What is ‘urban design’ and why is it relevant?

E1.1 Urban planners are increasingly beginning to realise that the inherited ‘colonial’ planning models do not reflect the needs of the 21st Century African city. Primarily concerned with the form and function of settlements, towns and cities, urban design is being increasingly recognised as a means of addressing this situation through building more successful communities, settlements and cities as urbanisation increases.

E1.2 Urban design moves beyond more traditional ‘two dimensional’ physical or land use planning, to a more ‘three dimensional’ concern for the types of ‘place’ we are trying to create. By ‘place’ we mean how a settlement functions, the way it fees and its identity. This involves shaping the role of streets and spaces in an overall network and guiding the scale, form and land use of different buildings in relationship to that network in order to create a more efficient, understandable and distinctive settlement, town or city.

E1.3 Urban planning practice in Zambia does not currently reflect urban design principles. Current approaches focus on the development of masterplans for low-density settlements, built to traditional planning standards based around the car and segregating different land uses. Meanwhile in parallel, informal settlements are spreading without any regard to mainstream planning processes, preventing the provision of the most basic of infrastructure necessary to support a decent quality of life. This has to change.

1.4 This document should be used to stimulate thought and over time bring about this change through helping to guide the preparation of Integrated Development plans (IDPs), Land Use Maps, Layout Plans, Local Area Plans, settlement upgrading strategies and planning applications.

What are its key principles?

1.5 The key principles underpinning urban design could be summarised as follows:

- Development should contribute towards the creation of a more ‘compact’ and efficient city form through focusing higher-density, mixed-use development on public transport nodes in ‘walkable neighbourhoods’.
- Development should start from a detailed understanding of the physical, social and economic context in order to build more successful places with a stronger identity.
- We should focus on designing spaces before buildings, as the glue that ties the city together.
- The way settlements are designed should promote the use of sustainable, non-car modes of transport in order to increase the potential for social interaction, enhance accessibility for all and to reduce the impact upon the environment.
- Creating environmentally-responsive environments in terms of the location of development and its three-dimensional form.
- ‘Working in the fourth dimension’ and ensuring that development is planned in a way that is receptive to change, including flexible buildings and plot layouts.
- Creating a built environment that encourages diversity in terms of people and buildings. This includes mixing income groups in housing layout design, encouraging interaction through the design of the public realm and incorporating a variety of uses and building types down to the scale of the block or plot, including the retention and re-use of older buildings.

- Creating 'legible' environments that are easy to navigate through the combination of several ingredients, including taller buildings, the layout of routes, centres of activity, the definition of areas and the boundaries between them.
- Providing safe and secure environments through designing layouts with streets that are overlooked, routes that provide a range of choices and mixed environments, which are alive 24 hours a day.

The design process

1.6 Whether applying urban design at the scale of the city or the scale of the site, a 'design process' should be followed. This involves:

- an analysis of the context;
- defining opportunities and constraints;
- preparing development concepts or scenarios;
- preparing the final development framework, masterplan or development proposal.

1.7 While these steps should generally be followed sequentially, design is an iterative process and there will sometimes be a need to re-visit earlier stages in the process once more information is known.

Involving the community

1.8 With the potential to enhance community relations, reinforce local identity and create a sense of ownership over planning proposals, public participation is a key component of planning and urban design. Central to any project should be:

- the development of a public participation strategy from the outset;
- an understanding of who 'the community' actually are, ensuring a cross-section of society are engaged;
- ensuring that the community is engaged at all stages in the process;

Figure E1.1: High-density mixed-use development creates and more efficient city form and a vibrant street environment


Figure E1.2: Positive public spaces foster interaction and provide trading opportunities


Figure E13: Landmarks can aid navigation, advertise areas of civic importance and enhance 'sense of place'

- ensuring that the methods used are as inclusive as possible;
- ensuring that the process is transparent; and
- providing sufficient funds for the process from the start.

Its application to our work

1.9 Representing the most 'strategic' level of planning for district and municipal councils, IDPs should incorporate urban design principles as they provide the framework for improving design. The IDP sets out a spatial strategy for where higher density development should take place, where mixed-use development is most encouraged, what should be protected and the identification of key sites for development. This provides the basis from which Local Area Plans (LAPs) and ultimately development control decisions will deliver a more vibrant, compact, distinctive and efficient built environment.

1.10 Urban design is important to the preparation of Local Area Plans and Layout Plans as this is where we start to define the physical form, layout and character of places at the neighbourhood level. This includes setting out the detailed hierarchy of streets and spaces, the relationship of the neighbourhood to other areas, their function and therefore their form, buildings that should be retained and protected, the character of particular streets and spaces and how they should be treated. At this level urban design helps to build more cohesive, attractive and walkable communities.

1.11 Urban design is important in the upgrading of informal settlements as it provides a cohesive spatial strategy to tie together the various projects required to bring about a transformational change in the living environment. Primarily focusing on more strategic interventions, it can be employed to enhance the efficiency and functionality of the built form, make infrastructure more affordable, enhance open space provision, improve accessibility for all, provide a coherent movement framework and improve the character and identify of the area overall. This process should be based on the underlying principles of minimising displacement, providing security of tenure, involving the community fully in the planning and implementation process and providing for the incremental delivery of infrastructure and services to match local affordability.

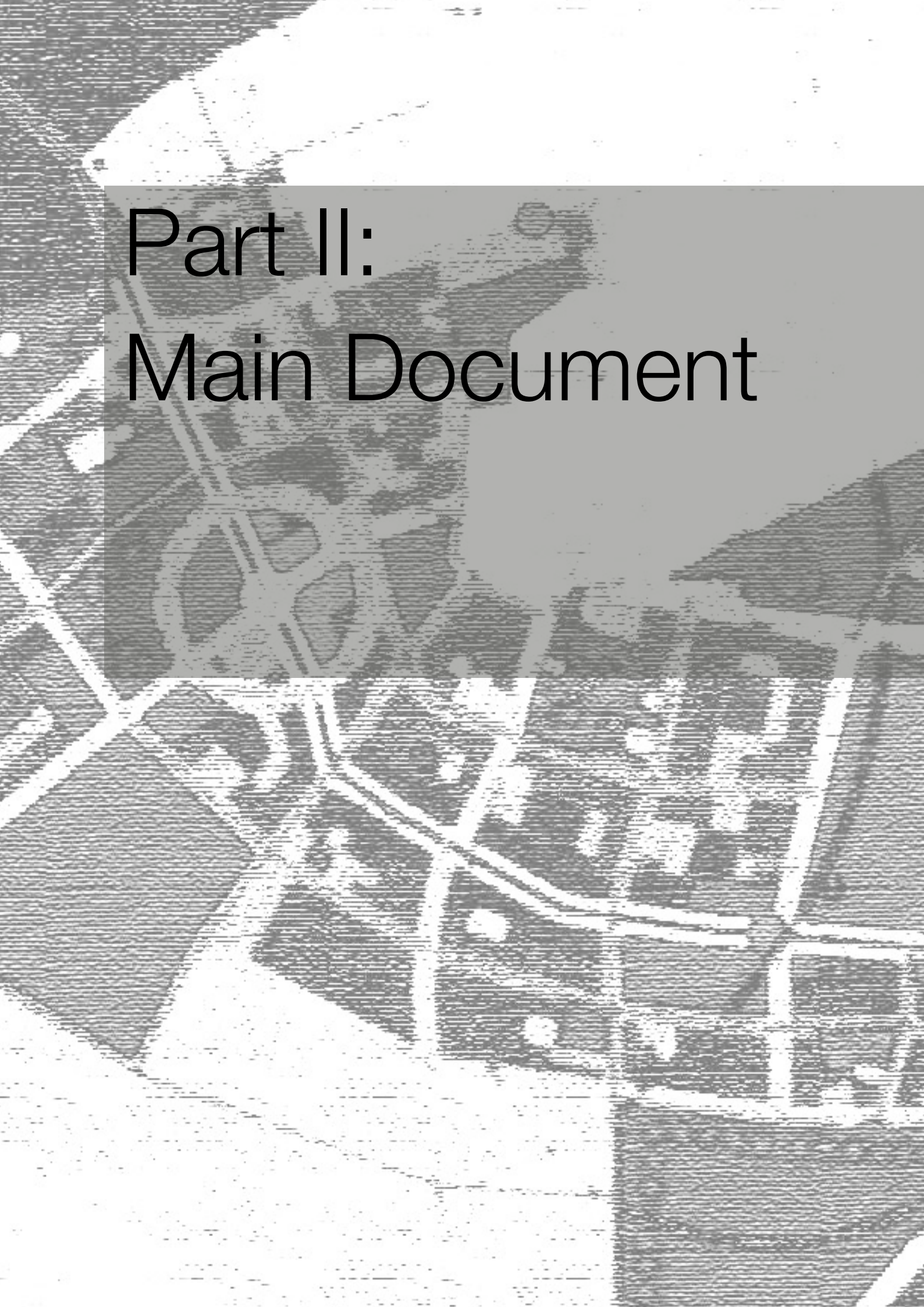
1.12 Ensuring that urban design principles are delivered 'on the ground' through development control decisions is crucial to good planning. Central to this is ensuring that applications:

- provide sufficient contextual information;
- respond to the potential for delivering high-density mixed-use development;
- relate appropriately to the surrounding street network and encourage access by non-car modes;
- relate to the scale and layout of surrounding buildings;
- propose development that enhances the safety and vibrancy of the street environment through providing 'active' frontage and buildings that overlook the street.

Realising change

1.13 So, while some will be familiar with the design process and some of the ideas discussed here, there is currently a lack of evidence demonstrating their application on the ground in Zambia. This document has been written in order to help us address this situation.

1.14 In order to make these changes happen, it is imperative to ensure that the different levels of Government work together to reach a shared understanding of what urban design is and ensure it is delivered on the ground.



Part II: Main Document

1. Introduction

What is ‘urban design’?

1.1 Urban design is primarily concerned with the form and function of settlements, towns and cities. It moves beyond more traditional ‘two-dimensional’ physical or land use planning, to a more ‘three dimensional’ concern for the types of ‘place’ we are trying to create. By ‘place’, we mean how a place functions, the way it feels and it’s identity. This involves shaping the role of streets and spaces within an overall network and then guiding the scale, form and land use of different buildings in relation to that network, in order to create a more efficient, understandable and distinctive settlement, town or city.

1.2 Key elements include:

- delivering more sustainable development patterns through building at higher densities, mixing uses and focusing development on public transport nodes;
- responding to the ‘context’ or surroundings of the study area to reinforce local identity;
- designing streets and spaces that are conducive to human interaction;
- creating a ‘legible’ or understandable urban form; and
- building for the pedestrian, cyclist or public transport user over the car user.

1.3 The main principles of urban design began to evolve in late-1950s early 1960s United States. It began as a reaction to post-World War II ‘modernist’ approaches to designing cities, which were focused on building lower density settlements built around the car, segregating different land uses and prioritising private, rather than public space. People realised that this was breaking down the fundamental ingredients that had made people congregate in urban areas in the first place - ease of communication, the potential for human interaction and the opportunity to exchange goods, expertise and ideas. It has since begun to develop into a specialism in its own right.

Figure 1.1: Vibrant public space - a key objective of urban design (The South Bank, London)

Figure 1.2: Landmarks aid navigation and create distinct places (Lusaka)

Figure 1.3: Mixing uses e.g. residential and commercial create efficiencies, aid viability encourage and more ‘active’ and lively places (London)

1.4 Urban design principles have taken longer to transfer to settlements in the developing world or 'Global South' and Sub-Saharan Africa. However, their value is increasingly being recognised as a means of building more successful communities, settlements and cities as urbanisation increases. Urban planners are increasingly beginning to realise that inherited 'colonial' planning models do not reflect the needs of the 21st Century South American, Asian or African city.

1.5 Urban planning practice in Zambia does not currently reflect urban design principles. Current approaches focus on the development of masterplans for low-density settlements, built to traditional planning standards based around the car and segregating different land uses. Meanwhile, in parallel, informal settlements are spreading without any regard to mainstream planning processes, preventing the provision of the most basic of infrastructure necessary to support a decent quality of life. This has to change.

Why are we preparing this document?

1.6 Our aim is to encourage the gradual introduction of urban design principles into planning practice here in Zambia. However, we recognise that what applies in one place does not necessarily apply in another. Therefore, they should not necessarily be applied verbatim, but thought should be given as to how they might be used or even whether they should be used at all. It is essentially a reference tool, NOT a rulebook.

1.7 The initial audience for this document is the staff of the Department Physical Planning and Housing (DPPH) and all Directors of Works and District Planning Officers across Zambia.

1.8 It should be used to stimulate thought and, if possible, guide people's work in:

- the preparation of IDPs;
- updating Land Use Maps;
- preparing Layout Plans;
- preparing Local Area Plans;

Figure 1.4: Designing segregated, privatised malls oriented towards car users runs contrary to core urban design principles (Great East Road, Lusaka)

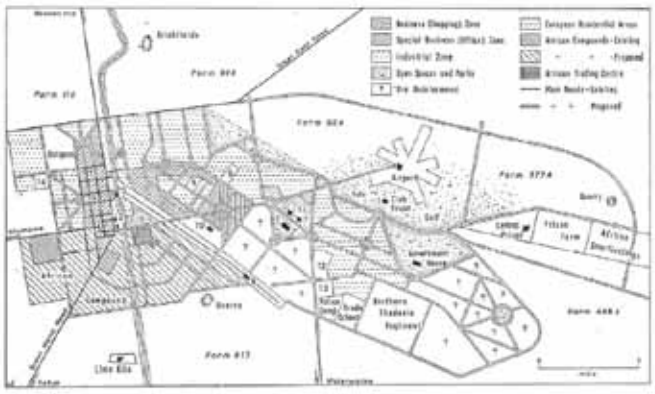


Figure 1.5: Many of the masterplanning principles currently employed reflect 'colonial' planning models (original masterplan of Lusaka)

Figure 1.6: Informal settlements are partially a result of current approaches and present a significant urban design challenge (Matilyo, Kapiri Mposhi)

- upgrading informal settlements; and
- providing advice on and assessing planning applications.

1.9 In the longer term it will also prove useful to developers in order to influence the preparation of planning applications and, in time, the preparation of Local Area plans.

What is the status of this document?

1.10 This document has no statutory weight. It is meant to get people thinking about urban design, to encourage them to take a more active interest in it as a subject, to think more creatively about how it might be applied in our day-to-day work and, hopefully, begin to apply it!

1.11 It is written in anticipation of the enactment of the Spatial/ Urban and Regional Planning Bill. This will result in a fundamental change in the way planning in Zambia operates, integrating socio-economic and physical planning aspects and encouraging more 'contextual' and participatory planning approaches. Urban design should be central to this process.

How has it been developed?

1.12 The process of preparing this document formed part of an Action research project and has entailed a series of consultation exercises. These include:

- a series of in-house workshops with planners in DPPH Central Province;
- the circulation of a draft document to planners and related professionals within the Central Province, followed by a further workshop and a questionnaire survey to canvas views on the effectiveness of the document;
- a further survey and a series of one-to-ones; and
- the use of the document in undertaking a study on informal settlement upgrading in Kapiri Mposhi.

1.13 The outcome of this process is a document that marries international urban design expertise with local knowledge.

Figure 1.7: Chisamba - GIS Map of Context

Figure 1.8: Kapiri Mposhi - Running Land Use Map

2. How to use this document

Some general comments

2.1 This handbook should not sit on the shelf gathering dust! It is written in a relatively easy non-technical style within supporting visuals in order to make it easy to read and engaging. It gives an introduction to the key principles that make up the main body of urban design theory and practice and sets out how we might apply them in our day-to-day work.

2.2 In creating this document, we have tried to make it as applicable as possible to what we do here in Zambia. However, as some of the ideas are inherited from the Global North, some of the principles that apply so readily in that context may be much less relevant, less important or much more difficult to apply Zambia. Therefore, we welcome discussion and or challenges to the content of this document. That is the best way to improve the content and make it truly locally relevant.

2.3 This document should be read in conjunction with other Government guidance documents as they emerge, including MLGH's Draft Guidance on Preparing Integrated Development Plans, April 2012. As this document has no statutory weight, that document takes precedence.

2.4 The visual communication of complex and inter-related physical, social and economic issues is central to the urban design process. As we develop our skills in Geographic Information Systems, we will also be able to develop our skills in spatial analysis and mapping, which will in turn make the kind of diagrams seen throughout this document easier to produce. In the meantime, it should guide our thought process and, where possible give us the inspiration to communicate our thoughts in more visual ways, thinking all the time how we might apply this 'on the ground'.

Application to our work

2.5 Let us be clear. Urban design principles apply at all stages of the planning process, from the strategic to the detailed. This includes in the preparation of 'strategic planning frameworks', down to the assessment of applications to develop a housing plot. It is therefore applicable to all.

2.6 Therefore, If you are:

- preparing an IDP and want to know how urban design can help you prepare a better document, please turn to p.10-36 to understand the general principles and then p.37 for more detailed guidance on urban design in the IDP process;
- preparing a Land Use Map, Layout Plan or Local Area Plan, turn to p.10-36 to understand the general principles and then p. 51 for more detailed guidance on urban design in the layout/ local area planning process;
- preparing a plan for the upgrading of an informal settlement, turn to p.10-36 to understand the general principles and then to p.67 for more detailed guidance on how urban design principles can be applied to settlement upgrading; and
- preparing for a pre-application discussion about a planning application or assessing one, please turn to p.10-36 to understand the general principles and then p.83 for more detailed guidance on urban design in the development control process.

3. General principles

The key principles

3.1 In order to determine the relevance of the urban design issues discussed in our workshops at DPPH, we undertook a workshop reflecting on the impact of a lack of urban design principles on planning within the Central Province, what we understood to be its key principles and which were of most relevant to our core objectives as planners. The table opposite (Table 3.1) shows how those principles that were considered to be of greatest importance in our day-to-day work relate to key principles of urban design according to prevailing wisdom. The latter are explained below.

1. High-density, mixed-use development

3.2 One of the fundamental principles of achieving more environmentally sustainable settlements is the concept of the 'compact city'. The idea being a more efficient, less land-hungry settlement is designed around:

- a public transport network with stations or routes on the network acting as 'hubs' or 'corridors' around which the density of development (i.e. people per hectare) is increased - for example, through taller buildings or building apartments, rather than houses;
- at these key 'nodes' a mix of uses is provided, including community facilities, shops and services, creating a focal point for the community and maximising access to facilities for which there is widespread demand;
- the higher density nature of development and the integration of residential and non-residential uses combined helps to create an environment which is conducive to walking at the local level and the use of public transport at the larger scale, thereby reducing the environmental footprint of development by reducing car usage; and
- the resultant more compact form reduces overall land take, preserving the natural environment

Figure 3.1: High-density development focused on transport node (Strasbourg)

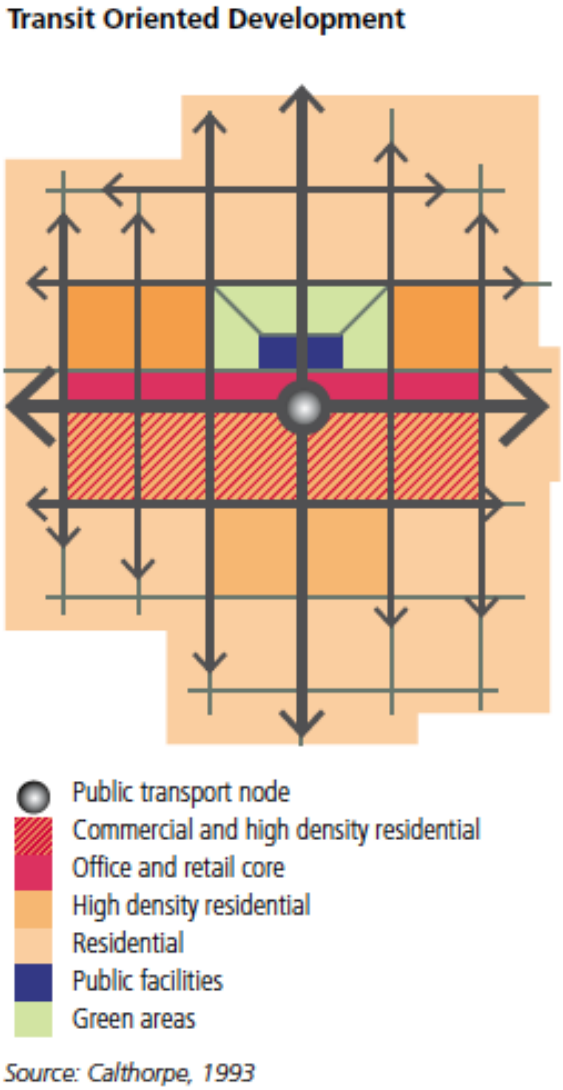


Figure 3.2: Concept of Transit-oriented Development illustrated (source: UN: Urban Planning for City Leaders, taken from Calthorpe, 1993)

Table 3.1: Correlation between the most important elements of urban design highlighted by DPPH Central staff and key urban design principles

DPPH's most important elements of urban design vs key principles - correlations

Urban Design Principles → / DPPH Priorities ↓	1. High density, mixed-use development	2. Responding to context	3. Designing 'spaces before buildings'[1]	4. Accessibility by all transport modes	5. Creating environmentally-responsive environments	6. Creating adaptable environments	7. Creating diverse environments	8. Creating 'legible' environments	9. Creating safe and secure environments
1. Connectivity and road networks	Refer to para. 3.2-3.3			Refer to para. 3.7					
2. Mixing uses, creating employment and providing social amenities	Refer to para. 3.2-3.3								
3. Social, economic and environmental sustainability	Refer to para. 3.2-3.3	Refer to para. 3.4-3.5	Refer to para. 3.6	Refer to para. 3.7	Refer to para. 3.8	Refer to para. 3.9-10	Refer to para. 3.11-13	Refer to para. 3.14-16	Refer to para. 3.17-18
4. Providing old and new architecture	Refer to para. 3.2-3.3								
5. Bringing sanity to the built environment	Refer to para. 3.2-3.3							Refer to para. 3.14-16	
6. Providing for non-car modes				Refer to para. 3.7					
7. Beauty		Refer to para. 3.4-3.5				Refer to para. 3.9-10	Refer to para. 3.11-13	Refer to para. 3.14-16	
8. Providing landscaping and high quality public realm			Refer to para. 3.6	Refer to para. 3.7				Refer to para. 3.14-16	
9. Mixing people	Refer to para. 3.2-3.3						Refer to para. 3.11-13		

1 Gehl, J. (1971) Life Between Buildings, Arkitektens Forlag - The Danish Architectural Press, Copenhagen, Denmark

3.3 This is also known as ‘transit-oriented development’ . Not only does this approach reduce environmental impact but it also enhances vitality through creating more life on the streets. To follow this principle requires a fundamental change in the way we plan new development in Zambia.

2. Responding to context

3.4 Development does not happen in a vacuum. Settlements are living, breathing places with a life of their own. Every new addition to the built environment has in impact upon the way a place looks, feels and functions. It is therefore fundamental that we take into account the specific context or ‘place’ for which we are planning, rather than planning ‘from the desk’, as we have been doing too often. By ‘place’ we mean:

- its position within the wider context or region - What is it known for? What are the connections? What is it good at?
- its history - this can be both natural (e.g. geological) or human (e.g. Kabwe was first established as a mining community) and the way it came to be;
- the way it fits together - the streets and spaces that connect the dots;
- its ecology or natural environment;
- its sense of community and culture, including involving the community in the design process; and
- its distinctive and recognisable places.

3.5 New development needs to take account of and respond to these different elements to create more distinctive, interesting and beautiful ‘places’.

3. Designing ‘spaces before buildings’

3.6 The main focus of urban design is the spaces between buildings, not the buildings themselves. This is otherwise known as the ‘public realm’, the spaces within the city,

Figure 3.3: Examples of placing a settlement in context (Kapiri Mposhi)

Figure 3.4: Identifying key aspects of a place’s history is an important part of the site analysis (e.g. Sables Mine, Kabwe)

Figure 3.5: Designing vibrant public spaces built for human interaction is a key urban design principle (Mukuyu Tree, Kabwe an environment conducive to human interaction)

which we all share in common. The public realm is the glue that ties the city together. It includes all those areas within the city that are not private - the parks, roads, pavements, landscaping, which are in the ownership of the public via the Government. Designing an accessible, inclusive, attractive public realm is key to creating a strong civil society.

4. Designing for accessibility by all modes of transport

3.7 Building upon the compact city approach, another key principle of urban design is to reduce reliance on the car through promoting other more efficient, environmentally-friendly, sociable and inclusive forms of transport: walking, cycling and public transport. This can be achieved by the structure of the settlement - following compact city principles (see 1) - the design of the public realm and the ordering and layout of new development.

5. Creating environmentally-responsive environments

3.8 Our world is changing. Climate change is happening and as a result temperatures are on the increase, flooding is becoming more common and the weather is generally becoming more erratic. We therefore need to design our settlements to both reduce their impact upon the environment and adapt to our changing climate. This includes where development is built and how it responds to the natural elements in terms of its three-dimensional form - wind, sun and water in particular. This includes thinking about how their negative effects can be minimised (e.g. reducing impacts on the environment surrounding a new building - the microclimate, flooding etc.) and their potential to be harnessed (e.g. through the generation of electricity) at the planning stage.

Figure 3.6: Designing for non-car modes of transport is essential to reducing environmental impact and creating successful places (Livingstone)

Figure 3.7: Designing environmental adaptation measures such as green roofs and walls can reduce run-off and enhance ecology (Madrid)

Figure 3.8: Buildings should be designed to be flexible over their lifetime - these buildings used to be factories but are now apartments (Bermondsey, London)

6. Creating adaptable environments

3.9 Good urban design involves 'working in the fourth dimension'. This means not only planning for land use, policy or form, but also time. Thought needs to be given as to how the settlements, layouts or buildings we are planning will develop or evolve and making sure that our plans provide flexibility to allow for that change. This means planning layouts that can accommodate change and buildings that can be used in a variety of ways.

3.10 We need to consider whether the layout we have planned will still work if different buildings are removed or take time to come forward.

7. Creating diverse environments

3.11 Variety is the spice of life, as they say, and settlements are no different. This applies to people as much as the built environment. Well designed places encourage people of all walks of life to mix, through mixing different income groups in the design of housing layouts, encouraging the shared use of community facilities and creating a public realm attractive to all users.

3.12 Encouraging diversity in the built environment can build on this, through protecting the best and most adaptable of the older buildings, while providing new buildings around this. Older buildings are part of our 'collective memory', reinforcing the character and identify of a place and telling its story. They can be used by a variety of users and uses within their lifetime, adding to the richness and variety of a place. They also withhold 'embodied energy' i.e. a lot of time, effort and natural resources went into creating the building and its loss is a loss of energy in a time when we need to preserve it.

