

Managed Land Settlement Process: "Thought piece" on Basic Services

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Summary

This thought piece briefly sets out –

- principles that must underlie the provision of basic services, irrespective of whether by a managed land settlement process or not; and
- then deals specifically with the managed land settlement process, and answers a number of questions posed by the organisers of the thought experiment workshop.

The thought piece takes care to point out that much more is involved in providing access to services than simply providing physical infrastructure in sufficient proximity to the intended users of the services.

Infrastructure is only a means to an end. Specific characteristics of the site and of the community to be served are all-important in making decisions on infrastructure.

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1 Principles and definitions

Preface

Whereas LANDfirst “involves” both “informal settlement upgrading (where people are given permission to stay where they are and basic development projects are provided as a first step to upgrading and improvement)” and “managed land settlement”, this report deals only with the latter.

“Managed land settlement” is defined as the situation “where basic developing products are provided to a greenfield portion of land and households are allowed to settle on this land as a first step towards future upgrading and improvement”. (Afeis-corporan. “Managed Land Settlement (MLS) – an Overview.” November 2009, DRAFT 5)

The request of the organisers of the thought experiment workshop for a thought piece on “basic services” would best be served if this thought piece does no more than point out that informal settlement upgrading, while subscribing to most of the same basic principles, is invariably a much more complicated process than is managed land settlement. Also that it is usually more complicated for reasons that have far more to do with history and with the real and perceived rights of the current residents than they would have to do with the issues discussed in this thought piece. And which are furthermore invariably so circumstance-specific that little guidance to LANDfirst can be given in a thought piece as short as this one has to be.

Finally: provision of basic services, in a MLS process, in an important respect to some or other degree differs from "basic tenure", "basic finance" and the other issues considered at the thought experiment workshop. That is, provision of basic services is not an event, but is a process -- particularly in that the planning, design and construction, and commissioning of the service infrastructure is only the beginning of the process, because the service has to be operated and maintained for decades to come, and at various points in that lifetime the service infrastructure has to be refurbished.

Introduction

This thought piece is deliberately about issues and principles, rather than about setting out a step-by-step process for the planning and provision of services. What is important – and needs to be fully understood – are these issues and principles that need to be taken into account in the provision of services.

Above all else, the circumstances of the development (particularly including the site and its relationship to the rest of the urban fabric, or to the nearby rural fabric – and

also particularly including the community that it is intended will be settled on the site – and also particularly including the current and future roleplayers pertinent to the site) is the major determinant of the process of the planning and provision of services. One size simply doesn't fit all – and therefore, other than what is briefly described under “Site- and community-specific characteristics” and “Levels and standards of service”, below, most of this thought piece is devoted to the issues and principles of service development.

This thought piece deals only with what are generally referred to as “township” or