3.13 Ideally, new buildings should also be designed to stand the test of time like the older buildings with which they share the village, town or city.

Figure 3.9: New developments should incorporate a variety of housing types in one place in order to create mixed communities (Lusaka)

Figure 3.10: Old architecture mixed with new can create an interesting built environment (Dar-es-Salaam)

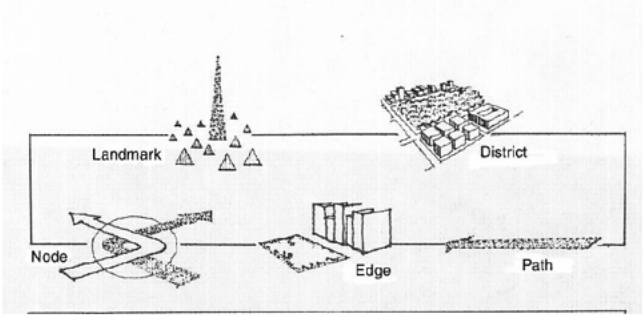


Figure 3.11: The key components of creating a legible environment (Kevin Lynch, the Image of the City)

8. Creating 'legible' environments

3.14 Our enjoyment of a place can depend on our ability to understand it. Settlements that are easy to find our way around and have a clear structure are easier to move around, help us feel more like we 'belong' and are often more beautiful.

3.15 Key ingredients of creating a legible environment include:

- the location of Nodes - the intersection of two or more major routes, which are often the focal point of activity;
- the definition of Districts, neighbourhoods or areas with a distinct character;
- the network/ arrangement of Paths - key streets or routes through a place;
- the placement of key Landmarks - stand out features, either through their physical form or other recognisable qualities; and
- the definition and treatment of Edges - distinct boundaries that divide areas of different character of function.

3.16 The way these different ingredients are combined can dictate how easy it is to understand a place.

9. Creating safe and secure environments

3.17 The safety, or indeed, the perception of safety, can be a key factor in the success of a place. If a street feels unsafe to walk down, regardless of whether a crime has ever been committed there, then people are less likely to use it. The less people use a street, the more conducive it becomes to criminal activities, which in turn further discourages people to use the street - the result is a vicious cycle, ending in a public realm that people don't use, affecting the overall civility, sociability and life of the place.

3.18 There are a number of things we can do as urban designers to prevent this from happening, from creating layouts where buildings overlook the street, mixing residential and non-residential uses so a places is alive at all hours of the day to providing 'permeable' street networks that offer a range of route choices, enabling us to avoid trouble if necessary.

Figure 3.12: Streets with a mix of uses, with active uses (e.g. shops) at ground floor level and complimentary uses (e.g. residential) at upper floor level create a safer environment as they encourage 'natural surveillance' from different people at all hours of the day (top: Lusaka, bottom: Dar-es-Salaam)

More on the relevance of Urban Design to the Zambian context

3.19 While urban design evolved largely within the North American/ European context, its principles are been studied and applied globally. This includes within Sub-Saharan Africa. Its principles are being found to be relevant in such places, addressing such issues as informality and the cost of providing basic infrastructure.

3.20 Here's how:

- High-density mixed-use development reduces the cost of providing infrastructure and services (e.g. water and electricity), as the networks can be more compact; it allows the closer integration of complimentary activities, such as offices and printing services or housing and a grocery shop, helping functionality and economic growth; and facilitates greater access to facilities for those without a car, as walking/ cycling distances are shorter and public transport provides better access, is cheaper and more viable - referred to as the 'spatial justice' approach.
- Providing and/ or improving good quality public realm - streets, parks or squares or even in-between, undefined spaces - is a good way of encouraging social interaction (for free), which can help to build a sense of community; while it can also help to improving the health of the community as more people are likely to walk, cycle or play in the open.
- Well-designed public spaces can also help create value, becoming 'destinations' in their own right, making both them and the neighbourhoods within which they are located good places to live and do business. This can also raise local property values, a positive externality which can be captured for reinvestment in the urban fabric through increased business rates and

Figure 3.13: Public transport schemes such as Bus Rapid Transit, combined with high density development are an affordable means of improving access for all (Curubita, Brazil)

Figure 3.14: Open spaces of all kinds - big, small, hard, soft all improve opportunities for human interaction (Dar-es-Salaam)

Figure 3.15: A thriving public realm can create a destination and give life to a place, which in turn stimulates business (Lusaka)

taxes, helping to create a 'virtuous cycle'. Key to this is not only their design, but also how the surrounding uses relate - publicly accessible uses that generate activity will add to the vibrancy of the space.

- Community involvement in the design process creates empowerment, adds to innovation and increases the likelihood that a plan will be followed.
- Focusing on low-key and more inclusive interventions to the 'public' rather than 'private' realm, such as improving pedestrian accessibility and upgrading markets, rather than building privatised malls on Greenfield land, can maximise benefits for a wider section of the population and reinforce local identity. If shopping malls are to be permitted, they should be situated in sustainable locations i.e. places highly accessible by transport modes other than the car, and integrated sensitively into the surrounding urban fabric, so that they feel 'part of' the town.
- Achieving more integrated places, through mixing tenures, uses and building types, can help to break down barriers between different sections of the community.

Figure 3.16: Markets are truly public places healthy food can be sold at affordable prices, improving the health of the community, while also providing a forum for interaction (Stone Town, Zanzibar)

Figure 3.17: Public participation can be crucial in delivering successful urban design (Lubuto, Kapiri Mposhi)

4. The design process

Introduction

4.1 Whether applying urban design at the scale of the city or the site, there are a number of commonalities with the overall approach followed.

4.2 Here we set out what is known as the 'design process', which should be followed at all scales of planning, particularly on larger sites (e.g. over 1 hectare), when preparing Local Area Plans or when preparing Integrated Development Plans. Doing so will ensure that any plan, strategy or proposal is grounded in its context and responds to the opportunities it presents, creating a better planned place. Failure to do so will risk creating development that is divorced from the key issues in the locality, lacks coherence and contributes little to the quality of the place.

4.3 The key steps in the process are as follows:

- Step 1: Analyse the context;
- Step 2: Define the opportunities and constraints;
- Step 3: Prepare development concepts/ scenarios;
- Step 4: Prepare the final development framework, masterplan or development proposal.

4.4 These steps will generally be followed in order. However, design is an iterative process and there will sometimes be a need to revisit earlier stages in the process once more information is known. The different steps are discussed within the following paragraphs.

Step 1: Analysing the context

4.5 As stated above, regardless of the scale of the project, be it an IDP or plans for a new housing development, the starting point should be an analysis of the context. This should comprise a critical assessment of all of the issues relevant to the development of the place, be it social issues such as the rate of population growth within the locality, economic issues such as the key industries within the area, or environmental, such as the topography. Using this information as a basis, the proposal that follows will relate much more successfully to the locality. This will help to deliver a better outcome for everybody - a better product for the developer, a better living environment for the resident and a more sensitive and better integrated development for the planning authority.

4.6 The extent and complexity of this analysis will depend upon the scope and nature of the plan or proposal. However, any major development proposal, local plan or IDP should take into consideration some or all of those elements set out within Table 4.1, depending upon the scale of the area under consideration.

4.7 Any site analysis is positive, but ideally a diagrammatic site analysis should form a significant component. This will help to development a sound understanding of the key spatial issues and relationships relating to the settlement, area or site.

4.8 A useful final stage is to summarise the analysis, identifying the most important issues dictating future development of the site or area. An effective approach is to prepare a summary analysis diagram, which captures the most pertinent issues identified in a single image. Figure 4.1 provides examples of how such a diagram might look.

Element	Issues for Potential Consideration (Taking spatial dimension into account)
Context and History	Mapping out the site, area or town in relation to its wider context and how and why it has developed over time.
Policy and Legislation	The key policies and the requirements they impose upon the development of the area affected.
Socio-economic issues	Demographic issues, such as population growth and composition and household size; housing condition, need and demand; analysis of key employment sectors (including composition, concentrations, potential for growth etc); employment and labour force trends, etc.
Land Use and Settlement Pattern	The layout of different land uses within the area, identifying concentrations of different functions, such as housing areas, employment areas, centres, etc.
Movement and Connections	How people move to, through and around a place taking into account all modes of transport - walking, cycling, public transport and car.
Open space	The different types of open space within a locality, their type, state of repair, ownership and linkages between them.
Natural Features and Environmental Constraints	Those natural elements that might dictate the type of development that can take place within a locality, such as dambos, the topography, forests, environmental hazards, conservation sites etc.
Built Environment	Key built features of interest that contribute towards the character of the place, be they landmarks (such as a distinctive building, a tree or a hill), areas of unique character or key views; or features that detract from the visual quality of the locality, such as industrial buildings or informal structures.

Table 4.1: Issues for consideration in analysing the context

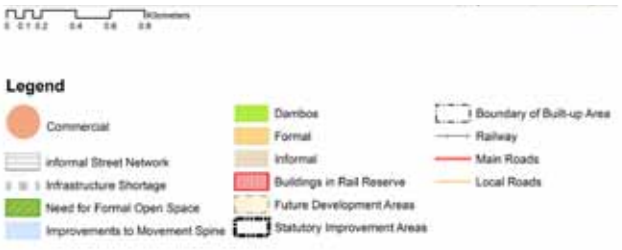


Figure 4.1: Example of a Summary Analysis Diagram

Step 2: Defining opportunities and constraints

4.9 Following analysis, the next step is to identify those issues that are 'constraints' and those that represent 'opportunities'. Within this context:

- constraints would be those features or issues that cannot or should not be changed, due to their value or negative externalities that would arise if they were e.g. dambos and flood-prone areas;
- opportunities would be chances to use existing features or resources more effectively, to capitalise on the location or re-location of existing or proposed features, or to address problematic issues e.g. a site's proximity to the town centre.

4.10 These could be presented as a list for smaller schemes, but the most effective way to show these issues is through a diagram. Depending upon the scale of the project, these could be shown either on the same drawing or on separate diagrams.

4.11 The diagram should try to capture the issues in a clear and coherent manner. Figure 4.2 shows how this might look.

Step 3: Developing a vision

4.12 Once a full understanding of the context has been developed in undertaking Steps 1 and 2, the next step is to develop a vision for what you are trying to achieve. This involves taking a step back and thinking about what is possible and what is desirable. In essence, a vision should represent an idealised view of what the future could and should be for the site, area or settlement once the project has been realised.

4.13 'Visioning', as it is sometimes known, should involve more than just one person. It should involve a range of parties, with the number depending upon the scale of the project. It should at least include the client, the design team and where possible members of the local

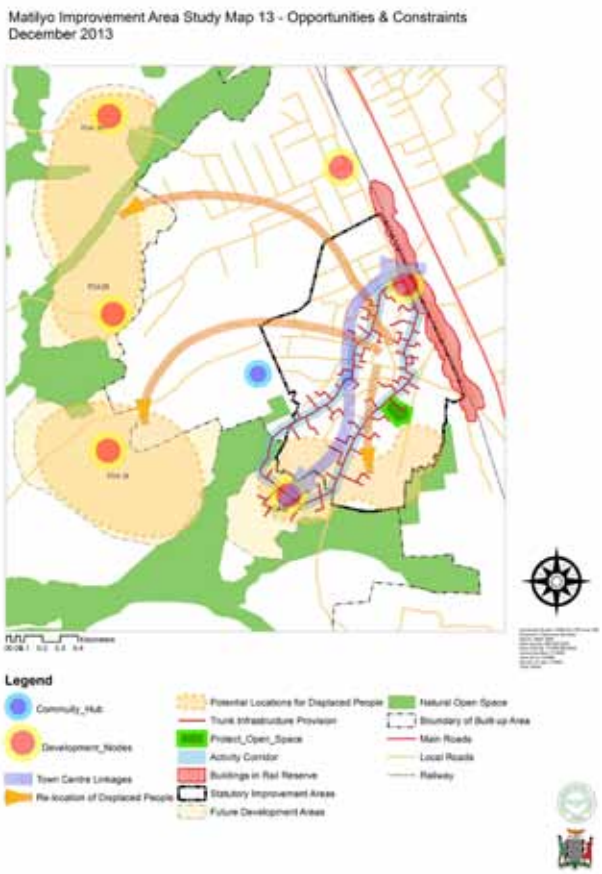


Figure 4.2: Example of an Opportunities and Constraints Diagram

Box 4.1: Creating a Vision (An Example)

Mukonchi Vision: *'By 2050 Mukonchi will be an attractive and healthy community with a strong economy built on agriculture'*

<u>What do we mean by attractive and healthy?</u> 'Mukonchi will be a well-connected residential community with secure and good quality housing supported by proper infrastructure. It will include a range of accommodation types, providing access to planned and serviced housing for its population.

The town will provide a healthy living environment for its population. It will offer a range of shops and services, including social amenities, government offices, well-established schools, new health facilities, a shopping mall and a sports complex, together with a range of parks and open spaces.

<u>What do we mean by strong economy?</u> Mukonchi will have a strong economy based on agriculture, offering a range of employment options for its residents, Mukonchi will provide an attractive location to invest for the agriculture sector, with the farm block supported by strong infrastructure networks - good roads, water networks, electricity infrastructure and tree plantations.

community. For larger projects such as an IDP, it should also include members of government departments/ para-statals, representatives of the Royal Establishments, representatives of private business etc. There are a number of ways one can go about developing a vision. These are summarised within Section 5.

4.14 The vision is usually presented in the form of a concise statement. A narrative explaining components in more detail may support the vision. It may also be supported by a series of photos (sometimes called 'precedent images'), drawings or other visual representations illustrating the desired end result. The vision might also be supplemented by a series of objectives, if necessary, in order to further articulate the desired future for a place.

4.15 Box 4.1 provides an examples of a vision statement.

Step 4: Preparing concepts or development scenarios

4.16 Concepts or development scenarios are simplified ideas of how the development of an area might be shaped in order to realise the vision. In order to understand the full development potential of a place or a site, it is often helpful to think of a number of alternative options for how the vision and objectives might be realised, so that the entire spectrum of possibilities might be considered. This could include higher or lower density options, focusing development in different locations, higher or lower levels of intervention, or a number of other alternatives.

4.17 The concepts or development scenarios should represent realistic or feasible solutions to the key opportunities and constraints presented by the site analysis.

4.18 Figure 4.3 provides an examples of how development scenarios might look.

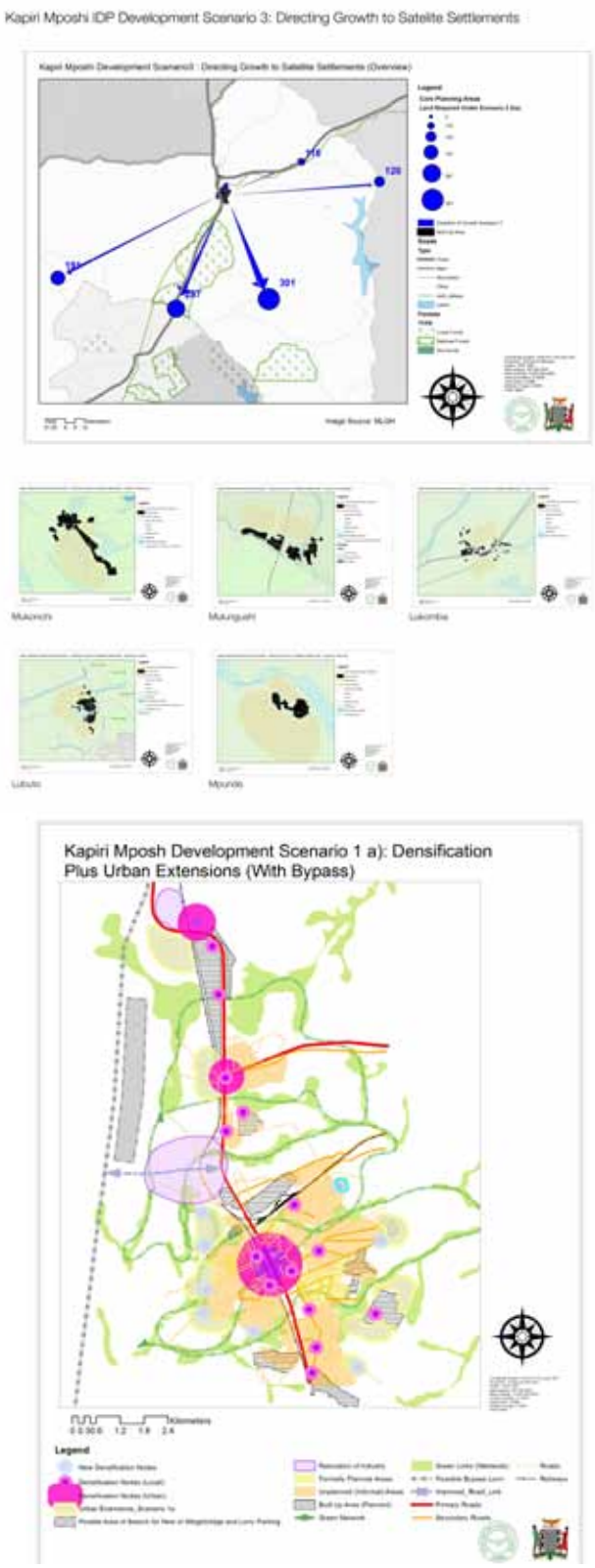


Figure 4.3: Examples of Development Scenario Diagrams

4.19 As part of the process there is also a need to develop a series of criteria or development principles, against which the different scenarios are to be assessed. These will need to be designed to respond to the opportunities and constraints identified in the analysis, the vision and objectives and sound practice taking into account prevailing policy and legislation. Depending upon the scale and nature of the project, these may be formulated through consultation with a range of stakeholders. This will help to ensure that all issues are taken into account in deciding on the preferred concept or scenario.

4.21 The different scenario should then be assessed against the key criteria and the preferred option adopted. This will then be developed into the development framework, masterplan or development proposal.

Step 5: Preparing the final development framework, masterplan or development proposal

4.22 The final proposal will be developed based on the principles of the preferred development scenario. It might take the form of a development framework, a masterplan or a detailed proposal. These are defined further within Table 4.2. For the remainder of this section we simply refer to these as the detailed proposal.

4.23 The detailed proposal will need to build upon the principles established by the preferred development scenario. The intended output from the design process - an IDP, a Local Area, a Layout Plan or a detailed development proposal - will dictate the overall level of detail. This could be establishing the general land use framework and policy overlays setting out specific requirements for key areas of a settlement, it could be setting out design requirements for different areas of a town, such as building heights, set backs and materiality, or it could be a detailed planning application for submission to the relevant planning authority.

4.24 Where the final proposal will establish a development framework, there may be a need to 'test' the principles being set, through the development of a more detailed scheme (a masterplan) first, and then stepping back and setting or revising the development framework based upon the learning developed from the detailed masterplan. This may take several attempts for the entirety or specific parts of the development framework, before the design team are happy that the framework is sufficiently robust. This will particularly apply at the more detailed levels of planning i.e. Local Area/ Layout Planning and the preparation of a detailed scheme.

4.25 Figure 4.4 provides a useful example.

Type	Description	Potential Application
Development Framework	A series of development principles and parameters designed to guide the nature, location and form of development, without fixing the final solution.	IDPs, Local Area Plans, Layout Plans
Masterplan	A 'fixed state' solution - one interpretation of how a development framework might be realised or development on a site might be delivered. Generally applicable to larger developments e.g. more than ten houses, larger mixed-use developments etc, where the proposal will include its own road network… etc. This often includes two- and three-dimensional drawings showing how the buildings would be laid out on each plot, their height etc.	Providing an illustration of how a Development Framework might be built out, or for Planning Applications on larger sites.
Detailed scheme	A development proposal providing sufficient detail for submission as a planning application, including detailed floor plans, elevations, sections, materials specifications etc.	Planning Applications

Table 4.2: Types of design 'product'

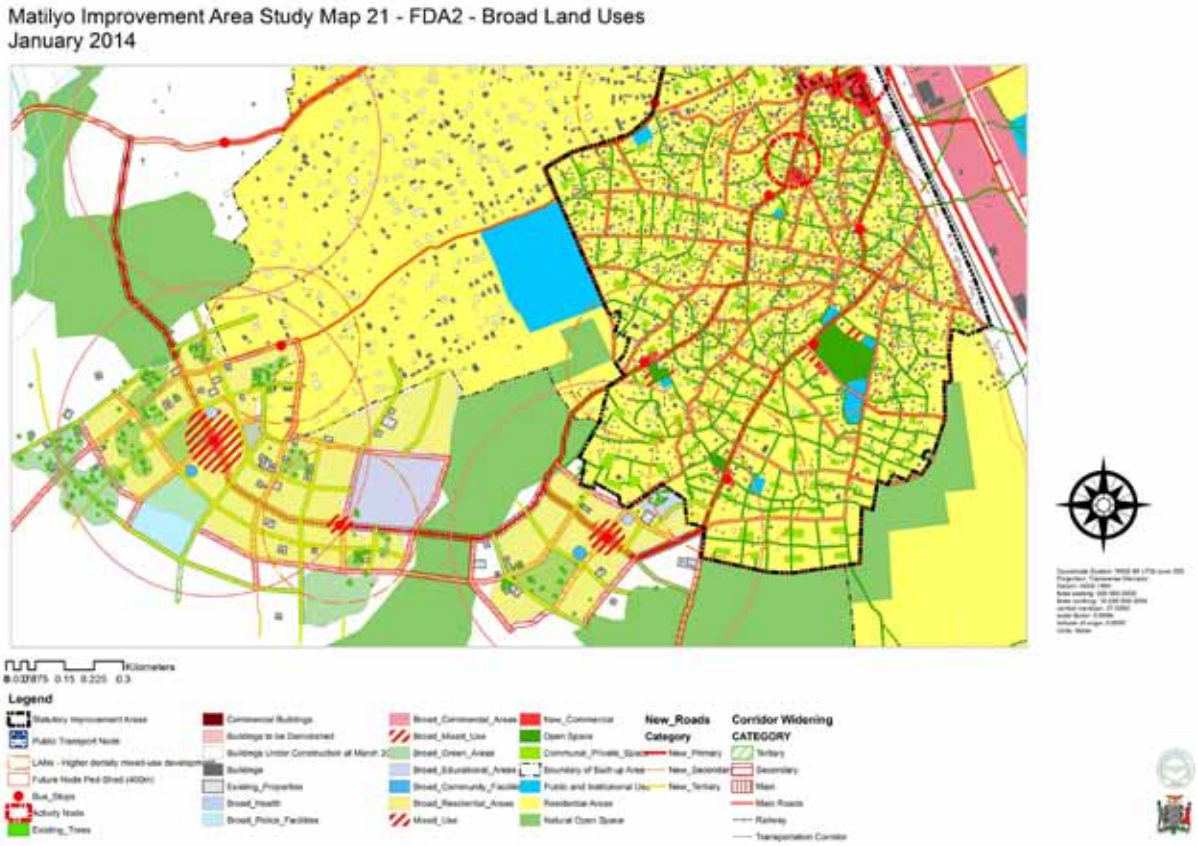


Figure 4.4: Example of a Development Framework Diagram

5.0 Public participation in the design process

Introduction

5.1 There is an extensive body of literature discussing the value of public participation within development in general and it has a long history within the planning profession itself. It is now considered to be essential to good planning practice in many parts of the world and urban design is no different. In fact, urban design can provide a useful medium through which to engage the public due to its more visual nature.

5.2 Despite this growing recognition and increasing expertise in this most crucial of planning aspects, public participation within planning practice in Zambia currently remains in its infancy. However, this is set to change with the introduction of the Spatial Planning Bill. This will place significantly greater emphasis on public participation at all stages of the planning process, from the preparation of IDPs, to Layout Planning and Settlement Upgrading, down to the management of planning applications.

5.3 This section provides a brief overview of the history and origins of public participation, its key principles and its application to urban design and planning processes in Zambia. It also provides an outline of some useful tools and techniques of particular relevance to our work as planners.

Background and key principles

5.4 The importance of public participation in planning and other development professions first began to be recognised in the 1960s, for its value in addressing issues of social exclusion, meeting the needs of the poorest in society and building more distinctive places.

5.5 Since then participation has made its way into mainstream development theory and practice, with (The United Nations Centre for Human Settlement (UNCHS) declaration (1976) in Vancouver, and the Earth Summit (1992) in Rio playing a key role in this process (Cage, p.2).

In parallel, the range of tools and techniques has developed and expanded through ongoing development work, with approaches such as Participatory Urban Appraisal (PUA) methodologies; Rural Rapid Appraisal (RRA) techniques; Participatory Learning Methods (PALM); Micro-planning; Planning for Real; ZOPP and UNCHS (Habitat) Participatory Urban Decision Making; Community Action Planning (CAP) and Participatory Rural Appraisal (PRA) (Chambers, p.7 and Cage p.2) and other derivatives now commonly used in development work. Through such approaches, the practitioners have been able to develop deeper understandings of local context and increasingly empower communities to develop workable solutions to complex issues specific to their situation. As a result, this has enabled practitioners to bring about significant and sustainable change within some of the poorest neighbourhoods.

5.6 Public participation has for a long time been recognised as a potentially valuable part of the planning process, through its potential to enhance community relations, reinforce identity and create ownership over development plans and other planning proposals.

5.7 Some of the key principles are as follows:

- The need to develop a public participation strategy from the outset of any planning project.
- The need to develop of an understanding of who ‘the community’ actually are, ensuring that a cross section of society (the key stakeholders) will be engaged, including the poorest and most marginalised (usually through non-governmental organisations (NGOs) and community-based organisations (CBOs), government (national, local and para-statals), representatives of the Royal Establishments (be they the chief/ chieftainess or local headmen/ women), councillors (as the elected representatives), private businesses and other members of the public.

- Ensuring that the community is engaged at all stages of the process, from inception through to implementation, as it will help to enhance the scheme (many heads are better than one) and the sense of ownership created will increase the likelihood that the scheme is implemented as agreed.
- Ensuring that the methods used are as inclusive as possible. For instance, through:
  - » meeting people 'on the ground' so that you may build an understanding of their issues in reality;
  - » meeting people in a setting and forum they are comfortable with, so that people do not feel intimidated, particularly more marginalised community members, for example, breaking large meetings down into groups, using women to present to women, or meeting people at a location of their choice;
  - » communicating in the local language - Bemba, Tonga, Lenje etc - rather than in English, which is likely to only be understood by more privileged members of the community;
  - » tailoring methods to the competencies of the community group - for example, using more visual techniques such as drawing where people are not comfortable with reading and writing;
  - » empowering the community by giving them control wherever possible; and
  - » making any consultation events as engaging, involving and active as possible.
- Be transparent, through documenting the process and preparing a report for presentation with the final output, if not before.

Figure 5.1: Consulting the Community (Lukomba, Kapiri Mposhi District)

Figure 5.2: Visioning Workshop (Kapiri Mposhi)

Figure 5.3: Walking Tours in the Community (Mulungushi, Kapiri Mposhi District)

- Budget for it! Walking tours, workshops and public meetings can be expensive and need to be factored in from the outset of any project. However, while they may seem costly at first, if the process is done right you will see the benefits in the longer term through the development of more innovative and distinctive planning proposals, stronger, more pro-active communities and increased compliance with planning requirements.

Application to different areas of planning

5.8 Involving the community is important at all stages of the planning process. However, the nature and extent can vary, depending upon the scale of the proposed development and the resources available. Here we provide an outline of its importance at different stages and some potential tools that can be employed.

5.9 The **Integrated Development Plan** is the highest level of planning document within a District or locality. It sets the key principles by which future development will be guided at all subsequent scales. Involving people at this level will enable their views to be built in from first principles and ensure that the plan stands a better chance of being delivered on the ground, a key issue in Zambian planning. Consultation processes will work towards developing the larger scale strategic framework for the area, including larger scale infrastructure projects, rather than detailed design interventions.

5.10 **Local plans (Local Area Plans and Sectoral Local Plans)** are where the detail of the issues identified within the IDP begin to be tackled. As they are often focused at the neighbourhood level, the outputs will be more tangible and the community will start to feel a real sense of ownership over many of the problems up for discussion, as they probably face them on their doorstep. At this level the more detailed physical features and characteristics begin to take on greater importance, such as street patterns, landmarks, key frontages, key views etc, all of which are crucial to the identity of an area. Therefore, the public participation exercises undertaken should seek to draw out local people's views on such features and develop an overall strategy for creating a more coherent design framework.

5.11 In relation to **planning applications**, the approach to public participation should be governed by the scale of the development proposal. For larger scale applications the Planning Authority should require developers to undertake their own public participation process. For very large applications that will affect a neighbouring community, this could include a public exhibition at the site, presenting the draft development proposals prior to the submission of the planning application (this approach is already required by the Environmental Impact Assessment process in any case). The applicants should then be able to demonstrate how they have responded to the issues raised upon submission of the development proposal itself.

5.12 Table 5.1 sets out the different stages in the plan preparation process (either IDP or local plans), the recommended approach and some potential tools and techniques for ensuring effective public participation. More information on each of the tools follows in Table 5.2.

Stage	Approach	Techniques (described further below)
Inception Report/ Planning Programme	For IDPs and Local Plans in particular, the public should be consulted from the outset, particularly in relation to the public participation components, as this will ensure that the most effective methods of engagement are agreed for that particular community. Also, through effectively involving them in the 'research design', they will take greater ownership over ensuring that the process is successful.	Community Meeting, Stakeholder Workshop
Planning Survey/ Issues Report	In order to fully understand the issues confronting the municipality or district, engagement with the community is essential during the baseline analysis stage of IDP preparation. The preferred approach should be to visit the main communities being planned for within the Council's jurisdiction in order to understand the issues 'on the ground'. Here it is useful to utilise participation methods that enable the design team to meet the community on their own terms, in a non-threatening environment and see first hand the issues that confront them. This will enable the design team to appreciate the key issues spatially, obtain a feel for how the settlement is laid out, and to identify its key features of interest and its key characteristics. 'Walking Tours' (otherwise known as Transect Walks) can be an effective means of doing this. Others are included in the next column. Once the issues on the ground are understood, for larger projects participation methods can then be used to interrogate the key issues and develop a response in partnership with the community themselves. This could take the form of a SWOT Analysis, or an alternative method. It might also be useful to get the community to provide some initial views on key projects at this stage.	Household Surveys/ Questionnaires, Focus Group Discussions, Walking Tours, Design Workshop/ Charette, Community Mapping, Rich Picture, Problem Tree Analysis, SWOT Analysis, Interactive Display

Table 5.1: Public participation in the planning process (continued overleaf)

Stage	Approach	Techniques (described further below)
Development Framework	The first stage of the Development Framework (DF) should be a review of the vision prepared at the outset of the process. This should be done in conjunction with the community. This should be followed by the preparation of a series of development scenarios as to how the growth of the planning area(s) might be managed of the spatial layout of the place might be improved. These will need to be assessed by the community against a series of development objectives and/ or criteria (the Critical Evaluation Criteria). The principles will need to be developed by the design team, ideally in consultation with the local community. The design team should then present the different options to the community and ask them to select a preferred development scenario against the development Critical Evaluation Criteria. If the budget is tight and there are a large number of criteria, it may be easier to break down into smaller groups, with each taking a small number of criteria (say 3-5) each. Another option might be to hold an exhibition within the community (e.g. rent space at a stall in a local market for a few days) to present the different options, asking people to fill in questionnaires on the different spatial development options. Once the design team has developed the preferred option into a draft spatial development framework, if time and resources allow the design team should present the DF to the community, which again could be in the form of a public meeting, workshop or exhibition. The feedback should be methodically recorded and a response provided to each point. This may prompt design teams to amend the document or it may not. In either case the design team should record their response to each comment and where necessary, provide justification for their action.	Stakeholder Workshop, Guided Visualisation, Ranking and Rating, Interactive Display, Interactive Model, Exhibition.
Action Plan	Once the Development Framework has been finalised, the key projects will need to be identified and cost estimates developed. This can be followed by a workshop with key stakeholders in order to undertake an informed assessment of the key projects identified in terms of: • their priority; • their feasibility informed by the cost estimates; • potential timing for delivery; • key stakeholders that should be involved; • funding options; and • any key issues that might be faced in delivering the projects. This will help the design team to prioritise the key projects and develop a more detailed implementation strategy. This should be accompanied by a clear phasing plan.	Stakeholder Workshop, Ranking and Rating.

Table 5.1: Public participation in the planning process (continued)

Specific tools and techniques

5.13 There are a number of different tools and techniques that can be employed in the planning process, some of which are mentioned above. Here we discuss some of the most useful tools for use in planning and urban design. Table 5.2 provides a summary of some of what they are, their use and how they are done.

Figure 5.1: Consulting the Community (Lukomba, Kapiri Mposhi District)

Figure 5.2: Visioning Workshop (Kapiri Mposhi)

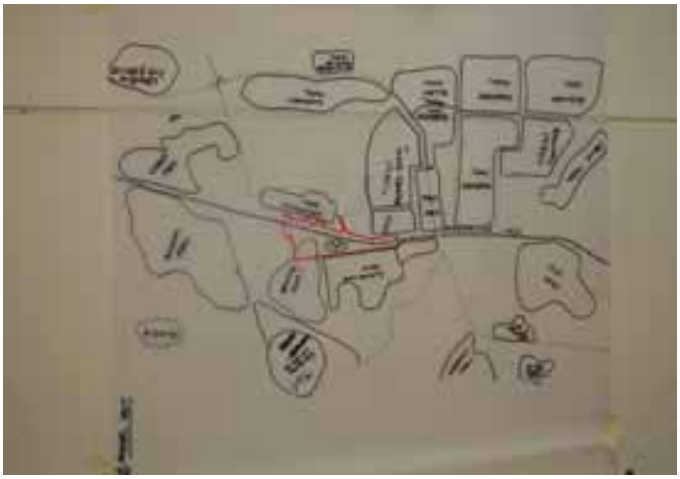


Figure 5.3: Community Mapping (Kabwe)

What?	Purpose	Technique	Potential Application	For More Information
Community Meeting: An open meeting with the community to present ideas.	To present and explain information.	Meeting at a local venue. Open to everyone, need to publicise via a range of media including radio, newspaper, newsletters, notice boards, announcements, etc.	Any stage in the process, although at the commencement (i.e. to launch the project) or end (i.e. to present the final product) are particularly appropriate.	A useful guide from New Zealand. Refer to Section 2: http://www.mfe.govt.nz/publications/urban/urban-toolkit-2009/
Stakeholder Workshop: An event, combining presentations with more interactive exercises discussed below	Combines distributing information and with more participative methods. Can be used at any stage in the planning process.	Meeting in a local venue. Invitations sent to key stakeholders. Usually will comprise a mix of presentations from the design team, followed by group work used to develop strategies, assess options, define a vision or objective etc.	Any stage - could be to interrogate analysis undertaken, to test design options/ scenarios, undertake visioning/ objective development etc.	
Focus Group Discussions: Group discussions of 5-15 people focused on a particular issue.	To build consensus, identify problems or solutions, plan a course of action or review an issue, proposal or project.	Compose a group/ groups representing an appropriate cross-section of the locality. Use a facilitator to guide the group through the issues and seek to build consensus. Record and feed back the results of the process.	All stages.	A Useful guide to facilitation from VSO (download/ refer to Part 3): http://community.eldis.org/.59c6ec19/
Survey: A questionnaire	In order to obtain a more detailed understanding of a locality.	Can include questions on facts and also opinions, views and desires. These can be done in different ways, either via a mail survey, where they are sent to the respondent without making contact, a group administered questionnaire, where the questionnaire is completed in the presence of others, or a drop-off questionnaire.	Analysing the context	For information on constructing questionnaire surveys: http://www.socialresearchmethods.net/kb/survtype.php

Table 5.2: Public participation tools and techniques

What?	Purpose	Technique	Potential Application	For More Information
Community Mapping: Helping the community to draw their own map of the locality.	Helps to develop an understanding of the community's perceptions of their area and any key issues - positive and negative. Cartographic accuracy is not the priority.	Facilitators ask participants to create a map of their territory, starting with key features. This may include buildings, landmarks, natural resources, services, facilities, infrastructure etc. Symbols may be used to represent features. Ask the group to analyse and discuss the map after it is complete.	Analysing the context.	A Useful guide to facilitation from VSO (download/ refer to Part 3): http://community.eldis.org/.59c6ec19/
Walking Tours/ Transect Walks: A walk around an area/ community, guided by the community themselves.	Useful as part of a baseline analysis in order to understand the issues confronting the community 'on the ground'.	Agree a walking route through a community that captures the key areas of interest/ a cross section of the place. Undertake a walk accompanied by one/ more local people, discussing the key issues facing the community along the way. Try to engage with as many local people as possible en-route. Take photos and extensive notes of the process.	A useful part of any baseline analysis.	A Useful guide to facilitation from VSO (download/ refer to Part 3): http://community.eldis.org/.59c6ec19/
Rich Picture: Using drawings to convey people's feelings on an issue, rather than writing.	Can be used to gauge people's perceptions of an issues/ situation and stimulate creativity.	Introduce the issue/ idea to the group. Ask them to draw their perception/ interpretation of the issue, emphasising that the message, not the quality of the drawing is important. Ask the group to analyse the issue and record interpretations/ interesting observations.	Baseline analysis and developing greater insight into the key issues affecting a community.	Paper on the value of illustrations in community development: http://www.intrac.org/data/files/resources/102/Praxis-Note-7-Working-Without-Words.pdf

Table 5.2: Public participation tools and techniques (continued)

What?	Purpose	Technique	Potential Application	For More Information
Problem Tree Analysis: A flow diagram used to assess the causes and effects of key issues.	Useful after baseline assessment to place specific issues in their wider context.	Draw a tree with roots and branches. Label the trunk with the key problem. Identify the causes of the problem as roots. Identify the effects and label them as branches. Join the inter-linked effects. Now convert problem, cause and effect into an objective to address the problem.	Turning the baseline analysis (identifying issues) into a series of objectives.	A Useful guide to facilitation from VSO (download/ refer to Part 3): http://community.eldis.org/.59c6ec19/
Design Workshop/ Charette: A workshop involving planners/ designers, the community and key stakeholders.	Local Area Plans and settlement upgrading. Useful for generating design concepts for key sites/ issues within an area	A collaborative process. Designers/ planners use technical expertise, facilitation and creative design skills to develop design solutions to different problems/ sites. Community feed into analysis and provide critical feedback on design options.	Analysing the context, developing scenarios/ options and testing design proposals.	A useful guide from New Zealand. Refer to Section 2: http://www.mfe.govt.nz/publications/urban/urban-toolkit-2009/
SWOT Analysis: Developing an understanding of the Strengths, Weaknesses, Opportunities and Threats of a place.	Developing a planning strategy that will directly respond to the key issues identified within the baseline analysis.	Identify the strengths, weaknesses, opportunities and threats of the place. Then one-by-one, discuss how strengths/ weaknesses can be addressed to exploit opportunities and overcome threats.	Strategy development - developing scenarios/ concepts to address issues raised in analysis.	A Useful guide to facilitation from VSO (download/ refer to Part 3): http://community.eldis.org/.59c6ec19/

Table 5.2: Public participation tools and techniques (continued)

What?	Purpose	Technique	Potential Application	For More Information
Guided Visualisation: A tool for helping the community to visualise a desirable future.	To help with visioning and as a pre-cursor to setting objectives for a planning strategy document/ proposal to address.	Facilitators as participants to relax and close their eyes. They then ask them to visualise their ideal community 20-50 years into the future. This is followed by a 'guided visualisation', where the facilitator asks a series of questions, enabling participants envisage how the place would be. Participants are then asked to write/ describe the key elements of what they saw. This can then be assembled into a vision statement.	Visioning	A Useful guide to facilitation from VSO (download/ refer to Part 3): http://community.eldis.org/.59c6ec19/
Ranking and Rating: Tools to aid decision-making.	Method of enabling a group to decide on a course of action, or a preferred option/ approach.	Develop a series of criteria against which a development solution can be addressed. Then score the different options against the proposed solutions e.g. 1-5. There are a number of variations on the same theme.	Selecting a preferred development scenario or identifying key/ priority projects.	A Useful guide to facilitation from VSO (download/ refer to Part 3): http://community.eldis.org/.59c6ec19/
Interactive Display: A display on urban issues/ a project that allows a community outline its views through voting, adding post-it notes or physically altering a display	Allows people to engage in and debate urban issues in a fun/ interactive way - generates ideas, creates interaction and records feedback from a cross-section of the community. Can be used at workshops, exhibitions or meetings.	Display material should be made clear and simple. People record their views of the display material using post-it notes or handwritten notes. These are recorded in a way that can be fed back afterwards.	Contributing towards baseline analysis, assessing development scenarios/ options, commenting upon frameworks/ development proposals.	A useful guide from New Zealand. Refer to Section 2: http://www.mfe.govt.nz/publications/urban/urban-toolkit-2009/

Table 5.2: Public participation tools and techniques (continued)

What?	Purpose	Technique	Potential Application	For More Information
Interactive Model: A model-building technique that uses a kit of simple blocks of various sizes to construct different massing configurations as a way of exploring different 3-D options for a site.	Enables people to envisage the scale and bulk of different development options for an area.	Timber, paper, plastic, Pleistocene modules, based on common building types/ components are used. They should be capable of being adapted into a range of scenarios. They should be recorded as they emerge and can be used to enable the community/ non-designers to engage in the design process and understand the implications of decisions on three-dimensional form/ space.	Developing/ assessing different design options.	A useful guide from New Zealand. Refer to Section 2: http://www.mfe.govt.nz/publications/urban/urban-toolkit-2009/
Exhibition: A presentation of a plan or proposal to the community at a public event/ in a public place.	To present development scenarios/ options or a draft solution to the community. Helps to reach people on the ground as you are taking the proposals out to them.	Prepare presentation materials, print-outs of development options/ proposals for display and discussion with the community. Locate the exhibition where it will be accessible to a cross-section of the community e.g. a local market. Be prepared to engage and discuss the proposals with interested members of the community. Record feedback.	Selecting preferred options/ presenting the final scheme.	

Table 5.2: Public participation tools and techniques (continued)

6. Application to Integrated Development Plans (IDPs)

Introduction

6.1 Planning in Zambia is changing. Under the new planning Act, the IDP will be the key planning document produced by every Council. The IDP will be a document that sets the strategy for the physical development of the place, tied into a wider socio-economic understanding of how the place functions and how it should develop. Specifically, it will provide the 'spatial framework' for how the place develops, including the urban structure. This is key to achieving a sustainable, distinctive urban form.

Figure 6.1: Mazabuka Spatial Development Framework Land Use Map, (Mazabuka Municipal Council)

Why is urban design important to its preparation?

6.2 The IDP provides the framework for improving design. It sets out a spatial strategy for where, amongst other things, higher density development should take place, where mixed-use development is most encouraged, what should be protected and the identification of key sites for development. This provides the basis from which Local Area Plans and ultimately development control decisions will deliver a more vibrant, compact, distinctive and efficient built environment.

6.3 This section applies largely to those parts of an IDP covering settlements and urban areas, although some of its principles can be applied at the District level also.

How do urban design and placemaking apply at this level?

General

6.4 The IDP should do the following:

- It should set the vision for what kind of place the district, town or settlement should be. This should provide a basis from which the elements that make a place unique can be identified and some key design-related objectives can be identified.

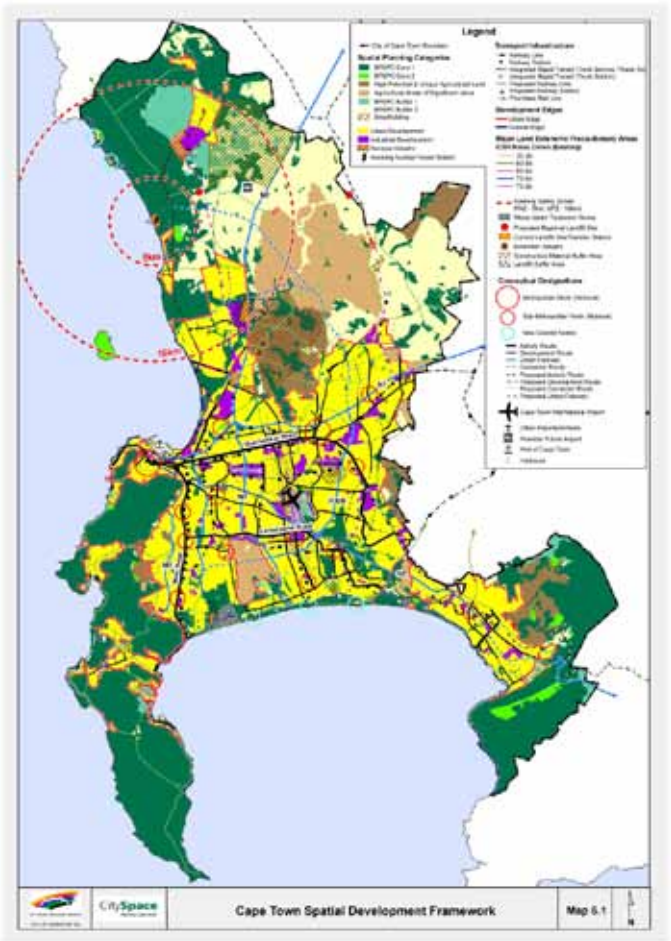


Figure 6.2 Cape Town Municipality Spatial Development Framework (City Space, South Africa)

- It should summarise the most important features of the place that make it distinctive, such as a building (e.g. a church), a natural feature e.g. a tree or river, a community facility e.g. a community hall, or an entire area (e.g. the Luangwa Township housing area in Kabwe) and make provision for their protection.
- Set out policies to reflect key issues locally, such as the need to improve connections and linkages from one housing area to the town centre, the need to upgrade an informal settlement or the potential to build taller buildings in a particular location.
- Identify sites/ areas where change might happen, such as town centre sites where commercial, community and residential uses might be built, where an existing derelict facility is in need of demolition and redevelopment, or Greenfield sites where new development will be provided.
- Identify methods for bringing forward development proposals under the planning system. This might be through a Local Area Plan, a planning brief (a description of a planning brief is provided in the box opposite and the Glossary) or a planning application.
- Specify requirements of Local Area Plan, briefs or planning application (e.g. specific information that should be submitted with the planning application, especially if dealing with a large site).
- Outline the Council's general objectives on design. This could include policies on a buildings relationship to its context, materials, boundary treatments, etc.

Box 6.1: Urban Design Briefs

An urban design brief is a document that provides an outline of all the Council's key requirements for particular development site. The development may have been identified within the IDP or Local Area Plan. It will help to ensure that any development proposal that follows for the site delivers a good design that ties into the plans for the wider area.

It usually comprises a written document with supporting diagrams ranging from one to a number of pages. It can include:

- opportunities identified;
- constraints identified;
- contextual information/ analysis;
- programme/ schedule of land uses;
- floor areas/ number of units;
- building heights;
- 'parameters' or dimensions of the building footprints and where the building line is fixed or flexible;
- engineering services required; and
- access requirements.

Context & character

6.5 As part of the baseline analysis it is important that an analysis of the 'spatial' and physical form of the place is undertaken. It has been notable that this was absent in the initial phase of analysis undertaken for many IDPs.

However, understanding spatial relationships and characteristics is important in capturing the essence of the place and what makes it unique.

6.6 Key issues to include in undertaking the Planning Survey/ Issues Report:

- The location of a place in context - how the settlement(s) relate to their surroundings, why they are there, their size and role in relation to other settlements e.g. Kapiri Mposhi has grown as a transit town on routes between Lusaka and the Copperbelt and Tanzania, Mumbwa as a commercial centre for the surrounding farms etc.
- History and the development of a place - an understanding of how the place has developed over time, including different eras of development and what has shaped this development. If possible, maps should be produced showing how the place has grown and developed over time. This provides an understanding of important features and gives an idea of how the place will continue to develop.
- Land Use - this should map out the key areas of different land use, including residential, commercial, industrial etc. This should include the identification of different centres, both the main town centre and smaller neighbourhood centres and local centres. This should provide an understanding of the overall hierarchy of centres i.e. their catchment and importance overall and the relationships between them.
- Movement and connections - this should include regional, sub-regional, local and neighbourhood movement networks, including roads, public transport and foot and bicycle. Mapping and commentary should indicate the overall hierarchy of different routes i.e. their importance/ size and should indicate any deficiencies in the network, e.g. where places are poorly served by public transport, where walking routes are interrupted by roads with fast-moving traffic/ railways etc.

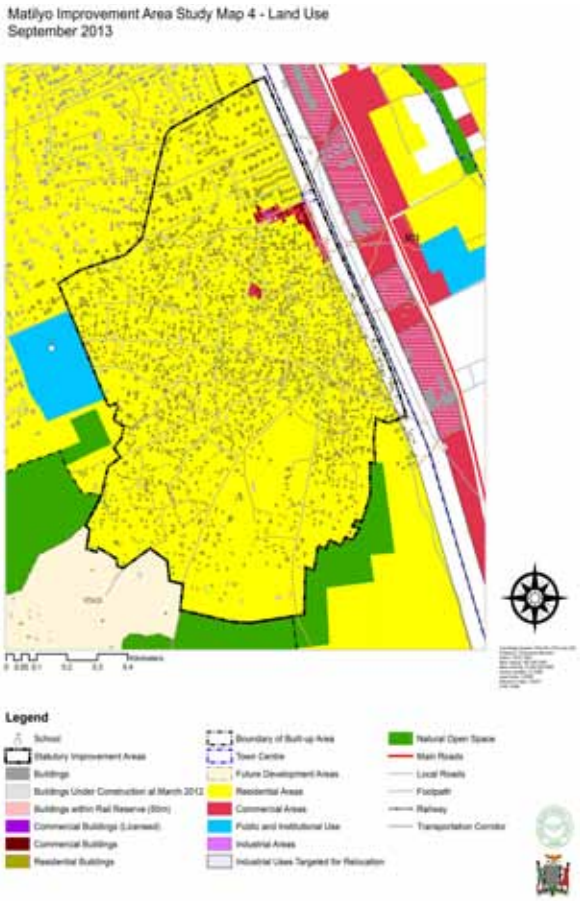


Figure 6.3: Matilyo Informal Settlement (Kapiri Mposhi) Existing Land Use Map

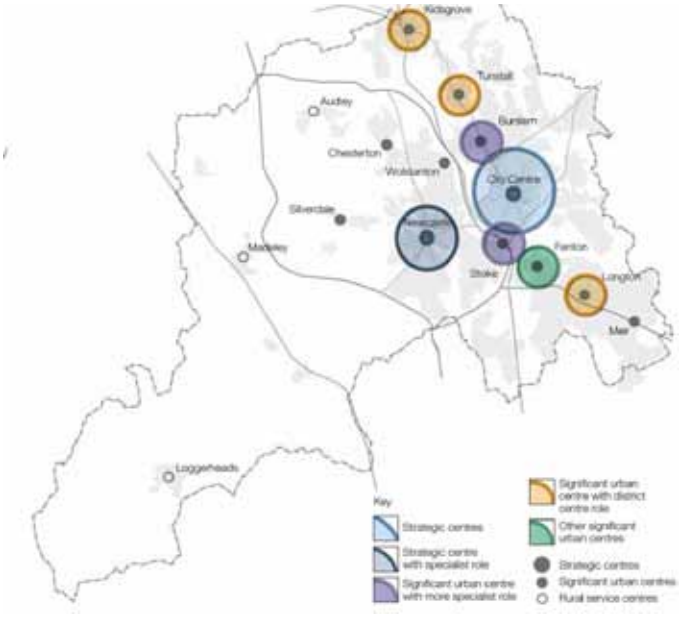


Figure 6.4: Map showing the hierarchy and function of towns that make up Stoke-on-Trent and Newcastle-Under-Lyme (Tibbalds Planning and Urban Design, UK)

- Open space network - this should identify where existing spaces are located, their type e.g. playgrounds, parks, squares, wetland areas, how well maintained they are, who owns them and who uses them. It should also identify where there are deficiencies that need to be addressed e.g. through mapping out existing spaces and identifying how many homes lie within a 5-10 minute walk. This will show where new spaces are needed.
- The location of key landmarks/ places of interest - mapping out those features that make a place distinctive or different, which can include landscape features e.g. a hill or mountain (think of the hills to the north of Kapiri Mposhi), buildings e.g. TAZARA railway station in Kapiri Mposhi or places valued for their history, meaning or use e.g. The Mulungushi Rock of Authority, a Church, or a community hall.
- Public participation - the residents and users of a place are likely to understand it best. They will have developed a strong appreciation of what works badly, what works well and what is valuable through experiencing it on a daily basis. As planners/ urban designers we need to draw upon this knowledge base to understand the key issues and to capture what really makes that place unique, which can then be built upon. Their inclusion from day one will also provide the basis for 'ownership', making people feel like any plan produced is theirs and therefore, more likely to follow and police it themselves.
- Social and economic factors - an understanding of the society and economy of the place should underpin all of the above.

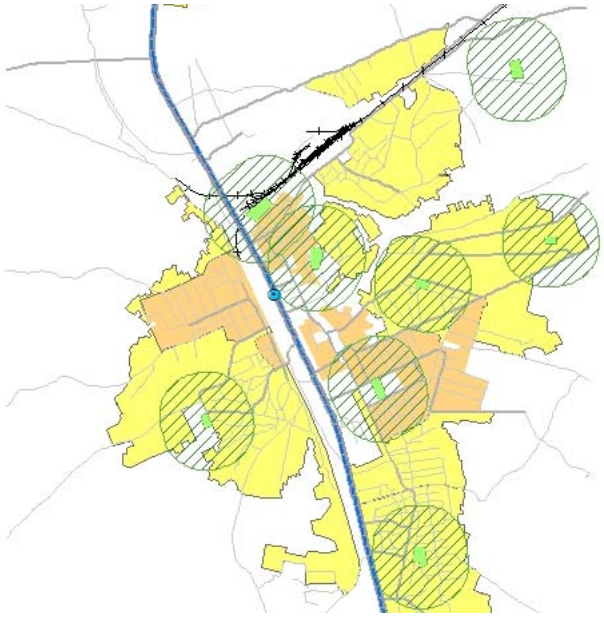


Figure 6.5: Kapiri Mposhi Township - map of existing open space and catchment areas (400m distance or 5 minute walk)

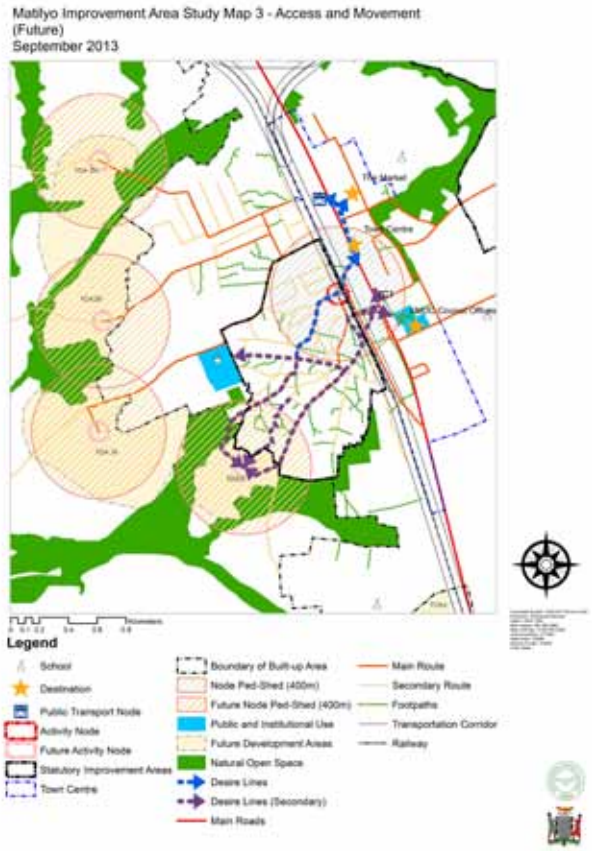


Figure 6.6: Map showing access and movement network in Matilyo, Kapiri Mposhi

Movement and connections

6.7 Building upon the baseline analysis, the IDP sets the strategic 'movement framework' for the settlement(s) or study area concerned. In order to make movement for non-car users easier, the settlement should be planned around a series of key transport 'nodes'. These are points of focus at the convergence of major routes or interchange on the transport network e.g. the Intercity Bus Terminal/ Railway Station in Lusaka. Around these nodes, the IDP should promote development at a higher density, with a mix of uses and the development of a network of streets and spaces that encourage movement by foot. This may need to be complimented by stronger enforcement of transport and traffic rules in order to avoid congestion. At those locations the intention should be to keep block sizes small, to enable a maximum choice of route options, so that people can take the routes that they are most comfortable with and creating opportunities for more uses. This is known as the 'walkable neighbourhood' (refer to Box 6.2 (overleaf) for more information on what this is).

6.8 It is important that we move beyond traditional definitions of roads based on their movement function only, which would appear to be the current practice. At present we are not really thinking about the kind of environment they will create for all users, just how cars will use them. We need to start thinking about the kind of environment they create for people walking and cycling and how they relate to the public transport network NOT JUST PEOPLE IN CARS.

6.9 We therefore need to start considering the 'places' they will create from the outset. The table opposite (6.1) shows how we need to start thinking of how a street can also be a place, not just a route for cars to move through.

Figure 6.7: Map showing transport network within London Thames Gateway (Greater London Autority, London)

Convention	Streets Combining Capacity and Character	Vehicular Dominance
Primary Distributor	Main Road/ Cross town/ city	
District Distributor	Avenue/ Boulevard (more formal treatment/ landscaping - could include tree planting)	
Local Distributor	High Street (mixed uses, active frontages)	
Access Road	Street/ Square (mainly residential - variation in building lines can encourage traffic calming)	
Cul-de-Sac	Mews/ Courtyard	

Table 6.1: Streets that combine capacity and character (Source: Urban Design Compendium, UK)

6.10 This shows how the role of the streets in the hierarchy should influence the kind of environment that is created. This includes how it should shape the location of adjacent uses and the kind of landscaping that should be provided. For example, under the new classification, the Great East Road in Lusaka would be treated as a Main Road, with more

Box 6.2: Walkable Neighbourhood

'Walkable neighbourhoods are characterised by having a range of facilities within 5 minutes (up to about 400m) walking distance of residential areas which residents may access comfortably on foot. Where amenities cannot be provided within this area, good public transport links to relevant facilities should be accessible.

In many cases, it may be better for a new development to reinforce existing centres and facilities rather than providing alternative facilities.'[1]

3 The Scottish Government, 2010. Designing Streets (P26) (Bibliographic reference 20)

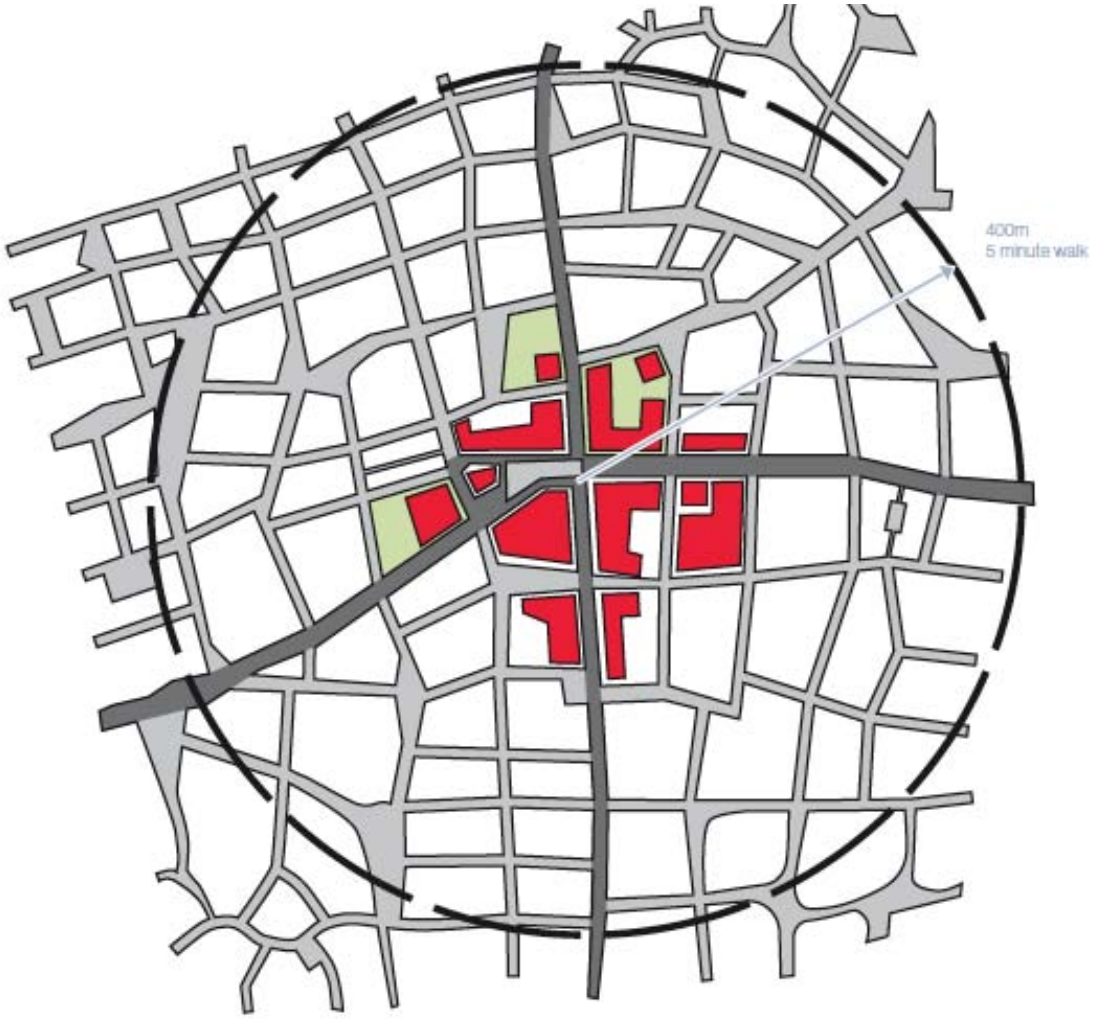


Figure 6.9: The walkable neighbourhood (Source: Designing Streets, Scottish Government - Andrew Cameron (WSP))

emphasis on vehicle movements, while Cairo Road would be a Boulevard and the collection of streets to the west of Cairo Road, such as Chachacha or Kalundwe Roads as high streets, both with mixed uses and active frontages, while the former is wider with more formal landscaping.

6.11 The Development Framework can:

- identify public transport nodes and locations for interchange between different types of transport;
- determine the hierarchy of streets and detail the overall approach to the design of each street type e.g. balance between vehicles and pedestrians, treatment of parking, approach to landscaping, etc.
- identify locations for new connections/ streets.

Uses and density

6.12 The IDP sets the framework for creating the 'compact city' referred to at paragraph 3.2. The idea is to build at a higher density around the key public transport 'nodes' or 'corridors' established by the movement framework, discussed in paragraph 4.7 and Box 4.1 on 'the walkable neighbourhood' above. These areas should be developed at a higher density with a greater mix of uses, because this maximises access to facilities and services for a greater number of people, as explained within Box 4.1.

6.13 Current convention is for people to build single storey houses set within large plots. While it will be more complicated to provide utilities and services to two, three, four etc. storey buildings and blocks of flats, there are numerous examples of where this has been done since the 1930s and before in Zambia. This is not, therefore, a reason for restricting development to one storey only. Surveys for the Kapiri Mposhi IDP have shown that there is a demand for this type of accommodation among young

Figure 6.10: Example of higher density development in Lusaka

Figure 6.11: More traditional higher density mixed-use development in Kabwe

singles and couples. Mixing higher density apartment blocks with lower density housing provides the opportunity to create more mixed communities and concentrate people in accessible locations such as centres and public transport nodes.

6.14 The Development Framework can:

- identify 'nodes' and 'development corridors' where densities should be higher e.g. up to four storeys and more, and where there should be more than one primary use e.g. office, retail, community and residential uses;
- use policies to either demand or encourage development of a higher density in these locations; and
- deliver more mixed communities through specifying the housing mix within certain locations, including seeking more apartments/ flatted developments;

Open space and public realm

6.15 Good quality streets and spaces are like the veins that power the heart of a community, while green space is like the lungs that help it to breathe. Through depriving the local population of these, we are currently severely damaging the health of the neighbourhoods that make up our towns and cities. There is currently lack of formal open space in most settlements within Zambia, while most streets and spaces are suffering from a lack of maintenance and neglect. This is for a number of reasons, not least of which is that people keep building upon any open space they find.

6.16 At the level of the IDP, we should be considering how to create a 'network' of open spaces across a settlement. This should include different types of open space, such as smaller tighter 'hard' spaces, where no greenery is provided, to larger parks, providing space for sport, relaxation and play. Rather than repetitively applying uniform standards and guidelines, we need to analyse the existing

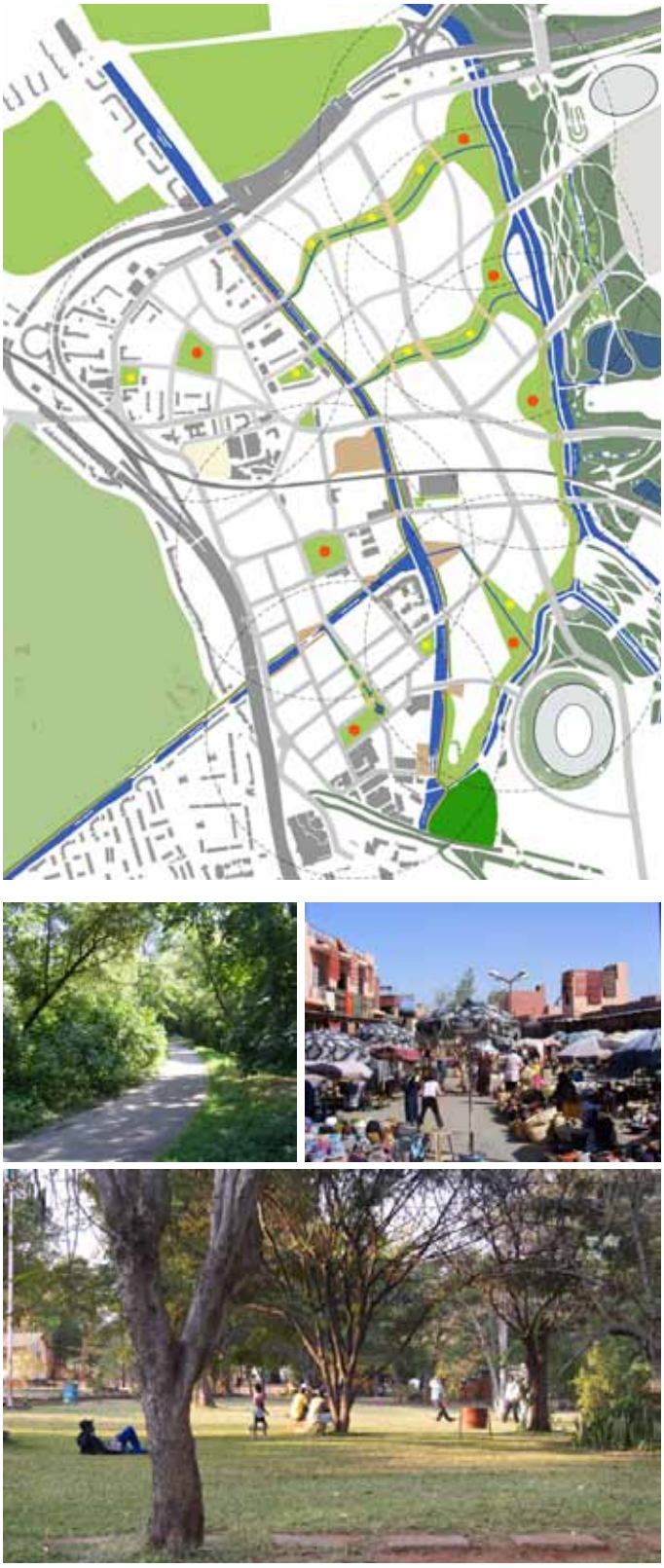


Figure 6.12: Defining an open space network (top) and open spaces of different character (photos - top left: Prague, top right: Marrakesh, Morocco, bottom: Livingstone)

open space network - where the spaces are, why they are there and how they are used - and think how we can develop, exploit or add to this network. In most cases, there will be a general lack of formal open space, so we need to think about how this will be addressed over the lifetime of the IDP i.e. where new spaces can be added, where existing ones can be improved and how they can be linked.

6.17 In order to create a safer, healthier and more accessible environment, the linkages between spaces will be important. The ideal is for people to be able to walk or cycle safely in an attractive environment between spaces of different character.

6.18 Central to creating such a network is public participation. This will help to understand what kind of spaces people want, providing the basis for including them in their development at the next stage.

6.19 The Development Framework can:

- identify existing open spaces for protection and improvement, sites where new open spaces might be improved and opportunities to create and develop linkages between them;
- imply the character of the linkages between spaces, which could outline kind of uses allowed along the route, priority routes for infrastructure provision (e.g. street lights), any landscaping for the route, the degree of tolerance towards informal trading etc.

Resource efficiency and environmental sustainability

6.20 Good urban design is important to achieving environmentally sustainable development. At the level of the IDP, the key issue is ensuring that settlements are efficient in terms of their overall form and are designed so as to minimise impacts both on and from the environment. Following the compact city principles outlined above will help to ensure this through reducing the need to travel by car, one of the world's

Figure 6.13: Dambo (wetland area) Kapiri Mposhi Township

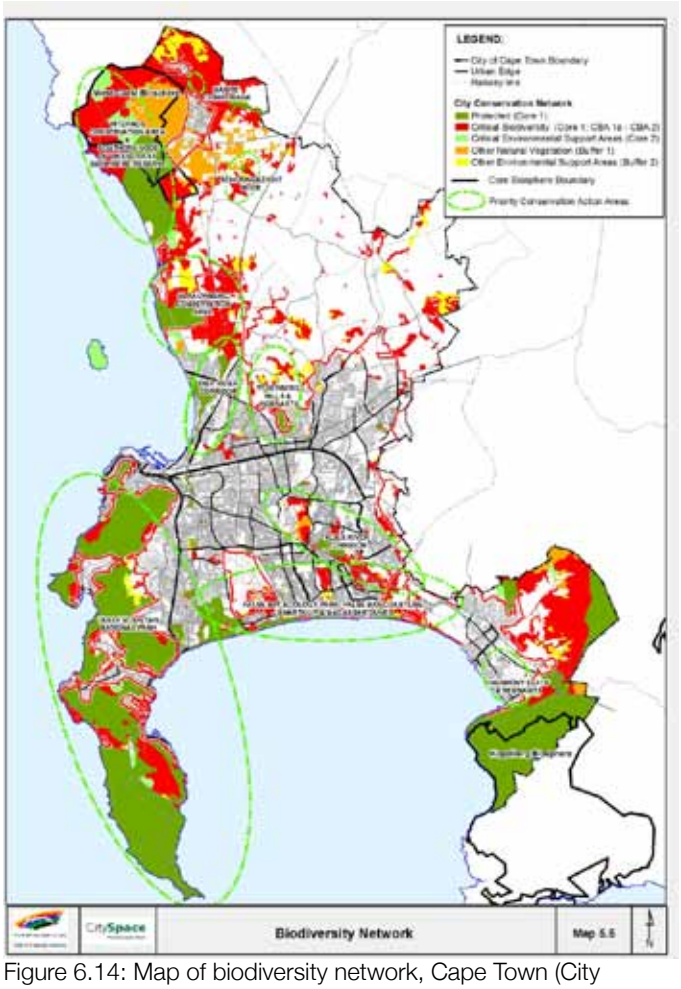


Figure 6.14: Map of biodiversity network, Cape Town (City Space, South Africa)

biggest polluters in terms of emissions, reducing the overall footprint of development and reducing the resources required to service a settlement in terms of energy generation.

6.21 Another key issue within the Zambian context is flooding. At the strategic level, good urban design will ensure that development is directed away from flood-prone areas, such as dambos. It should also help places to adapt to the changing climate, through such interventions as increasing the overall amount of green space within developed areas, which reduce the speed of surface-water run-off and reduce the urban heat island effect, while tree planting reduces carbon in the atmosphere.

6.22 The Development Framework can:

- introduce compact city policies as discussed previously;
- make provision for new development sites away from areas prone to flooding;
- prohibit vulnerable development within areas prone to flooding;
- protect existing areas of green space and identify new areas for green space provision; and
- (potentially) specify the use of renewable energies, require environmental adaptation measures such as 'green' roofs and place a cap on parking provision.

Legibility

6.23 The IDP should lay the foundations for creating a settlement that is easy to understand and recognise for all users. It should bring 'sanity' to the built environment and build upon the distinctive elements of a place, in order to create a functional, attractive and ultimately unique environment.

6.24 Having analysed the context and the strategic setting, most distinctive features, the movement network, the land use mix, open space network and key landmarks, we should be in a position to develop an understanding

Figure 6.15: Example of landmarks in Kabwe and Ndola

Figure 6.16: An 'urban design framework' diagram identifying nodes, paths, areas for protection gateways etc for an urban centre (Urban Design Guidance for Stoke-on-Trent and Newcastle-Under-Lyme (By: Tibbalds Planning and Urban Design, UK))

of how the place feels and fits together in the mind of someone moving through the streets and spaces of a place. We can then use this to develop an urban design framework or an 'armature', identifying the bare bones of a place with a clear structure and a distinctive environment,

6.25 The Development Framework can:

- designate activity nodes - where activity will be at its most intense and reinforce this through policies seeking higher density, mixed-use development, including more public and active uses in these locations;
- identify paths - key routes, corridors and linkages within the settlement that will take people between the key 'destinations' and seek to reinforce their status and character through the way they are designed - their width, adjacent building heights, the mix of uses fronting onto such routes, whether they incorporate informal trading, the way they are landscaped etc; and
- identifying existing key landmarks or proposing new ones, which could be higher buildings, areas for prominent community facilities, natural features, open spaces or something else, that will be clearly recognisable to the community.

Implementation

6.26 In planning new areas for development, there is a need to prepare detailed Layout and Local Area Plans for development control decisions to follow, based upon the principles established by the IDP. In order to do so, the IDP will need to outline a detailed policy framework that commits the Council to preparing further policy documents that will provide more detail or stipulates certain requirements for development proposals. The Action Plan will then need to provide a programme for delivering these plans and a framework for monitoring the success of the Council in achieving its policy objectives.

6.27 There is also a need for the Council to service sites (at least to a basic level) prior to the allocation of plots in order to incentivise developers to build in accordance with the proposed plans. Otherwise, there is a risk that developers will build elsewhere.

What might this look like?

Kapiri Mposhi IDP (Draft) - Development Framework

6.28 The Draft Integrated Development Plan for Kapiri Mposhi provides one example of how to embed urban design principles into the spatial planning process from the outset. It is based upon the selection of a Preferred Development Scenario by the local community that favoured densification of the existing urban area and controlled urban expansion.

6.29 The document incorporates a strong urban design aspect, through the development framework, which defines a hierarchical route network and a series of nodes in order to identify key areas for intensification and growth. This includes a series of Urban Nodes (the Town Centre, Turn-off and KGP), where the highest concentration of development and the greatest mix of uses is to be focused. These are then linked to a series of outlying neighbourhood-level Local Activity Nodes and 'Future' Activity Nodes by Priority Routes for Public Realm Improvement.

6.30 The Local and Future Activity Nodes (LANs/ FANs) are neighbourhood centres where higher density, mixed-use development is to be promoted at the neighbourhood level. The Future Activity Nodes are located within Future Development Areas, where the future expansion of the Township is to be accommodated. The Priority Routes for Public Realm Improvement are corridors where trunk infrastructure and improvements the public realm are to be focused, with the intention that they will then provide attractive routes for public transport, walking and cycling. Space for bus stops and taxi ranks should then be provided at each of the LANs/ FANs. This approach is in line with the principles of Transit-Oriented Development.

6.31 Figure 6.17 shows the Preferred Development Scenario that informed the Spatial Development Framework, Figures 6.18-6.19 show the Spatial Development Framework itself.

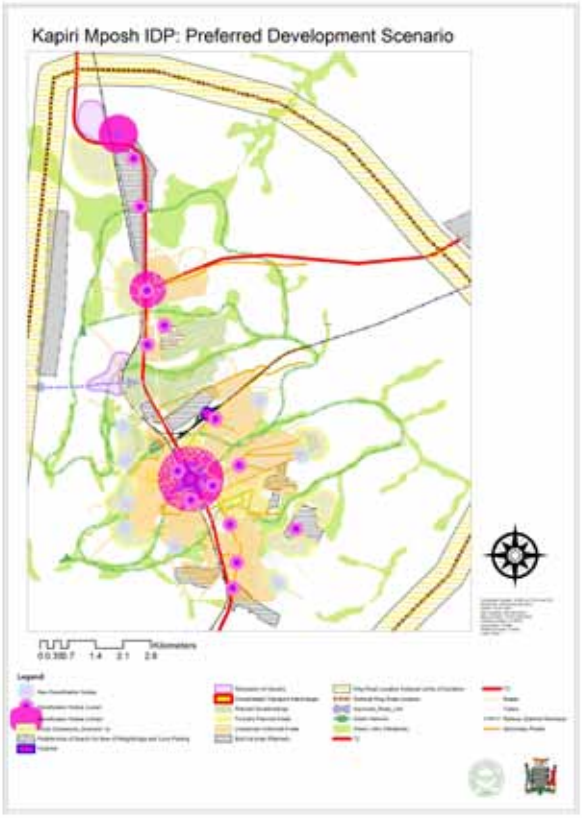


Figure 6.17: Kapiri Mposhi IDP Preferred Development Scenario

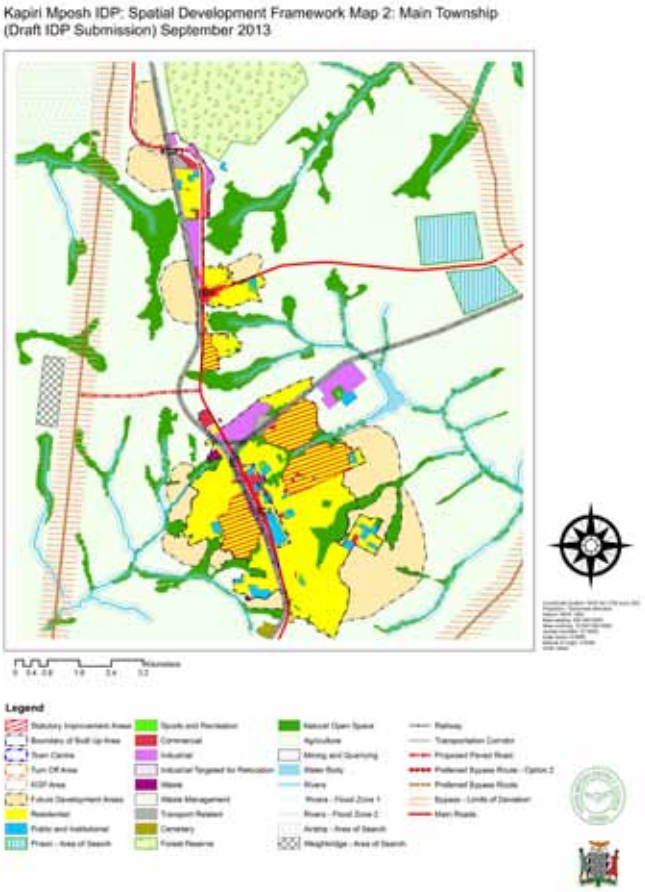
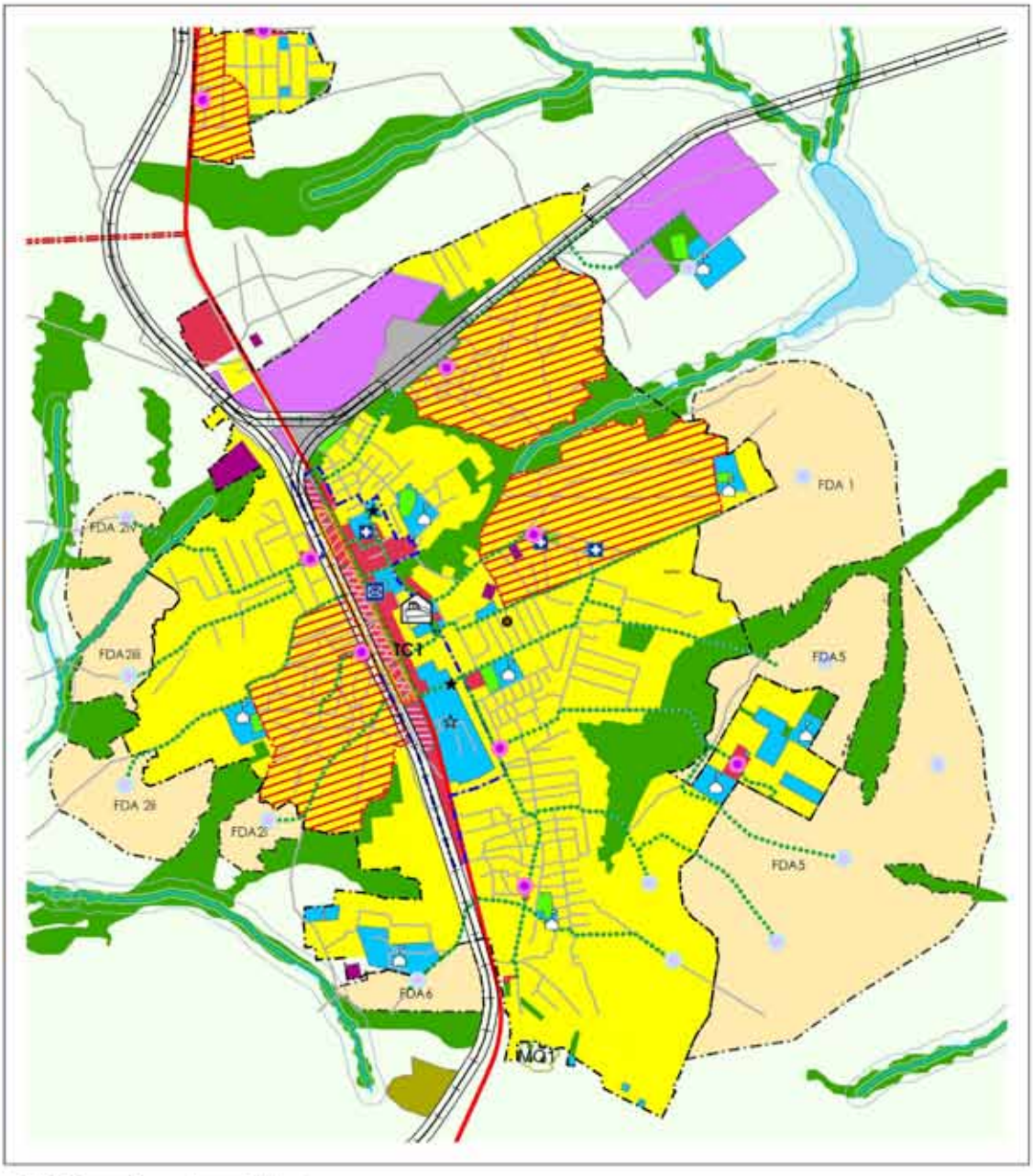


Figure 6.18: Kapiri Mposhi IDP Development Framework - Whole Township

Kapiri Mposh IDP: Spatial Development Framework Map 3: Town Centre
(Draft IDP Submission) September 2013



Coordinate System: WGS 84 UTM zone 35S
Projection: Transverse Mercator
Datum: WGS 1984
false easting: 500 000.0000
false northing: 10 000 000.0000
central meridian: 27.0000
scale factor: 0.9996
latitude of origin: 0.0000
Units: Meter

0 0.2 0.4 0.8 1.2 1.6 Kilometers

Legend

- School
- VCT Centre
- Post Office
- Police Station
- Fire Brigade
- Courts
- Community Centre
- Clinic
- Boundary of Built Up Area
- Town Centre
- Local Activity Node
- FDA Local Activity Nodes (Approximate Location)
- Future Development Areas
- Residential
- Statutory Improvement Areas
- Public and Institutional
- Sports and Recreation
- Commercial
- Industrial
- Industrial Targeted for Relocation
- Waste Management
- Waste
- Transport Related
- Cemetary
- Forest Reserve
- Natural Open Space
- Agriculture
- Mining and Quarrying
- Quarry Reinstatement
- Water Body
- Rivers
- Rivers - Flood Zone 1
- Rivers - Flood Zone 2
- Area of Search - Transport Interchange
- Railway
- Transportation Corridor
- Priority Route For Public Realm Improvements
- Proposed Paved Road
- Main Roads
- Local Roads

Figure 6.19: Kapiri Mposhi IDP Development Framework - Town Centre

Key Questions to ask yourself

- Have we thought about the settlement's location within the wider context - its role?
- Do we understand how the settlement has developed over time?
- Do we understand the layout of its streets and spaces, built and unbuilt spaces and scale and density of development?
- How do ecology and the natural environment influence the planning and layout of development?
- Do we understand the local community - who they are, their needs and their demands? Have we engaged them properly?
- Have their views been taken into account?
- Have we thought about and identified the key destinations, places, landmarks, and historic elements within the settlement?
- Have we considered the quality and different elements of the movement network - vehicular, public transport, bicycle, foot?
- Do we understand the mix of uses?
- Do we understand the key constraints and opportunities?
- How do our options for growth relate to our analysis and the existing urban structure?
- What kind of environment will the streets and spaces create - what will the character and function of the different streets be?
- Are we integrating transport, facilities and densities/ building heights in order to create a more environmentally-friendly, vital and viable place and increase accessibility;
- How easy will it be for public transport users, cyclists and pedestrians move around?
- Is there a strong network of centres and do they compliment one another? Does it relate to transport accessibility and density.

7.0 Application to Layout and Local Area Planning

Introduction

7.1 While the IDP sets the overall urban structure, it is at the scale of Layout Planning and Local Area Planning that we start to determine the detailed layout of roads, land uses, buildings and other spaces. This is perhaps the most crucial scale in determining the kind of place we live in. We consider both here, as though the preparation of Layout Plans is the main approach to guiding the layout of new development in the short term, Local Area Plans will replace them in the medium to longer term.

7.2 Layout planning is the current process whereby the District Council secures a site for development (usually from a Chief) and then DPPH Officers draw up a layout or 'masterplan' for how the area should be built out down to the level of the plot. Local Area Planning is a more involved process, more similar to the preparation of a miniature IDP. The end result will be a form of masterplan or 'development framework' that determines what is built where. In other words, it will require detailed contextual analysis and an action plan, in addition to a spatial development framework, which not only outlines a proposed layout, it may also include a range of other policies and controls that determine the overall form and nature of development. This could include controls on the design, height and mass of proposed buildings. They are usually prepared for part of a settlement with a certain character or function, such as informal housing areas, town centres and greenfield housing sites, although they may also be prepared for a small settlement in its entirety.

7.3 Regardless, it is important to follow a similar process, even if with layout planning the process is less extensive, collaborative and is not documented in the same way. The sooner we start to adopt these approaches, the easier the transition will be.

Why is urban design important to its preparation?

7.4 This is the level at which we start to define the real physical form, layout and character of places at the neighbourhood level. This includes setting out the detailed hierarchy of streets and spaces, the relationship of a neighbourhood to other areas, its function and therefore its form, buildings that should be retained or protected, the character of particular streets and spaces and how they should be treated. At this level, urban design helps to build more cohesive, attractive and walkable communities.

Figure 7.1: Urban Design Framework for a new development site (Tibbalds Planning and Urban Design, UK)

How does urban design apply at this level?

General

7.5 Firstly, central to creating a stronger sense of place is recognising that all places are different. We need to start thinking in a more flexible way and moving beyond rigid design standards with the same conventional approaches to designing streets and plot sizes, instead thinking more about what would be suited to the area or site and its surroundings e.g. sometimes narrower streets or tighter plots may be appropriate.

7.6 Secondly, at this level, urban design does not start with layout planning. It starts with site selection. If we are selecting sites for development that are dislocated from the main settlement and environmentally unsuitable, then it will be difficult to plan efficient, compact places and combat urban sprawl from day one. Therefore, we urge District Councils to think hard about this before they propose new sites for layout planning.

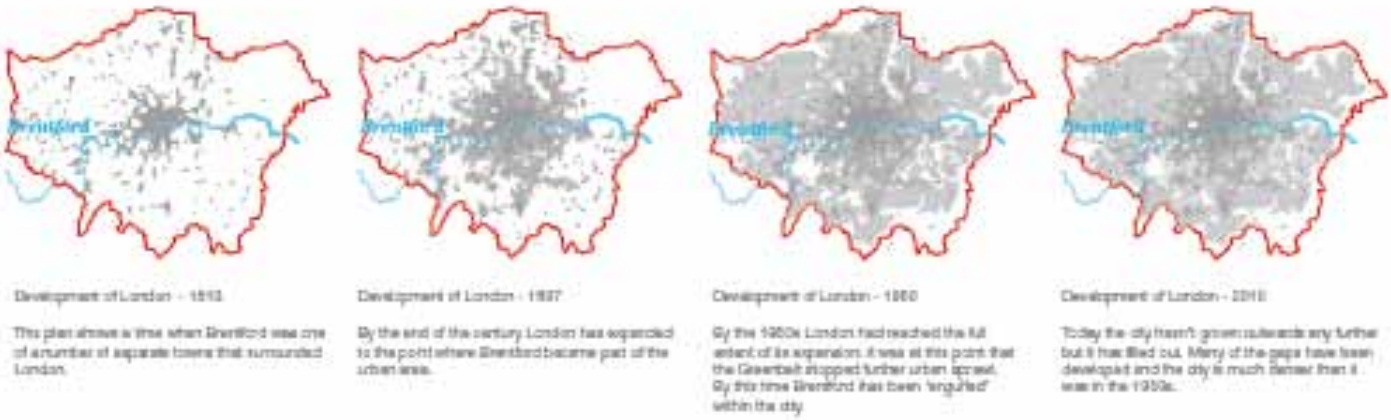
Site analysis in context

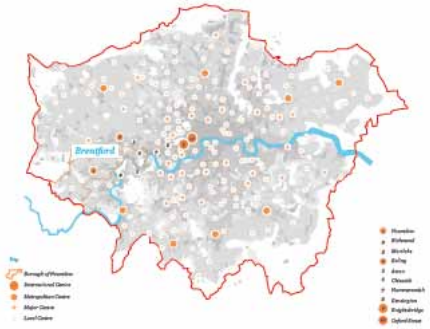
7.7 Before we prepare layouts or Local Area Plans (LAPs) for an area, it is important to understand the key opportunities and constraints, in relation to the wider area. Key considerations would be:

- how the area relates to a higher level plan i.e. the IDP;
- how an area fits into the wider settlement structure, including its relationship to other neighbourhoods, whether it is a destination (i.e. the town centre or an employment centre), the relationship of any centre to other centres within the settlement (i.e. is it the main centre or a sub-centre);
- how the area has developed over time;
- how it relates to the wider movement framework - how will new connections be established with existing routes, how will non-car users be able to move around;
- how it relates to the wider open space network;
- how it relates to surrounding built form in terms of scale and density;
- what key features of interest exist - buildings, community facilities, meeting places, local landmarks, etc - and how they relate to the site;
- notable environmental features and their impact upon development - rivers, dambos, hills, trees etc; and
- the character of the local community and its influence on the place, including such issues as the prevalence of informal structures and trading.

7.8 From here we are in a position to identify those issues that are most important to the development of the site (a 'summary analysis' drawing can help with this process) those that constrain development, and those that present opportunities to be capitalised upon. Once these have been evaluated and mapped out, we can then develop one or a series of development options or concepts as to how the area could develop and change. This should set out, in simplified terms - ideally both diagrammatically and in word form - the key components of that concept.

7.9 In the case of LAPs, public participation is important from the start. It is important that, where resources allow, officers visit the community and meet with local people in order to understand the particular culture of that community and key issues affecting those places. Their knowledge and expertise should also be involved in the development of a solution to the unique problems affecting that community. Refer to Section 5 for more guidance on community engagement.





Brentford Town Hall 1936

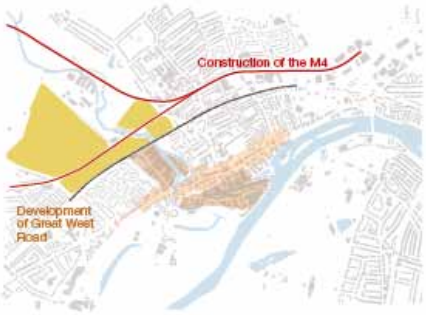
Transhipment Point 1880 (now Brentford dock housing area)

Brentford High Street 1907

Phases of Development Pre 1700

Phases of Development 1700 -1900

Phases of Development 1940's



Phases of Development 1960s -

Figure 7.2: A series of maps (top), photos (above) and diagrams (above right) illustrating the historic development of a site in Brentford, West London in relation to its context over time (Urbed, UK)

Movement and connections

7.10 The key objective should be to develop a street network that maximises permeability, access by non-car users, and builds upon the overall sense of place. Key considerations are:

- a movement framework that connects the surrounding streets and spaces, maximising access to key destinations;
- defining the function and character of the different streets and spaces (main roads, boulevards/ avenues, high streets, streets etc.) and how they should be treated, thinking beyond vehicular traffic to how non-car modes can use it, the type of uses that should face onto it and the type of landscaping that should be provided;
- how the site relates to existing public transport infrastructure and how non-car users will be able to move to and through the site;
- a block structure that maximises the overall choice of routes, producing a finer 'urban grain' and maximising permeability; and
- where buildings may need to be removed (particularly in the case of informal settlements) in order to accommodate new/ wider routes, preferably trying to minimise any interventions.

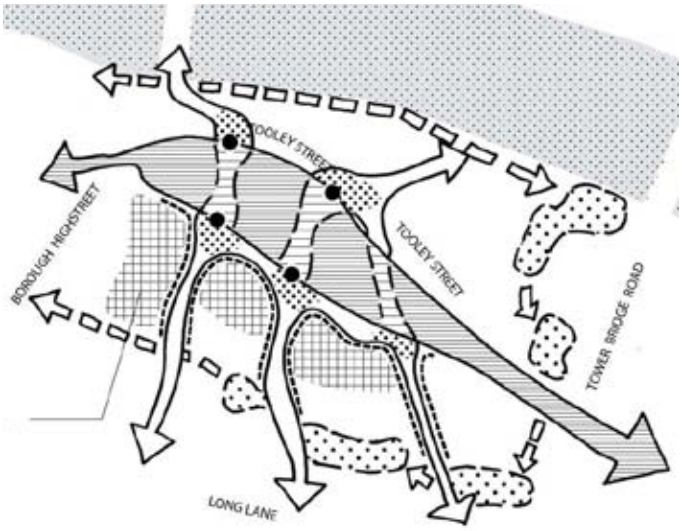


Figure 7.3: A development concept for an area around London Bridge, South London (Tibbalds Planning and Urban Design, UK)

Figure 7.4 (above): A development concept for an area around London Bridge, South London (Tibbalds Planning and Urban Design, UK)

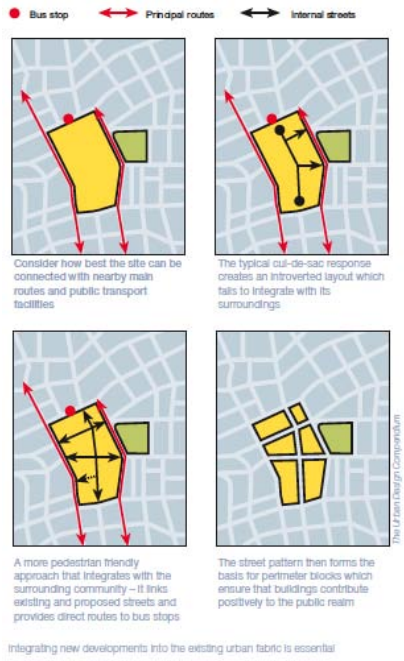


Figure 7.5 (left): Diagram illustrating how to integrate a site into the wider street network (Source: Designing Streets - taken from the Urban Design Compendium)

Uses and density

7.11 The key objectives should be to relate the mix of uses and density of development to the wider movement and open space network. Key considerations are:

- the overall amount of housing and mix of uses that should be planned for, which should have been determined as part of the site analysis of at the IDP stage where one has been prepared;
- densities should increase the closer a site is to a centre, a public transport node or a key movement corridor, thereby maximising accessibility and vitality in these key locations - this should include a mix of houses and flats in order to maximise the number of units provided on the site and provide a greater mix of people; (i.e. single people, couples, families etc.)
- the mix of uses should build on this. Residential uses should be mixed with other uses, such as commercial and office uses, where possible within the same buildings in order to make more efficient use of the land and to increase the variety of activities being undertaken within that location e.g. someone could work, shop and live in the same place, adding convenience and creating a place which is alive 24 hours a day, thereby improving community safety;
- the placement of public buildings and facilities within key nodal locations can serve to increase the vitality and activity of these locations, creating a focus for the community and building identity; and
- the only uses that really need to be segregated in the traditional way are polluting industrial activities, which create noise, air and visual pollution, with most others capable of being integrated through sensible layouts.

Figure 7.6: Diagram defining maximum building heights across a site in South London (Elephant and Castle SPG 2004, London Borough of Southwark and Tibbalds Planning and Urban Design, UK)

Figure 7.7: High density, mixed use development along key movement corridor in Dar-es-Salaam

Figure 7.8: High density, mixed use development (Lusaka)

Open space and public realm

7.12 The public realm can make or break a community. In developing layout plan and LAPs we need to think about how any new open spaces will relate to and build on the wider open space network in a way that responds to the character of that particular neighbourhood.

7.13 Key considerations are:

- understanding the character and function of each space and how it relates to the strategic whole - if a space is within the town centre, it may be better suited to being a trading location, surrounded by shops and services, and populated by informal trading activities. However, if a space is located in the middle of a residential area, it may be suited to being a space where people come to relax, talk and play;
- thinking about the use, design and scale of surrounding buildings and how they relate to the space itself - spaces that have active uses (such as shops, libraries, food outlets etc) spilling out onto them and are overlooked are almost always more successful as they feel safer and more sociable;
- thinking how we can influence the design of the space to encourage people to use it - designing spaces flexibly can also allow people to adapt them for their own purposes and therefore enhance ownership and usage;
- how informal traders, who will invariably be drawn to a space if it is popular, will be incorporated from day one e.g. through integrated structures that they can use such as shelters, proper market structures etc; and
- thinking about how the public realm and public space might relate to or incorporate natural features, such as streams and wetland areas or natural vegetation, in order to enhance the ecological value of the space, create an attractive focal point and aid in environmental adaptation e.g. through reducing the speed of run-off vs. the use of concrete.

Box 5.1: The secret of successful public space

The Project for Public Spaces view public space as being the most critical element in building successful communities and from there, successful towns and cities. In their view, public spaces should be seen as the focal points of a community. Their approach is summed up in their concept, 'The Power of Ten', as described in the following quotation:

"… The core principle is the importance of offering a variety of things to do in one spot — making a place more than the sum of its parts. A park is good. A park with a fountain, playground, and food vendor is better. If there's a library across the street, that's better still, even more so if they feature storytelling hours for kids and exhibits on local history. If there's a sidewalk café nearby, a bus stop, a bike path, and an ice cream stand, then you have what most people would consider a great place.

What if a neighbourhood had 10 places that were that good? The area would then achieve a critical mass — a series of destinations where residents and tourists alike would become immersed in the life of the city for days at a time.

Taking the next step, what if a city could boast 10 such neighbourhoods? Then all residents would have access to outstanding public spaces within walking distance of their homes. That's the sort of goal we need to set for all cities if we are serious about enhancing and revitalizing urban life."[1]

4 Project for Public Spaces, 2012. *Placemaking and the Future of Cities (Draft) (P.13) (Bibliographic reference 18)*






Figure 7.9: A series of images illustrating different types of public realm/ open space - spaces within informal settlements (Cape Town), those designed to accommodate informal traders (Livingstone), in built seating along streets (Stone Town), nighttime activity (Marrakesh), green space (Livingstone) and urban squares (Madrid)

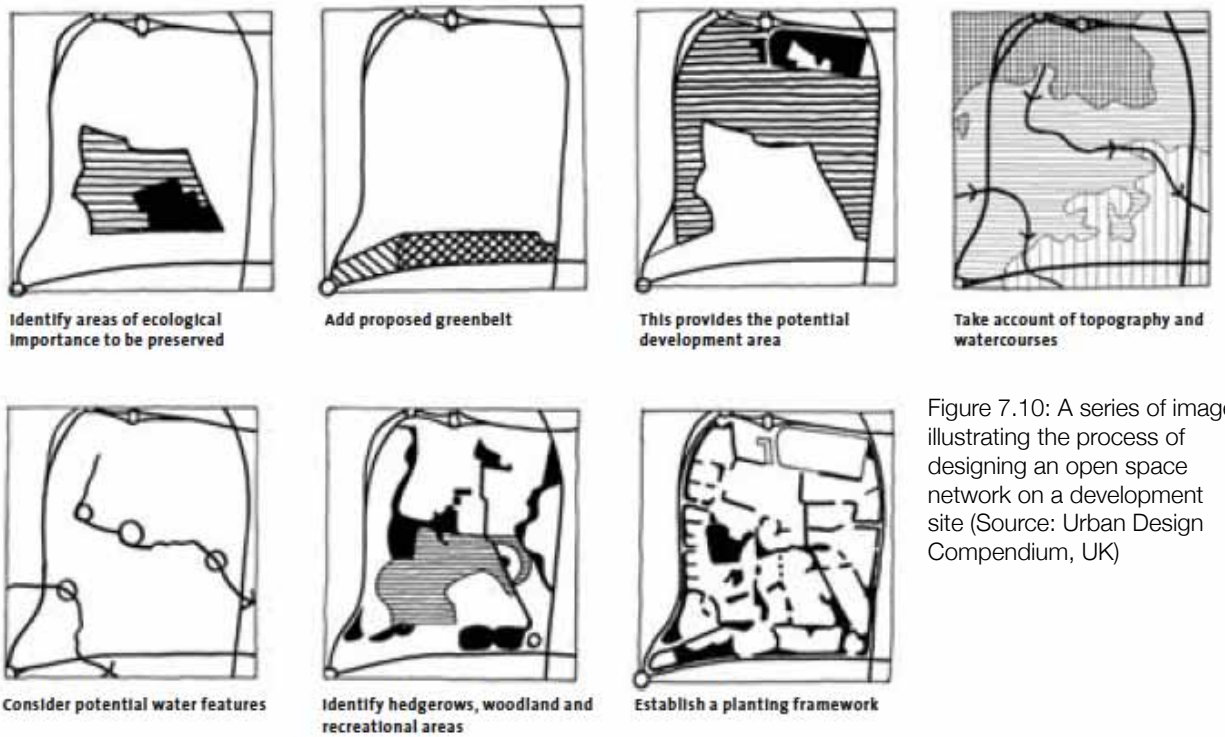


Figure 7.10: A series of images illustrating the process of designing an open space network on a development site (Source: Urban Design Compendium, UK)

Energy and resource efficiency

7.14 At the layout planning stage, we can start to influence the overall form and layout of development so as to increase energy efficiency and reduce resource depletion. Key considerations are:

- how the layout of streets and spaces relates to the path of the sun - will buildings restrict the amount of sunlight reaching a space or other buildings, which might in turn increase reliance on artificial forms of lighting;
- conversely, the use of features such as collonades and building orientation can create cooler streets and buildings that reduce the need for artificial cooling systems such as air conditioning and fans;
- avoiding single aspect buildings (i.e. buildings with windows on only one side) to prevent them receiving too much or too little sun and lacking cross-ventilation, which would create an uncomfortable living environment and increase reliance on polluting systems such as air conditioning;
- whether rainfall can be captured and used for irrigation purposes - for landscaping or urban agriculture;
- whether/ where urban agriculture can be incorporated into the design of public spaces;
- protecting existing trees and encourage the planting of new ones; and
- whether renewable source of energy can be incorporated and how.

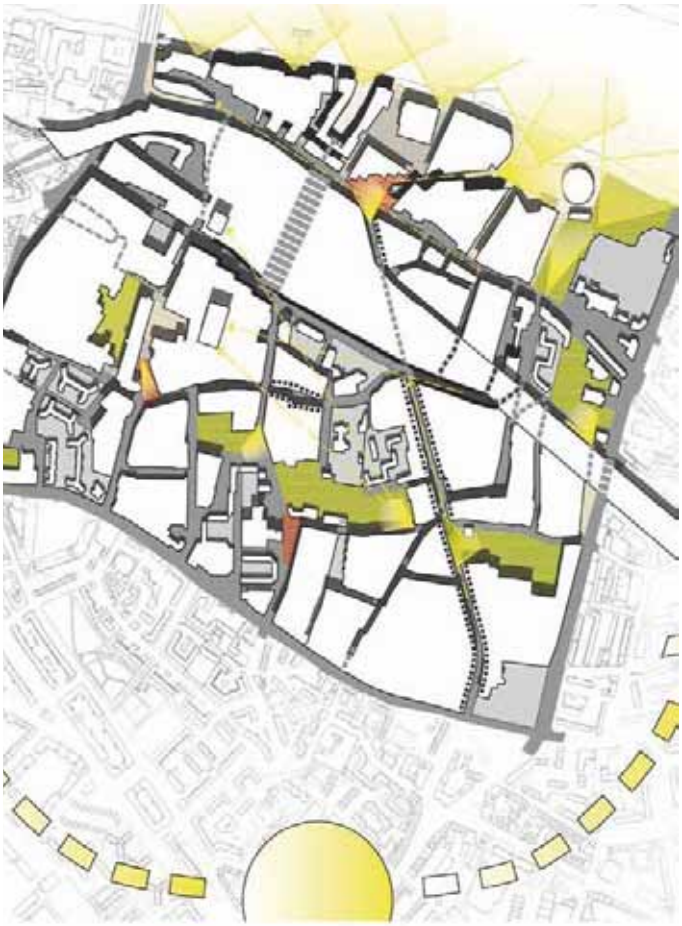


Figure 7.11 Taking into account the path of the sun in masterplanning (Tibbalds Planning and Urban Design, UK)

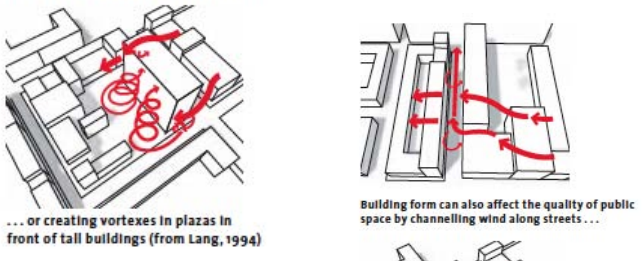


Figure 7.12: Considering microclimate in building layouts (Source: Urban Design Compendium, UK)

Figure 7.13: Collonades help to create a more comfortable environment and stimulate activity on the street (Lusaka)

Legibility

7.15 Through careful placement of routes, spaces, building lines and taller buildings, we can aid navigation at the neighbourhood level, and help to create a more distinctive environment.

7.16 Measures include:

- identifying areas of distinct character - derived from a common history, architectural style, function or something else;
- developing and building upon the character of different streets and spaces through the scale of development, nature of uses permitted, key features that are representative of the area which should be protected and reflected in new development;
- orienting key routes or spaces so as to open up views of landmarks;
- the placement of landmarks in prominent locations to provide focal points for key views;
- using detailed interventions to build upon character through providing guidance on the palette of materials, landscape interventions, architectural elements that should be used within an area.

Figure 7.14: Landmarks aid navigation (e.g. The mine shaft at Sables Mine, Kabwe)

Figure 7.15: Areas of distinct character are important to understanding a place (e.g. The Town Centre area of Kabwe)

Figure 7.16: Diagrams such as the one above provide a strong movement framework and illustrate how one moves through a place (Ealing Integrated Spatial Development Framework, and Tibbalds Planning and Urban Design, UK)

Block structure and plot size

7.17 A key issue in creating a compact city and 'walkable neighbourhoods', is the issue of block structure and plot sizes. At present, plot sizes are so large and urban areas are sprawling so much that they become difficult to move around by means other than the car. In addition, cul-de-sacs are also sometimes used in planning new layouts, which limit the choice of routes open to pedestrians and potentially increasing walking distances further. This results in poor pedestrian 'permeability'.

7.18 In order to create more pedestrian-friendly layouts, we need to consider:

- reducing plot sizes, perhaps offset by an increase in building heights, in order to make new developments more compact; and
- reduce the size of urban blocks: A recommended ideal size for a block, in order to maximise permeability is 80-100m. The average planned block size in Zambia is significantly larger than this (e.g. the standard block size within the Town Centre area of Kabwe is 250m by 100m). The Ministry of Local Government and Housing (MLGH) planning standards need to be revised to address this issue.

7.19 In order to create safer and livelier streets and spaces, the most successful block structure to adopt is the 'perimeter block'. This is where the buildings pushed to the street-facing frontage of the block, with communal space for interaction and games such as Insolo or Akabwambe, traditional buildings such as Insaaka, parking, access, servicing and, potentially, utilities to the rear. This creates more continuous frontage with doors, windows and shopfronts facing onto the street, meaning people are coming and going all the time and the street is overlooked, particularly

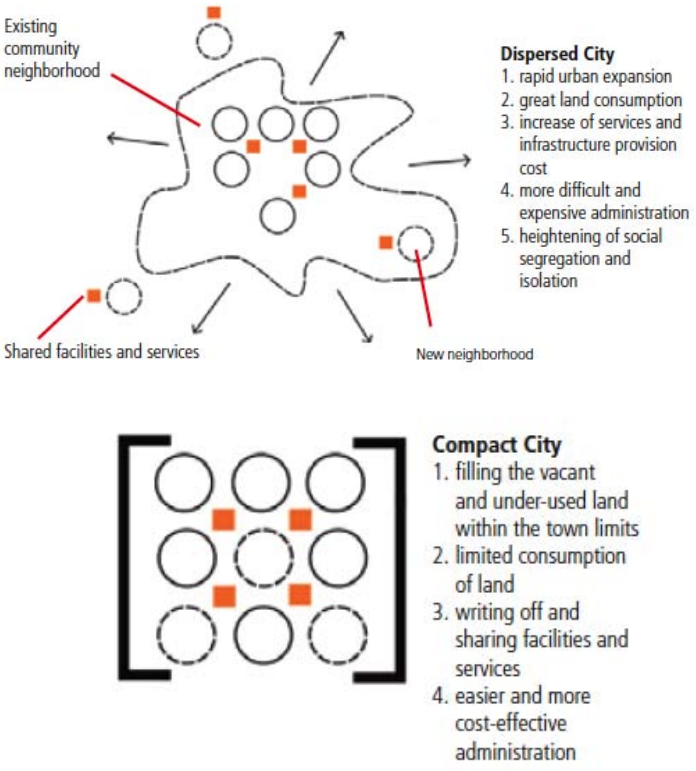


Figure 7.17: The land-take implications of developing at different densities (UN Habitat, taken from Planning Urban Settlements in South Sudan - Basic Concepts, UN)

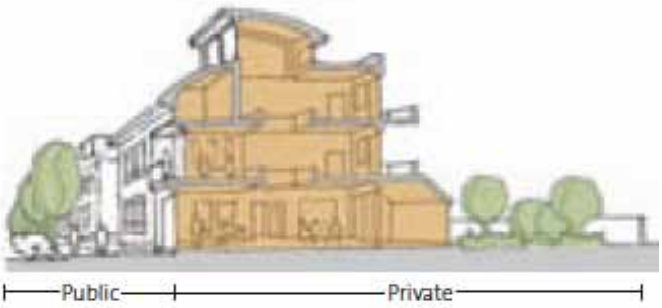


Figure 7.18: An illustration of how perimeter blocks define public and private space (Source: Urban Design Compendium, UK)

Figure 7.19: An aerial photograph of a high-density development designed around the principle of the perimeter block (Bo01, Vastra Hamnenn, Malmo

where combined with a secondary use at the upper level. This also provides a much clearer distinction between public and private space, discouraging trespassing.

Detail

7.20 In order to deliver on the above we need to have control over the detail of how development comes forward. Specifically, we should seek to:

- control the height and massing of buildings, which will deliver higher density development in the right locations and create landmarks, including in central locations, at nodes, along corridors and at the termination of key views;
- control the treatment of building frontages and therefore how 'active' they are and how well they overlook and animate the adjacent streets and spaces e.g. where the main frontage should be (and therefore doors/ windows be located);
- control the location of building lines, so that buildings can be brought closer to the street;
- increase the 'visual permeability' of boundary treatments, so that people are discouraged from putting up 2m blank solid walls that prevent overlooking of the street; and
- identify sites for mixed use development stipulating what should be provided at ground and upper floor levels.

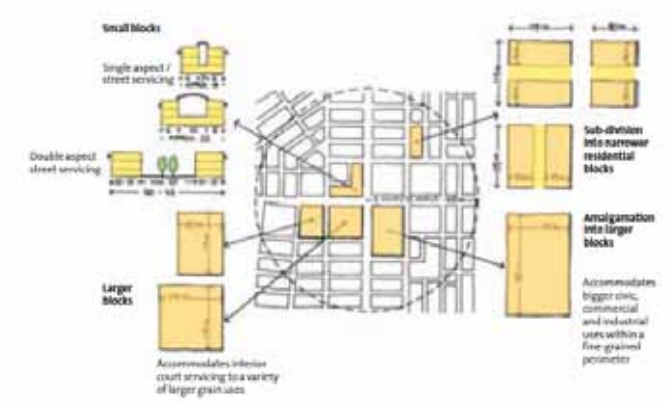


Figure 7.20: Diagram illlustrating the flexibility of having smaller block sizes (Source: Urban Design Compendium, UK)

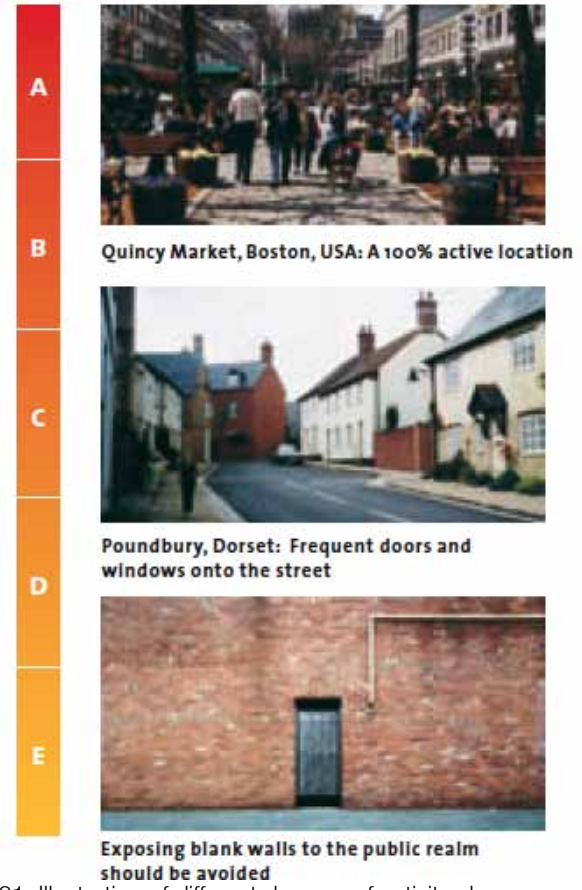


Figure 7.21: Illustration of different degrees of activity along building frontages (Source: Urban Design Compendium, UK)

Figure 7.22: Photos illustrating the visual permeability of different boundary treatments - bad vs good (both Livingstone)

Implementation

7.21 In order to realise these principles, it is imperative that planning in Zambia begins to 'plan ahead' of development, rather than playing 'catch up' and trying to apply them retrospectively to informal settlements. Ideally, this will need to form part of a logical planning process, preceded by the preparation of District or settlement-wide IDPs. Failing that, Councils should as a minimum ensure that when they secure land for development, it relates appropriately to the existing settlements within the District, rather than planning in a piecemeal fashion for sites provided on the whim of Traditional Leaders. Therefore, Councils need to start thinking now how much land they need to accommodate the growth of their population and where that land should logically be, taking into account the principles discussed above. MLGH is current preparing an 'IDP Toolkit' that should help Councils do this.

7.22 Planning ahead of development should include the delivery of trunk infrastructure to each block as a minimum prior to occupation, with individual occupiers then able to connect upon occupation of their plot.

7.23 In addition, provincial officers within the Department of Physical Planning and Housing and District Councils need to work much more closely to ensure that implementation happens in accordance with the proposed plans. This will need to include regular visits throughout the implementation of LAPs, from the setting out of plots, through to the construction of the buildings themselves.

Figure 7.23: There is a need to plan ahead of development in order to prevent the proliferation of informal settlements

Figure 7.24: New sites should be located on the edge of the existing urban area, close to existing facilities.

What might this look like?

Future Development Area 2: Kapiri Mposhi (Study Site)

7.24 Outlined over the following four pages is an example of how urban design principles might be applied to the layout planning process. This was a study undertaken for one of the 'Future Development Areas' (FDAs) identified within the Kapiri Mposhi IDP combined with the adjancent informal settlement (refer to Figures 6.18-19). This merely provides a short summary of some of the process, but by no means all. A full report of the study from which these images come is available as an annex to this document.

7.25 Figure 7.23 shows a summary site analysis diagram and the influences this might have on the development of the site, while Figure 7.24 identifies key opportunities and constraints that these issues present. Key factors include:

- adjacent land uses and the relationship any development will have with them, including destinations such as the town centre;
- how the site relates to the wider movement network, how access and servicing will be provided to the site;
- existing buildings present on the site and how they will be dealt with; and
- proximity to environmentally-sensitive sites such as wetland areas.

7.26 Figure 7.25 (overleaf) builds this into a development concept for the site, including:

- How the site relates to the adjacent Improvement Area (informal Settlement);
- How/ where development will be focused on the wider movement network.

7.27 Figure 7.26 (overleaf) outlines the development strategy for the site, including the movement network, locations for higher density mixed-use development, existing natural features to be retained and where community facilities are to be located.

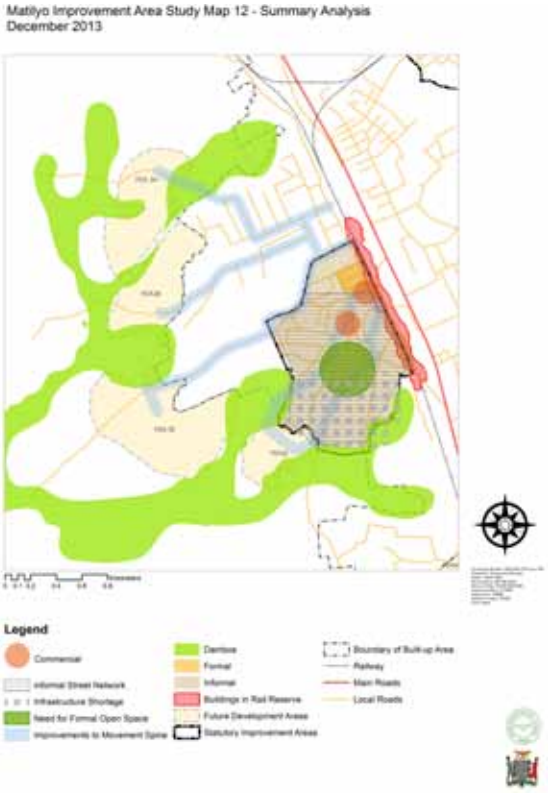


Figure 7.25: Kapiri Mposhi Future Development Area 2 Study: Summary Analysis

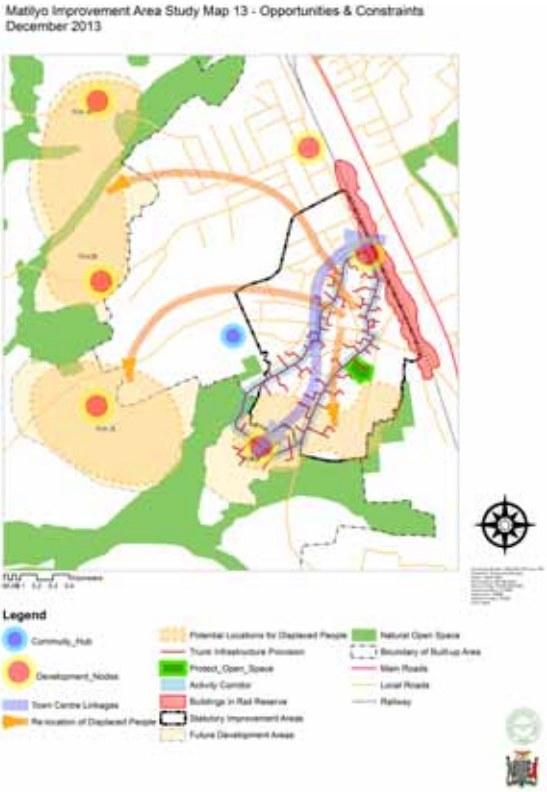


Figure 7.26: Kapiri Mposhi Future Development Area 2 Study: Constraints and Opportunities

7.28 Figure 7.27 outlines the open space strategy, including the main areas for public and communal open space. The latter are based on the principle of the perimeter block, with communal space at the heart of the majority of the blocks.

7.29 Figure 7.28 outlines the overall plot layout by use and building height, illustrating that higher density, mixed-use development is to be concentrated around key nodes on the public transport network. Each community is focused on a park, which is surrounded by a mix of public, commercial (including a market) and residential uses, housed within higher buildings that open onto the space, increasing the vibrancy, safety and enclosure of the space.

7.30 Figures 7.29-7.30 provide more detail on one of the Future Activity Nodes, including location for taller building elements, key views, the location of active frontages and an illustration of how the final scheme might look in two- and three-dimensions.

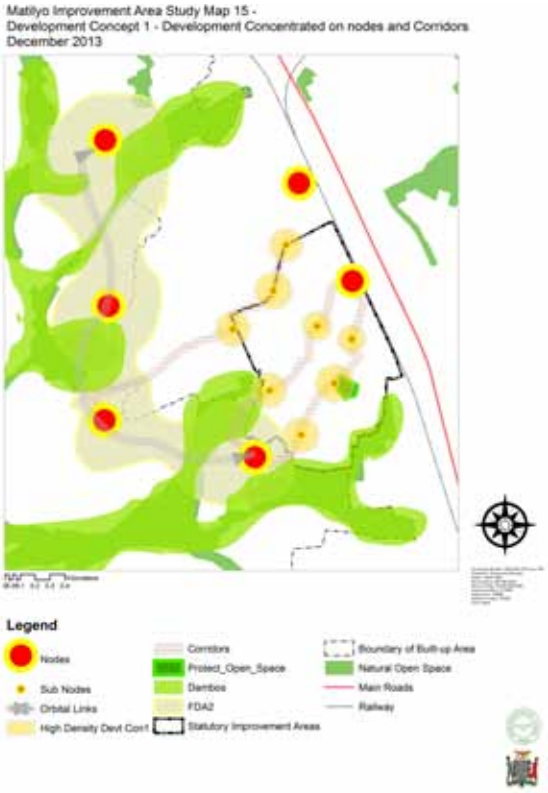


Figure 7.27: Kapiri Mposhi Future Development Area 2 Study: Development Concept

Figure 7.28: Kapiri Mposhi Future Development Area 2 Study: Development Strategy

Figure 7.29: Kapiri Mposhi Future Development Area 2 Study: Open Space Strategy

Figure 7.30: Kapiri Mposhi Future Development Area 2 Study: Strategy for Building Heights

Matilyo Improvement Area Study Map 31 - Future Activity Node Built Form
January 2014

Figure 7.31: Kapiri Mposhi Future Development Area 2 Study: Built Form

Figure 7.32: Kapiri Mposhi Future Development Area 2 Study: 3D Sketch of Proposed Development Node

Key Questions to ask yourself

- How does the site relate to the rest of the settlement?
- What contextual factors have been taken into consideration?
- How will the movement framework relate to the surrounding streets?
- How will the grid/ block structure maximise permeability?
- How have pedestrians/ cyclists been taken into account?
- What is the function and character of different streets and spaces?
- How will utilities be incorporated?
- How will informal trading be taken into consideration?
- How does the density of development relate to the mix of uses, location of centres and public transport infrastructure?
- Does the layout seek to mix and integrate uses or does it segregate them?
- Do we stipulate density requirements/ provide guidance on the type of built form we are seeking?
- How have environmental considerations been taken into account, including water supply, flooding, solar access, etc?
- What types of open space are being provided - do they form a network and are they linked?
- What will the character and function of each space be?
- How have the open spaces been related to the natural environment/ natural features (trees, water, topography etc.)
- Have different character areas been identified or defined?
- Has thought gone into how people (pedestrians in particular) will move to/ through the site and how they will experience it (visual guides etc)?
- How will buildings respond to the key nodes, corridors and edge conditions?
- Does the size of plots/ blocks help/ hinder the choice of routes?
- Do they allow for a range of building types/ sizes?
- Can the plot sizes be reduced?
- How will the buildings relate to the street?
- Do they provide active frontage and overlooking?
- Have we worked with the community?

8.0 Application to settlement upgrading

Introduction

8.1 One of the greatest issues facing planning in Zambia is the ongoing growth of informal settlements. Comprising approximately 70% of all development within Zambian settlements such as Lusaka[1], these areas are deficient in much of the most basic infrastructure that makes it possible to live a comfortable lifestyle, such as access to clean water, proper sanitation, electricity, waste collection services and well-maintained roads.

8.2 This chapter considers how the urban design principles discussed within the preceding chapters can be applied to the process of settlement upgrading.

A brief history of informal settlements in Zambia

8.3 Informal settlements in Zambia started developing in their current form during the early stages of colonial occupation. This occurred when people moved to the newly established urban areas in search of work in mining towns in the Copperbelt, or administrative centres such as Livingston and Lusaka. The formation of such settlements accelerated following independence, (for example, they made up 46% of housing in Lusaka in 1970[2]) and continues apace today, with approximately 70% of Lusaka's population currently living in informal settlements.

8.4 Ongoing attempts have been made to provide low-cost housing directly or upgrade existing settlements in order to provide a better quality living environment for citizens on low-incomes. This began with the construction of early townships by mining companies and councils in the 1930s. Councils and mining companies subsequently began to lease land for the construction of assisted, self-built housing by employees after 1945 in order to retain skilled workers. Then, in the late 1960s some of the first 'site and service' housing was pioneered in Zambia, whereby people were sold serviced plots and given technical support in constructing their own homes. At its peak (1966-70) 63,410 homes were built nationally via this method[3].

8.5 Following the enactment of the Housing (Statutory and Improvement Areas) Act in 1974, residents of informal settlements were able to obtain 30-year occupancy licences, providing greater security of tenure and encouraging people to invest in their properties. The World Bank Lusaka Project developed the 'basic servicing' concept, explained within Box 8.1[4]. This benefited 40% of Lusaka's population at the time, with services taken to 17,000 householders in informal settlements, serviced 7,600 overspill plots and provided 4,400 site and service plots. However, eventually maintenance of the infrastructure failed when the households proved reluctant to pay for the services provided. Wider application of the principles also failed when squatters and Councils could not cooperate on proposals to rationalise and service settlements elsewhere.

8.6 By the 1980s, policy shifted towards demolition and re-location, although settlers gained greater rights following the shift to multi-party politics in 1991. Due to a combination of the shift towards neo-liberal market policies, the sell-off of institutional housing and urban-rural economic imbalances, since then the main source of low-cost housing within Zambia has come to be the self-built informal variety. As a result, the explosive growth of urban areas is set to continue into the future and informal settlements will remain an issue for planners to contend with. Finding means to successfully upgrade and integrate these areas is, therefore, of paramount importance to planners and urban designers in Zambia.

1 UN Habitat, 2012. Zambia Urban Housing Sector Profile (P.50)
2 ibid (P.49)
3 ibid (P.49)
4 ibid (P.52)

The key issues facing informal settlements

8.7 The main challenges facing informal settlements include:

- Access to clean water - with 14% of urban dwellers (the majority in informal settlements and peri-urban areas)[5] reliant on shallow wells, which can often become contaminated by pit latrines and other forms of pollution. One in ten households endure more than a 30-minute walk to access clean water.
- Proper sanitation - For instance, approximately 90%[6] of households in informal settlements in Lusaka use pit latrines, often shared between several households.
- Roads are generally unpaved, poorly engineered and without drainage. These are often impassable in rainy season.
- There is no solid waste collection service, with most resorting to the burial or dumping of waste.
- Very few households have access to electricity, with charcoal the main form of fuel resulting in deforestation (Zambia's forests are retreating at 3.2% per annum[7]) and air pollution.

8.8 In addition, access to services, such as clinics and schools and access to employment opportunities is also a key issue that needs to be addressed in settlement upgrading, in order to effectively re-integrate such areas into the wider settlement.

8.9 Any upgrading process needs to tackle these issues as a priority, while also seeking to deliver a more attractive, successful and ultimately liveable environment that will stand the test of

Figure 8.1: Lack of waste management leads to the contamination of the local environment with health implications (Lukomba, Kapiri Mposhi District)

Figure 8.2: Poor drainage leads to flooding (Mukonchi, Kapiri Mposhi District)

5 UN Habitat, 2012. Zambia Urban Housing Sector Profile (P.102)
6 ibid (P.104)
7 ibid (P.108)

time. This means providing the above within a wider framework that will allow the settlement to develop into a distinctive and integrated component of the wider urban landscape.

How urban design principles can be applied

8.10 The overall objective of settlement upgrading is the improvement of the physical, social and economic environment of the existing settlement for the benefit of the residents. However, due to the 'organic' nature of informal settlements, conventional masterplanning approaches to achieving this goal needs to be abandoned in favour of a more flexible approach that recognises the distinct characteristics and complexities of each place. However regardless of the context, the needs to be governed by the following principles:

- minimising displacement and providing security of tenure;
- involving the community fully in planning and implementation;
- planning for the incremental delivery of infrastructure and services to match local affordability[8].

Overall Approach

8.11 It is recommended that the upgrading plan needs to be undertaken within the context of a wider development plan, such as an IDP. In this way, multiple areas can be tackled at once, rather than purely focusing on one location while the others remain neglected. A sequential approach to upgrading is recommended, otherwise known as the 'Whole wall approach' (explained within box 8.1[9]), which enables the delivery of basic services equally throughout the town, before progressing onto higher levels of servicing.

Figure 8.3: Lack of mains water supply requires the use of water kiosks, monopumps and shallow wells (Kapiri Mposhi District)

Box 8.1: The 'Whole Wall' Approach to Settlement Upgrading

The following approach is advocated by the UN in their document Urban Management Guidelines for South Sudan (Consultation Draft):

"When painting a wall, you do not paint a small section of the wall with undercoat, second coat and top coat; and then move onto another section; and then to another section.

You paint the whole wall with undercoat; then the whole wall with a second coat; and finally the whole wall with a top coat.

The delivery of services should adopt the 'whole wall' approach – deliver a basic level of services (= undercoat) equally and evenly to all households throughout the town, before providing areas with a higher level of services.

This is a more efficient and more equitable allocation of resources."

(UN-Habitat 2009, 5A.2(P.35))

8 UNDP, 2009. Urban Management Guidelines for Southern Sudan (P.34)
9 ibid (P.35)

Not only does this allow the more equitable and efficient distribution of resources, but also allows standards of servicing to be increased gradually as people's income levels increase.

8.12 As mentioned above, the default assumption is that a household or settlement should remain unless there is a pressing reason for its removal (for example, in order to deliver a key piece of infrastructure such as a road, school or hospital). This results in two potential alternative courses of action:

- where the house, area or settlement is to remain, the household should be given security of tenure and the strategy for upgrading prepared;
- where the house, area or settlement is to be removed, alternative plots must first be provided to the displaced households.

8.13 In relation to the former course of action, the settlement upgrading process shall usually comprise the provision of some of all of the following[10]:

- regularised layout;
- providing and /or upgrading roads and footpaths;
- upgrading the water supply;
- improving sanitation;
- providing an electricity supply;
- providing street lighting;
- providing solid waste management facilities;
- providing community facilities;
- providing support with housing construction;
- providing land tenure for residents (i.e. a 30-year Occupancy Licence).

8.14 The above should be supported by programmes to bring about community development and stimulate local economic activity.

8.15 Given the scale of the issues such areas are facing, urban design interventions are likely to be more strategic and functional in nature, focusing on such issues as densification, providing open space and improving access and movement.

8.16 Within the following sections we consider how urban design principles can be applied to reinforce this approach.

Site analysis

8.17 Many of the same principles apply to settlement upgrading as have been described within the Chapter on Public Participation (5) and the Chapter on Layout Planning/ Local Area Planning (7). However, the approach will need to be tailored to the more excluded and less affluent nature of the local population. If time and resources allow, undertake a survey of the local population in order to obtain a better understanding of the demographics, challenges and aspirations of people within the locality. If existing community structures are in place or have been established as part of a higher-level policy, then these may be employed to distribute and collect the survey.

8.18 As such areas are generally self-regulating, any strategy is likely to be more effective if the community are involved in the development of the strategy. Emphasis should be placed on face-to-face contact with the local community and undertaking site visits and walking tours, in order to understand the key issues on the ground. This will help to develop a fuller understanding of the issues, build trust and create opportunities for empowerment.

8.19 Key issues that should be considered are:

- the relationship to the higher level plan - the IDP - and its role in the wider strategy for the settlement;
- the pace and nature of change over time and how it might continue;

10 ibid (P.36)

- the relationship to the rest of the city structure, in particular those areas where jobs and services are/ will be provided;
- the relationship to the wider network of streets, footpaths, cycle and public transport networks;
- how it relates to the wider open space network - formal and informal;
- relationship to physical infrastructure networks - water and sanitation, electricity, waste management, street lighting;
- relationship to surrounding built form in terms of scale and density;
- key features of interest that exist within/ adjacent to the area in question - while the building or space itself may not be of value, the use it houses or its historical associations could be significant to a community;
- environmental features or hazards that may affect the local community, such as flood-prone areas;
- foci for activity, such as local markets/ trading places;
- potential synergies with any new areas planned for urban expansion in terms of new infrastructure provision. For example, upgraded roads leading to new development areas could serve both the new community and an existing informal settlement. If the same road accommodates trunk infrastructure such as water reticulation, electricity lines and street lights then this will have significant benefits for the local population. Newly planned areas may also be able to accommodate any residents displaced by the upgrading process.

8.20 The above will provide a sounder basis for progressing onto a design solution.

Figure 8.4: Informal settlements are growing rapidly and make up large areas of existing settlements (Matilyo, Kapiri Mposhi)


Figure 8.5: A local centre (Matilyo, Kapiri Mposhi District)

Access and Movement

8.21 The key objective should be to enhance the spatial integration of the area into the remainder of the settlement and provide proper roads and drainage throughout the settlement over time. This will in turn enable the establishment of a network of public transport and cycle routes that will enhance access to jobs and services for residents. Key considerations are:

- the relationship of the streets within the Improvement Area to the surrounding road network;
- how to develop a logical street network with a clear hierarchy out of the existing roads and pathways;
- developing clear design requirements for each street in the hierarchy, including its width, character, the type of vehicles it should be designed for and how infrastructure will be accommodated;
- defining the key movement routes where public transport links might be provided, trunk infrastructure and public realm improvements concentrated and economic and community activities might be focused; and
- coordinating any improvements with newly planned areas, so that upgrading and new infrastructure provision can be provided in tandem as discussed in 8.19.

Figure 8.6: Existing road network (Matilyo, Kapiri Mposhi District)

Figure 8.7: Creating a hierarchy of roads and pathways (Matilyo, Kapiri Mposhi)

Uses, Density and Activity

8.22 How densities can be increased within informal settlements is a particular challenge. Though they may also be dense in terms of population, often they are not in terms of scale and built form. The challenge is to retain or increase the density while improving living conditions. Building upon the identification of a logical route structure discussed in paragraph 8.21 above, key considerations are:

- where new activity nodes accommodating public transport hubs, higher density development, mixed-use development and public uses might be focused and how they will be integrated into the local settlement pattern, with the aim of minimising the displacement of people;
- how to integrate the buildings while making more efficient use of land, through the identification of new plots where land is being wasted;
- how the overall mix of housing types might be improved i.e. through providing apartments or medium or low-density (medium-high cost) plots.

Open space and public realm

8.23 Providing new public open space within informal settlements can be a challenge. By their very nature, informal settlements have usually grown in a manner whereby any space available is built upon by residents seeking to carve out a living environment as close as possible to existing jobs and services. As a result, open space is not something that usually happens naturally. However, through a methodical and logical upgrading process, such space can be identified and defined successfully.

8.24 In planning for informal settlements key considerations are as follows:

- the hierarchy of open space that can be developed, taking into account the degree that it will be public, semi-private or private;
- how any new open space will link to existing open spaces within the wider area and be interlinked by the new street network defined as part of the upgrading process; and

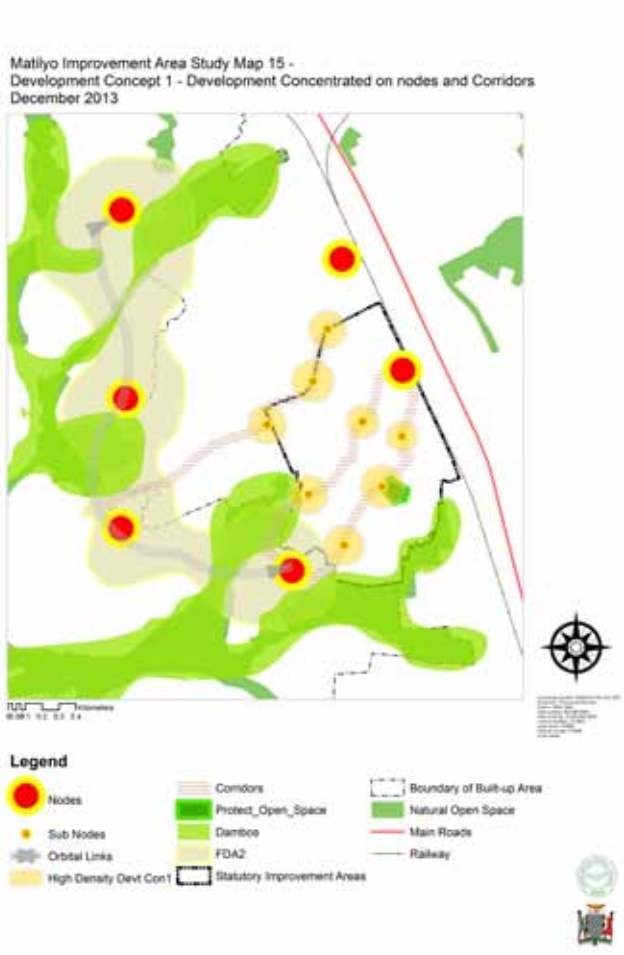


Figure 8.8: Identifying local activity nodes (Matilyo, Kapiri Mposhi)

Figure 8.9: Creation of new open space (Lukomba, Kapiri Mposhi District)

- whether it is desirable to provide communal amenity space based on the perimeter block principle, how this could be provided and how this could contribute towards multiple aims including providing amenity space, communal infrastructure and space for urban agriculture.

8.25 Another important consideration is how the spaces can be managed in such a way as to avoid them being developed. One option is through allocating a proportion of the space to a commercial venture free of charge for a limited period, on the condition that the occupant maintain and police the space. The concession can then be reviewed at regular intervals and the occupant evicted if they do not meet the required standards. The local community should also be active in the policing of such spaces through local governance structures, such as local development committees.

Blocks and Plots

8.26 As outlined above, the key objective in developing a block and plot layout is minimising the need for resettlement. This necessitates a relaxation in planning standards and a more flexible approach, which can result in a more organic and potentially unique layout. Key considerations include:

- the need to devise a layout that provides a meaningful route network, maximises access to infrastructure and provides vehicular or pedestrian access to each plot;
- keeping block sizes small (ideally under 100m x 100m or 1 ha) in order to maximise permeability - using narrow paths and tracks that prioritise pedestrian and cycle access can help to achieve this aim;
- increasing density through reducing the size of plots, particularly close to public transport nodes, complimented by the provision of some larger plots for apartments, mixed-use buildings and community uses in those locations. Within the study undertaken, plot sizes were reduced 50% against MLGH standards, as stipulated by the IDP, although 100sqm was considered to be the minimum reasonable plot size;
- provide a wide variety of plot sizes in order to create a diverse range of properties in order to provide choice within the local property market;
- exploiting the space created through using smaller plot sizes to create new plots which can accommodate residents in need of resettlement and promote the more efficient use of infrastructure; and
- increasing plot sizes where a plot fronts onto a secondary or primary street, in order to allow for potential future vehicular access.

Built Form

8.27 As for newly-planned areas, emphasis should be placed on increasing densities close to public transport nodes and along development corridors where possible. Key considerations include:

- identifying blocks and plots for higher density development where they lie in close proximity to public transport nodes;
- promoting higher density development around existing/ newly created open space in order to provide a strong edge to the space and enhance passive surveillance;
- the identification of any key views and where building heights other building elements should respond e.g. through using taller building elements to terminate a view;
- where active frontages should be provided to enhance the vibrancy and/ or safety of a street;

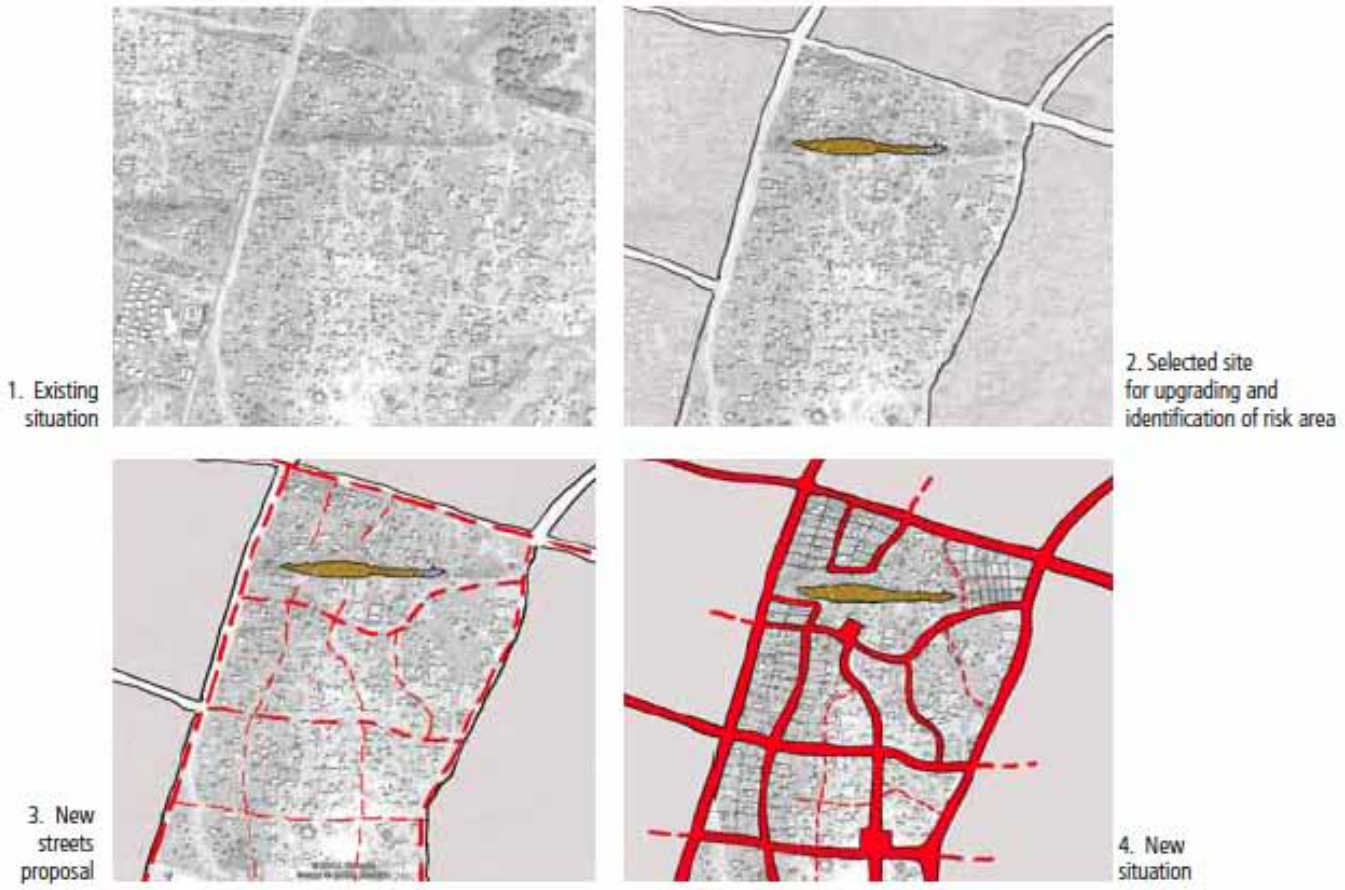


Figure 8.10: Developing a street network from the existing informal network of paths and tracks (Source: Planning Urban Settlements in South Sudan - Basic Concepts, UN-Habitat, 2012)

Figure 8.11: New road network, block and plot structure for (Matilyo, Kapiri Mposhi)

Figure 8.12: New blocks and plots arranged around a communal open space (Matilyo, Kapiri Mposhi)

- where buildings should be located on a new plot in order to define a street edge and overlook the street;
- any local design features that should be encouraged, such as verandas, in order to create a more comfortable living environment and reinforce local identity; and
- permitting the use of lower-cost, more traditional and locally available building materials.

Sustainable Resource Management and Infrastructure Provision

8.28 In order to promote more efficient use of resources, the approach to managing development should be guided by compact city principles. This involves the densification of development within the existing built-up area through making use of under-utilised land and increasing building heights in accessible locations. This serves to reduce the cost of infrastructure, maximise access by sustainable transport modes and reduce land-take overall.

8.29 The approach to infrastructure provision should be broadly in line with the 'whole wall approach', whereby basic servicing is provided to all areas in phases, and then sequentially upgraded over time as resources become available. This could be achieved through:

- providing mains water and sewerage connections, electricity and street lighting along spines roads, and gradually expanded to more peripheral areas;
- providing basic infrastructure i.e. connection of water, sewerage and electricity networks, to each block first and expanded to each plot later as resources (private, public or other) become available.

8.30 In terms of ecology, key considerations should be:

Figure 8.13: Higher buildings creating and edge to and overlooking the street (Kabwe)

Figure 8.14: Local design features, such as collonades and the use of paint to create a more vibrant colour scheme (Kabwe)

- the need to work with the community to direct development away from environmentally-sensitive locations, such as dambos. The encroachment on these areas poses threats both to residents through flooding and the ecosystem through the pollution of the water table that can result. The loss of natural habitat through the felling of trees and vegetation further degrades the natural environment.
- the potential use of environmentally-sensitive areas for small-scale subsistence agriculture, or informal recreation, subject to some controls over the total area used, so as not to result in the area becoming over-exploited.
- the potential to give some areas over to urban agriculture within the communal and public open spaces defined as part of the layout planning process. This would help to offset the loss of incidental open space that currently exists on-site.
- the protection and incorporation of existing trees in new layouts where possible, in order to protect existing habitats. Combined with the planting of new trees in newly created open spaces and along streets, this can enhance carbon sequestration and improve the quality and character of the overall living environment. The protection of existing and newly planted trees would need to be policed and enforced by the Council in partnership with local residents.

8.31 Key considerations in relation to energy production and use include:

- encouraging the use of environmentally-responsive design features, such as verandas and colonnades, minimum window sizes and cross-ventilation (i.e. windows on two sides of the building)

Figure 8.15: The use of environmentally sensitive areas for subsistence agriculture (Matilyo, Kapiri Mposhi)

Figure 8.16: The protection and incorporating of trees to improve the quality and character of the built environment and improve carbon sequestration (Kabwe)

which help to create a more comfortable living environment for residents without the need for energy intensive measures, such as artificial lighting and fans;

- use of cheap renewable energy sources, such as solar and solar thermal technology. Solar thermal technology provides a relatively cheap environmentally-friendly means of heating water for washing and cleaning, solar technology is being developed by a range of organisations to power household appliances and small devices, while solar cookers offer similar potential for cooking. Partnerships with NGOs and other organisations promoting such technologies should be investigated.

8.32 Key considerations in relation to waste management include:

- identifying areas (such as within communal open space or private gardens) for composting in order to reduce waste generation and support urban agriculture through the provision of fertiliser;
- working with the community to coordinate informal waste collection activities;
- expanding formal waste collection activities in parallel while ensuring that they are coordinated with the informal activities in order to maximise impact. Formal collection activities will be more feasible as roads are upgraded as part of the upgrading process.

Implementation

8.33 In terms of implementation, the key issue is community involvement at all stages of the process. The community will need to be involved from the outset in order to feel a sense of ownership of the solutions that result. Utilising existing committee structures can be efficient, but only if they are respected by and representative of the local community. Possible methods for community engagement are outlined within Section 5.

8.34 Monitoring will need to be carried out on an ongoing process and ideally in partnership with the local community, in order to ensure that what has been developed on paper is realised on the ground.

What might this look like?

Matilyo Improvement Area: Kapiri Mposhi (Study Area)

8.35 We have undertaken a hypothetical upgrading exercise in Matilyo in Kapiri Mposhi. This area has been identified as an Improvement Area under the Draft Kapiri Mposhi IDP (refer to Figure 6.18-19). Outlined over the following four pages is an example of how urban design principles might be applied to the upgrading process. This merely provides a short summary of some of the process, but by no means all. A full report of the study from which these images come is available as an annex to this document.

8.36 Figure 8.17 identifies key opportunities and constraints that these issues present. Key factors include:

- minimising the demolition of existing buildings, respecting informal boundaries where possible and providing areas for re-settlement as close as possible to the point of origin;
- the extent of any existing infrastructure networks and how they can be expanded;
- adjacent land uses and the relationship any development will have with them, including destinations such as the town centre;
- creating a logical movement network based around a new spine road linking to the Future Development Area;
- proximity to environmentally-sensitive sites such as wetland areas.

8.37 Figure 8.18 (opposite) builds this into a development concept for the site, including:

- how the site relates to the adjacent Future Development Area;
- how/ where development will be focused on the wider movement network.

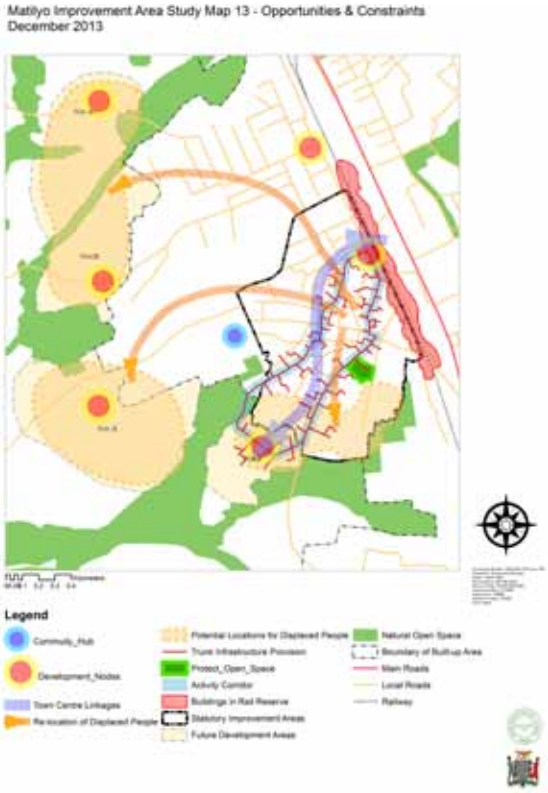


Figure 8.17: Matilyo Study: Opportunities and Constraints

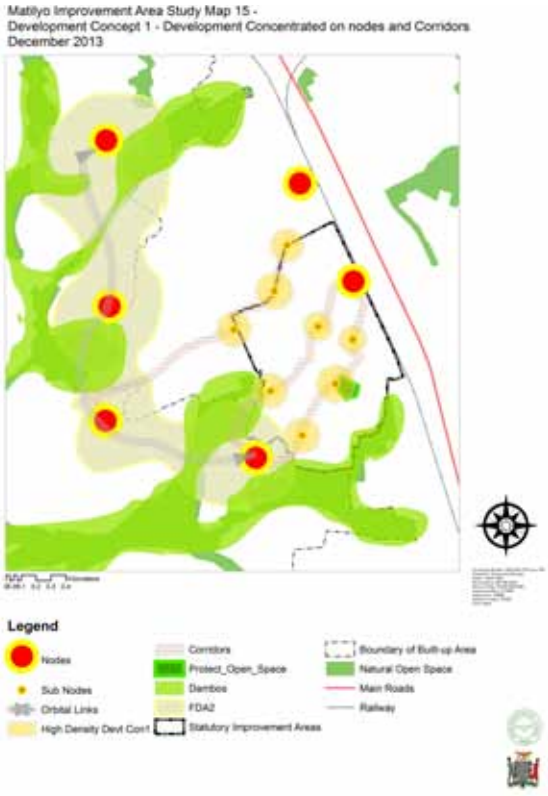


Figure 8.18: Matilyo Study: Development Concept

8.38 Figure 8.19 outlines the development strategy for the site, including the movement network, locations for open space provision, provision of commercial and community uses at public transport nodes, providing a formal layout and creating an urban structure that allows more efficient use of infrastructure.

8.39 Figure 8.20 outlines the open space strategy, including the main areas for public and communal open space. In allocating plots, the layout has sought to identify land for new public and communal open space within the existing urban grain. The latter are based on the principle of the perimeter block, with shared space at the heart of the majority of the blocks.

8.40 Figures 8.21 outlines the overall plot layout by use and building height, illustrating that space for new plots has been identified in order to make more efficient use of land and infrastructure and that higher density, mixed-use development is to be concentrated around key nodes on the public transport network where possible.

8.41 Figures 8.22-8.23 provide more detail on one of the Activity Nodes, including location for taller building elements, key views, the location of active frontages and an illustration of how the final scheme might look in two- and three-dimensions.

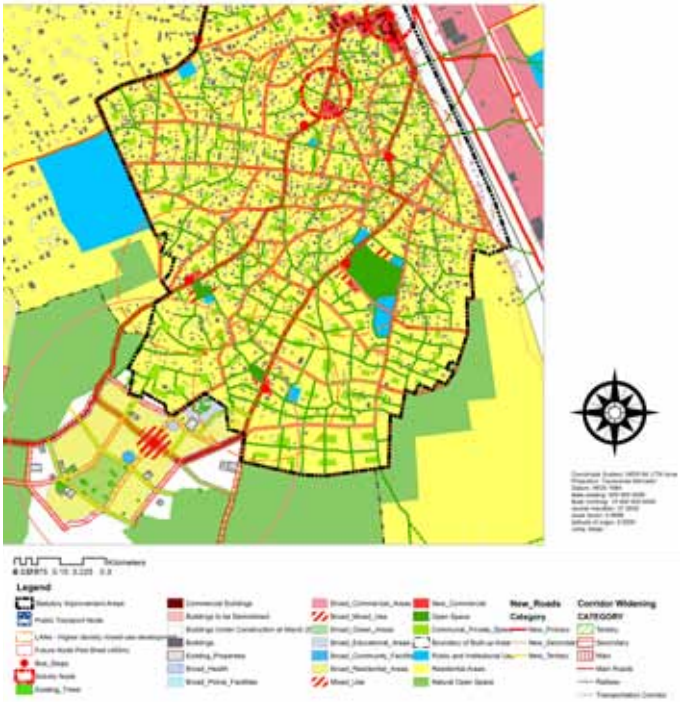


Figure 8.19: Matilyo Study: Development Strategy

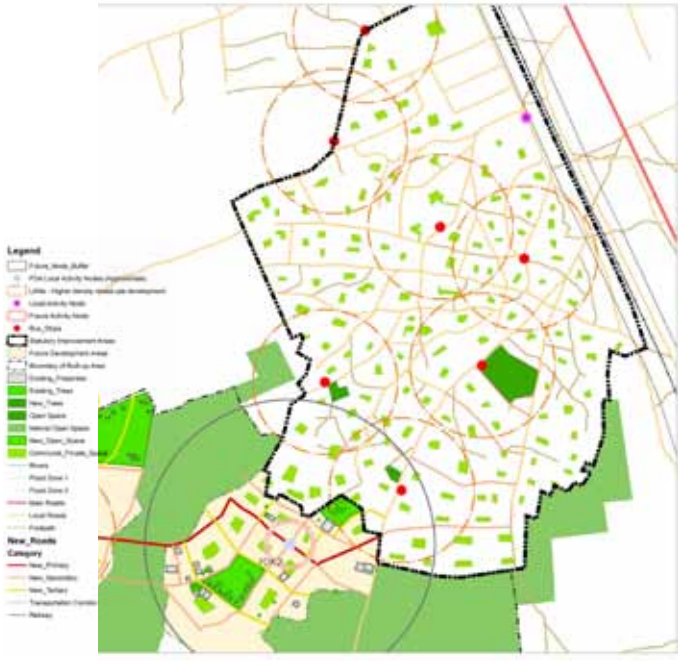


Figure 8.20: Matilyo Study: Open Space Strategy

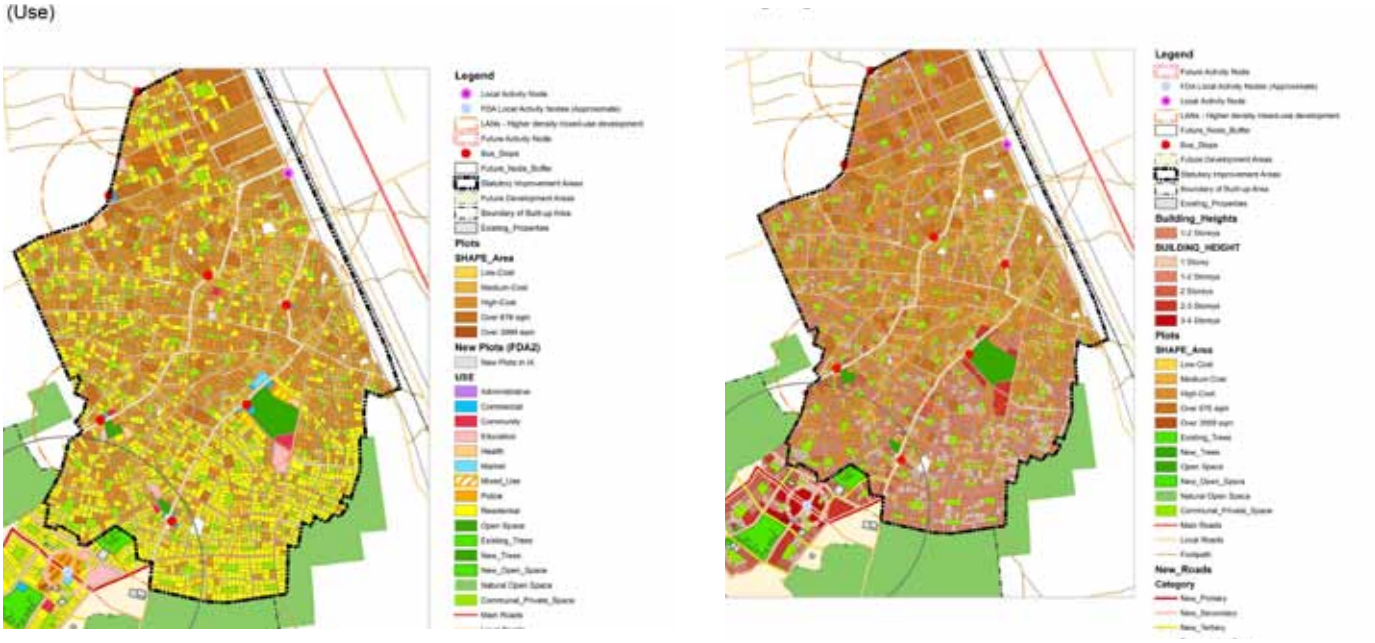


Figure 8.21 (left): Matilyo Study: Land Use; and Building Heights (above)

Figure 8.22: Matilyo Study: Illustrative Scheme

Figure 8.23:Matilyo Study: 3D Sketch of Proposed Development Node

Key Questions to ask yourself

- How well do we understand the area?
- Do we need to undertake a survey?
- Do we know the history of the area?
- How well do we know the community?
- What existing local governance structures are in place for us to engage with? Are they representative and do they truly represent the community's interests?
- What are the external factors influencing the community?
- What kind of infrastructure provision is available?
- What kind of social/ community facilities are there?
- What makes the settlement different or unique?
- How does the area relate to surrounding movement network, public transport network, open space network, built form/ density, features of interest, environmental hazards, economic foci and adjacent development areas?
- Does the framework provide a logical street network with a clear hierarchy?
- Are there clear design requirements for each street that would provide a clear character and relate to its function?
- Have nodes/ corridors for high density mixed-use development been identified and how will they be integrated?
- How will new buildings be integrated in order to improve the overall continuity and enclosure of streets and spaces?
- Have I improved the overall mix of housing types/ sizes?
- Is there a hierarchy of space types?
- Is there a network of open space?
- How will open spaces be protected/ managed?
- Do the block sizes maximise permeability?
- Do the plot sizes serve to increase density, variety, activity and adaptability?
- Is there a variety of plot sizes?
- Do the plot sizes allow for vehicular access where required?
- How will building heights relate to transport, infrastructure, open space and key views?
- How will building lines and active frontages be employed to enliven, enclose and enhance the safety of the street?
- What local design features will be encouraged?
- How will infrastructure be provided? Is it equitable and efficient?
- How will the proposed layout protect and enhance the natural environment, including sensitive features such as wetland areas and trees?
- Has due consideration been given to subsistence agriculture?
- Has existing/ new tree planting been factored in?
- How will energy use be reduced and renewable technologies be encouraged?
- How will sustainable management practices be encouraged, such as composting and formal and informal waste collection?
- How will the Council and community ensure that the Plan is implemented?

9. Application to Development Control

Introduction

9.1 Development Control (DC) is concerned with the management and coordination of development through securing compliance with the set laws, policies and standards for an area.

9.2 While there is little written policy upon which to base planning decisions (only legislation and regulations), this will become increasingly so in future, with IDPs and in some instances, Local Area Plans setting down a policy framework which should be followed in making development control decisions. However, while this is some way off, we should still be seeking to apply the same thinking in our development control decisions now.

Why is urban design important to its implementation?

9.3 DC is the 'front line' of planning work and, combined with enforcement and the appeals process is where all those nice policies and pictures set at the higher level are actually delivered on the ground. It is therefore crucial to delivering good design and vice versa, urban design is crucial to delivering good planning.

How does urban design apply at this level?

9.4 There are a number of key urban design issues we should be considering at this level. These are outlined below.

Contextual information

9.5 It has been noted that there are too many planning applications being submitted without any details on the site context and surrounding development. As planners we are meant to be assembling places that are designed in a way that makes sense - has 'sanity' to it - providing a coherent and well put together built environment. However, this is difficult to do so when people are not providing any information with their planning applications on what the context is. Where possible and especially for larger applications for built development, this information should form part of any

Figure 9.1: Photos of different types of development (Kapiri Mposhi and Lusaka)

development application, particularly within a built up area. It would also be desirable for change of use and subdivision plans. This could include:

- showing adjacent buildings on plans and elevations;
- providing photos of the site and its surroundings; and
- providing details of site access, including how it relates to the surrounding streets.

9.6 Not only should the application explain how it relates to the surrounding context it should also be clear how the proposal has been designed to relate to it. In the case of larger applications e.g. large industrial installations, supermarkets, shopping malls/ commercial developments, developments of more than ten units, perhaps we should be asking for a design statement to explain and justify the key design decisions.

9.7 Where an IDP or layout plan has been prepared, this will obviously set a series of more detailed policy requirements with which any proposal should comply, making the following more easy to judge. However, even in the absence of any such plan, there are still a number of questions we should be asking ourselves. These are considered below.

Delivering higher-density mixed-use development

9.8 Is the density/ mix of uses appropriate for the location? Is it located in/ close to a centre, 'node' or 'transport corridor' and therefore should we be encouraging higher density development with a greater mix of uses? If so, for a change of use application:

- Will the proposed change of use increase the mix of uses within an area, especially where it is close to a centre, node or transport corridor?
- Will it deliver more than one primary use on the site e.g. a mix of commercial and residential?

Figure 9.2: Example of plans showing adjacent buildings (ATP Architects, UK)

Figure 9.3: Photographs of the site context with map to aid orientation (Tibbalds Planning and Urban Design, UK)

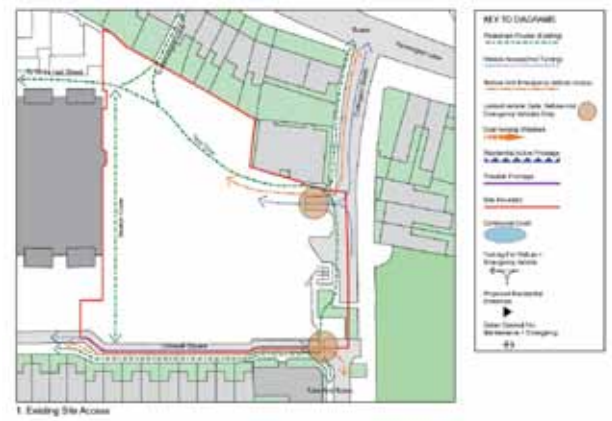


Figure 9.4: Details of access by different modes of transport (ATP Architects, UK)

- Will the proposed use sit comfortably with its neighbours?
- Is the building good for the intended purpose? For example, using houses as offices runs contrary to the compact city approach as offices attract large numbers of people and are conducive to being housed in simple, open plan, large floorplate, taller buildings in central locations where they can be accessed easily by foot, bicycle or public transport. Locating them in houses makes getting to them more difficult and maximises car use.

9.9 For a sub-division application:

- Will it present the opportunity to increase the density of built development in an accessible location i.e. a town centre, or close to a transport node or corridor?

9.10 For an application to develop

- Does the proposal seek to maximise the development of the site through delivering taller buildings or more flatted development/ apartments?

Movement and connectivity

9.11 In the case of any application:

- How does the site relate to the network of surrounding streets?
- How will access be provided and how does that relate to adjacent services/ facilities within the neighbourhood or settlement?
- Does the proposal provide for easy access by foot and bicycle to the adjacent services and facilities, public transport etc?
- Are the routes direct? Will they be safe? Does they encourage people to travel on foot or by public transport?

Figure 9.5: Photographs of buildings with retail use at ground floor and a secondary use above (Dar-es-Salaam and Ndola)

Figure 9.6: Mono-functional office development such as this fails to activate the surrounding streets and spaces 24 hours a day and encourages the use of the car - offices can be easily mixed with resdiential and retail uses (Lusaka).

Figure 9.7: Using houses as offices exacerbates low-density development and encourages car usage (Lusaka)

Built form

9.12 In the case of applications for development, how do the buildings relate to the street/ surroundings in terms of building line, scale and massing?

- Is the building line consistent with adjacent properties and helping to provide continuity and a sense of 'enclosure' to the street?
- Is the scale of the building appropriate to the width of the street and the type of street we are trying to create? If it is too low it may feel too 'suburban', too high and it might be oppressive.
- Does the scale and massing relate appropriately to the adjacent buildings?
- If a building is tall, is it in the right place? Conversely, if it is small, is it in the wrong place? Would a taller building provide a landmark, terminate a view or help to define the street better?

Detail

9.13 In the case of buildings and boundary treatments:

- Does the building have doors onto the street and windows overlooking the street or space?

Figure 9.8: Example of new buildings (left) relating appropriately to existing older buildings (right) through the arrangement (or 'articulation') of the building forms (Dublin)

Figure 9.9: Example of how buildings can provide a strong sense of enclosure (Dar-es-Salaam)

Figure 9.10: How different boundary treatments can be employed to clearly distinguish between public and 'defensible' private space without an impenetrable 2m high front boundary wall that detracts from both the appearance and safety of the street (both Livingstone)

- Does the boundary allow views through to overlook the street, thereby increasing public safety?
- Do the materials relate to those used commonly within the locality i.e. are they part of the character of the area?

Securing Implementation and Enforcement

9.14 In terms of enforcing the above, there is a need for closer cooperation and working arrangements between local councils and Government departments, including the Department of Physical planning and Housing, the Buildings Department, the Ministry of Lands, the Survey Department and the Road Development Agency. Through open lines of communication, the conformity of development within approved plans can be tracked more effectively by multiple bodies, not only the Council

Figure 9.11: Working together to secure implementation (Kapiri Mposhi)

10. Concluding comments

10.1 So, this handbook is designed in order to introduce people to the concept of 'urban design'. While some will be familiar with the design process and some of the ideas discussed here, there is currently a lack of evidence demonstrating their application on the ground in the Zambia. This document has been written to help us to start thinking how we can address this situation.

10.2 With the new planning Bill coming into force, this is an opportune time for such a project. This will revolutionise the way planning operates in Zambia and provides an opportunity to deliver better designed, more liveable and more distinctive 'places'. Urban design is crucial to realising this opportunity.

10.3 Remember, this document is not to be left gathering dust on the shelf! It is meant to be a 'think piece' to help us consider creatively how these ideas can be adapted to the Zambian context. Please use this opportunity to do so, and in the process change Zambian settlements for the better.

Bibliography

1. Carter, T, 2009. Urban Management Guidelines for Southern Sudan, Consultation Draft Version 1.3. United Nations Development Programme (Unpublshed)
2. Chambers, R., 2007. *From PRA to PLA and Pluralism: Practice and Theory.* Institute of Development Studies, University of Sussex, Brighton. Available at: http://opendocs.ids.ac.uk/opendocs/handle/123456789/660 [Accessed 20th November 2012]
3. Choma Municipal Council, 2010. *Urban Design Handbook: Inspiration for Choma*, Zambia, personal communication [Sent 18th June 2012].
4. Cuthbert, Alexander C., 2007. Urban Design International, Volume 12.4: *Urban design: requiem for an era - review and critique of the last 50 years*. UK: Palgrave Macmillan. Available through: http://search.proquest.com/docview/194514506?accountid=44993 [Accessed: 14th October 2012].
5. Gehl, J.,1971. *Life Between Buildings*, Denmark: Danish Architecture Press. Distributed by Island Press. Available at: http://www.rudi.net/pages/8741 [Accessed: 21st October 2012]
6. Institute for Transportation and Development Policy (ITDP), Environmental Planning Collaborative (EPC), 2011. *Better Streets: A guide to street design in urban India.* Available at: www.itdp.org/library/publications/better-streets-better-cities/ [Accessed 6th February 2012]
7. Jackson, Edward, T. Kassam, Yusuf (ed), 1998. *Knowledge Shared - Participatory Evaluation in Development Cooperation*. US/ Canada: Kumarian Press, IDRC Canada. Available at: http://www.ebooks.com/ [Accessed 20th August 2012]
8. Jacobs, J., 1961. *The Death and Life of Great American Cities*, New York, USA: Random House
9. Kindon, S. Pain, R. Kesby, M. (ed), 2007. Connecting People, Participation and Place, 2007. In: *Participatory Action Research Approaches and Methods - Connecting People, Participation and Place*. Oxford, UK: Routledge. Ch1. Available at http://www.ebooks.com/ [Accessed 20th August 2012]
10. Landman, K., 2008. Gated neighbourhoods in South Africa: an appropriate urban design approach? *Urban Design International, Volume 8.* UK: Palgrave Macmillan. Available through: http://www.palgrave-journals.com/udi/index.html [Accessed 31st October 2012]
11. Lloyd, R., 2003. Defining spatial concepts towards and African urban system. *Urban Design International, Volume 8.* UK: Palgrave Macmillan. Available through: http://www.palgrave-journals.com/udi/index.html [Accessed: 3rd November 2012]
12. Low, I., 2003. Space and reconciliation: Cape Town and the South African city under transformation. *Urban Design International, Volume 8.* UK: Palgrave Macmillan. Available through: http://www.palgrave-journals.com/udi/index.html [Accessed: 1st November 2012]
13. Lynch, K., 1960. *The Image of the City*. Cambridge MA, USA: MIT Press
14. Magalhaes F. Di Villarosa, F (ed)., 2012. *Slum Upgrading: Lessons Learned from Brazil*. Washington DC, USA: Inter-American Development Bank. Available at: www.citiesalliance.org/.../Slum-Upgrading-Lessons-from-Brazil.pdf [Accessed: 9th October 2012]
15. Masons, Andy ed (2009) The Barefoot Guide to Working With Organisations and Social Change The Barefoot Collective Available at: www.barefootguide.org [Accessed 20th November 2012]
16. Ministry for the Environment, 2006. *Urban Design Toolkit: Third Edition*, *March 2009.* Wellington, New Zealand. Available at: www.mfe.govt.nz/publications/urban/urban-toolkit-2009/index.html [Accessed 24th January 2013]
17. Narayanasamy N., 2009. *Participatory Rural Appraisal, Principles, Methods and Application*. New Delhi, India: SAGE. Available at: http://www.ebooks.com/ [Accessed 20th August 2012]

18. Nomico, M. Sanders, S., 2003. Dichotomies of urban change in Durban. *Urban Design International, Volume 8.* UK: Palgrave Macmillan. Available through: http://www.palgrave-journals.com/udi/index.html [Accessed: 4th November 2012]

19. Project for Public Spaces, 2012. *Placemaking and the Future of Cities (Draft)*. Project for Public Spaces/ UN Habitat. Available at: www.pps.org/wp.../PPS-Placemaking-and-the-Future-of-Cities.pdf [Accessed 29th October 2012].

20. Schaug, E., 2003. Urban design in black South African settlements, *Urban Design International, Volume 8.* UK, Palgrave Macmillan Available through: http://www.palgrave-journals.com/udi/index.html [Accessed: 30th October 2012]

21. The Scottish Government, 2010. *Designing Streets: A Policy Statement for Scotland.* Edinburgh. Available at: http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/ Designing [Accessed 17th January 2013]

22. The Scottish Executive, 2001. *Designing Places: A Policy Statement for Scotland*. Edinburgh. Available at: http://www.scotland.gov.uk/Topics/Built-Environment/planning/National-Planning-Policy/Designing [Avvessed 17th January 2013]

23. Skinner, C., 2008. *Street Trade in Africa: A Review.* South Africa: School of Development Studies, University of Kwazulu-Natal. Available at: www.inclusivecities.org/wp.../Skinner_Street_Trade_in_Africa. pdf [Accessed: 5th November 2012]

24. Smit, W. Hancock, T. Kumaresen, J. Santos-Burgoa, C. Sanchez-Kobashi Menezes, R. Friel, S.,2011. Toward a Research and Action Agenda on Urban Planning/ Design and and Health Equity in Cities in Low and middle-Income Countries. *Journal of Urban Health: Bulletin of New York Academy of Medicine Vol.88, No.5:* New York: The New York Academy of Medecine. Available through: http://www.ncbi.nlm. nih.gov/pmc/articles/PMC3191210/ [Accessed: 6th November 2012]

25. Southworth, B., 2002. Urban design in action: the City of Cape Town's Dignified Places Programme - implementation of new public spaces towards integration and urban regeneration in South Africa. *Urban Design International, Volume 8.* UK, Palgrave Macmillan. Available through: http://www.palgrave-journals.com/udi/index.html [Accessed: 31st October 2012]

26. Tibbalds, F., 1992. *Making People-Friendly Towns: Improving the public environment in towns and cities*. UK: Longman Group

27. Turok, I., 2009. *Driving Density Higher: Challenges for Central Cape Town (Draft for Discussion)*, African Centre for Cities, University of Cape town and University of Glasgow Available at: http:// africancentreforcities.net/ [Accessed 20/10/12)

28. UN Habitat, United Nations Human Settlements Programme, 2009. *Planning Sustainable Cities: Global Report on Human Settlements 2009*. London, UK: UN Habitat and Earthscan. Available at: www. unhabitat.org/grhs/2009 [Accessed: 28th October 2012]

29 UN Habitat, 2012. *Planning Urban Settlements in South Sudan: Basic Concepts*. Available at: www. unhabitat.org. [Accessed 7th February 2014]

30. UN Habitat, 2012. *Urban Planning for City Leaders*. Available at: www.unhabitat.org [Accessed 9th October 2012]

31. UN Habitat, 2012. Zambia Urban Housing Sector Profile Study. Available at: www.unhabitat.org. Accessed 23rd Qugust 2013]

32. Wills, G., 2009. South Africa's Informal Economy, A Statistical Profile. *Urban Policies Research Report No.7.* South Africa: Women in Informal Employment Globalizing and Organizing, Available at: wiego.org/.../south-africa's-informal-economy-statistical-profile [Accessed: 8th October 2012]

Photographs and Illustrations

P.7. Figure 1.5: Lusaka - Original Masterplan. Available at: http://cpdafricablog.blogspot.com/2010/10/lusaka-zambia.html [Accessed 27th July 2012]

P10. Figure 3.1: Freemark, Yonah., 2010. Strasbourg Tram, Available at: http://www.thetransportpolitic.com/2010/11/29/envied-the-world-over-strasbourgs-tram-expands-again/ [Accessed 27th July 2012]

P10. Figure 3.2: By Calthorpe, P (2003), cited in UN-Habitat (UN-H), 2012. *Urban Planning for City Leaders*. Nairobi, Kenya: UN-H

P.14. Figure 3.11: By Lynch, K, 1960. *The Image of the City*, MIT Press, Cambridge MA, USA

P.14. Figure 3.13: Source untraced, Available at:http://recom.org/remagv2/2012/01/22/article-brazilian-coaching/ [Accessed: 21st November 2012]

P.37. Figure 6.1: Mazabuka Municipal Council (MMC), 2011. *Spatial Framework for Mazabuka Urban - Draft*. Mazabuka, Zambia: MMC

P.37. Figure 6.2: By City Space, taken from City of Cape Town (CCT), 2012. *Cape Town Spatial Development Framework Statutory Report.* Cape Town, South Africa: CCT

P.39. Figure 6.4: By Tibbalds planning and Urban Design, 2010. Taken from *Newcastle-under-Lyme and Stoke-on-Trent Urban Design Guidance Supplementary Planning Document - Consultation Draft January 2010.* UK: RENEW, North Staffordshire Regeneration Partnership, Stoke-on-Trent City Council, Newcastle-under-Lyme Borough Council, and Advantage West Midlands.

P.41. Figure 6.7: Greater London Authority (GLA), 2004. *London Thames Gateway Development and Investment Framework.* London, UK: GLA.

P.42. Figure 6.9: Cameron, Andrew (WSP), taken from The Scottish Government (SG), 2010. *Designing Streets: A Policy Statement for Scotland.* Scotland, Edinburgh: SG

P.45. Figure 6.14: By City Space (Refer to Figure 6.2 for details)

P.25. Figure 6.16: Tibbalds Planning and Urban Design (Refer to Figure 6.5 for details)

P.51. Figure 7.1: Tibbalds Planning and Urban Design, taken from Hampshire County Council (HCC), 2010. *Merton Rise Design and Access Statement and Development Masterplan (Draft 6 August 2010).* Hampshire, UK: HCC

P.53. Figure 7.2: Urbed, taken from ISIS Waterside Regeneration (IWR), 2010. *An Outline Planning Application for the mixed use redevelopment of land at Brentford Lock West - SD4: Design and Access Statement (Illustrative Masterplan).* Manchester, UK: IWR

P.54. Figure 7.3: Tibbalds Planning and Urban Design (TPUD), 2009. *London Bridge Quarter Context / Issues - Emerging Spatial Strategy DRAFT 11.11.09*. London, UK: TPUD

P.54. Figure 7.4: Tibbalds Planning and Urban Design (Refer to Figure 5.3 for details)

P.54. Figure 7.5: The Scottish Government (SG), 2010. *Designing Streets: A Policy Statement for Scotland*, taken from Llewelyn-Davies for the Housing Corporation and English Partnerships (HC & EP), 2007. *The Urban Design Compendium - Second Edition*. London, UK: HC & EP

P.55. Figure 7.6: By Tibbalds Planning and Urban Design, taken from London Borough of Southwark (LBS), 2004. Elephant and Castle Supplementary Planning Guidance. London, UK: LBS Regeneration Team,

P.57. Figure 7.10: Llewelyn-Davies for the Housing Corporation and English Partnerships (HC & EP), 2007. *The Urban Design Compendium - Second Edition*. London, UK: HC & EP

P.58. Figure 7.11: Tibbalds Planning and Urban Design (Refer to Figure 7.3 for details)

P.58. Figure 7.12: Llewelyn-Davies (Refer to Figure 7.9 for details)

P.59. Figure 7.16: By Tibbalds Planning and Urban Design (TPUD), taken from TPUD et al, 2008. *Ealing Metropolitan Centre Spatial Development Framework*. London, UK: TPUD

P.60 Figure 7.17: By UN- Habitat, taken from *Planning Urban Settlements in South Sudan: Basic Concepts.* Nairobi, Kenya)

P.60. Figure 7.18: Llewelyn-Davies (Refer to Figure 7.9 for details)

P.60. Figure 7.19: Takemoto, N., 2005. Available at: http://www.cooltownstudios.com/2005/09/02/so-close-to-being-a-great-neighborhood-yet-so-far/, [Accessed 27th July 2012]

P.61. Figure 7.20: Llewelyn-Davies (Refer to Figure 7.9 for details)

P.61. Figure 7.21: Llewelyn-Davies (Refer to Figure 7.9 for details)

P.75. Figure 8.10: By UN-Habitat (Refer to Figure 7.15 for details)

P.84. Figure 9.2: ATP Architects, 2006. Planning Application Drawings for Penzance House, Kennington (London Borough of Lambeth) - East Block Elevation, Drawing Reference 06100/PL.07. Essex, UK

P.84. Figure 9.3: Tibbalds Planning and Urban Design and ATP Architects (TPUD and ATP) for L&Q and Tower Homes, 2007. *Penzance House, Cottington Street, SE11, Planning, Design and Access Statement - May 2007,* London, UK: TPUD and ATP

P.84. Figure 9.4: Tibbalds Planning and Urban Deisgn and ATP Architects (refer to Figure 9.3)

All remaining photographs were produced or taken by Michael Fox, Author and Planning Advisor to Ministry of Local Government and Housing.

Glossary

Accessibility	A general term used to describe the degree to which a product, device, service or environment is available to as many people as possible. The physical access to a space or service is one of its components and the one used in this document. (UN-Habitat, 2012. Urban Planning for City Leaders (Bibliographic reference 27)
Active Frontage	Where the facade of a building has doors or windows on to the street. The degree of activity can vary, with a shopfront being very active, with customers coming and going regularly, while residential will be less active, with the residents coming and going a few times a day. Blank walls provide no active frontage and can affect the vibrancy/ safety of the adjacent streets and spaces.
Density	Density is essentially the intensity of development within a given area. It can be measured in terms of the number of people per hectare, number of 'habitable rooms' (i.e. bedrooms, living rooms and larger kitchens), or units per hectare. Contrary to popular belief, it does not just imply taller buildings but is also a result of using space more efficiently.
Draft Spatial Planning Bill	Is the draft legislation that once enacted, will define the policy and legislative framework for planning in Zambia. It is due for adoption later in 2012/ early 2013.
Integrated Development Plans (IDPs)	Sets out a strategy to guide the development of a town, city or locality over a pre-determined period. It brings together social, environmental, economic and land use planning, incorporating a clear spatial strategy and defining a series of key projects and their path to delivery. Full citizen participation should be central to the process
Local Area Plan (LAPs)	A planning instrument to provide detailed proposals for development for areas indicated in the Integrated Development Plan. LAPs may not deviate from the provisions in the Integrated Development Plan and must recognise poverty alleviation, local democracy, public participation, accountable governance and other planning principles and recognise national and regional guiding principles. The preparation of a Local Area Plan may be initiated by a community or a Ward Committee.
Sectoral Local Plan (SLPs)	May be prepared to support development within a local authority's area of jurisdiction. May include action area plans and District layout plans directing land use for development such as infrastructure and service provision, health and education, housing and economic development communication, transport, waste management water and sanitation agriculture, wild-life management, forestry and tourism
Settlement Pattern	Describes the layout of buildings, roads and other supporting infrastructure within the built-up area.
Topography	Describes the arrangement of natural and artificial physical features of an area.

Acknowledgements

Author:

- Michael Fox - Adviser to Ministry of Local Government and Housing for Voluntary Services Overseas (VSO)

Contributors:

- Staff at Department of Planning and Housing, Central Province (Raymond Lukomona, Harry Zulu, Felicianos Machiko, Rex Mulenga, Anthony Phiri)
- Peter Cockhead Adviser to Ministry of Local Government and Housing for Voluntary Services Overseas (VSO)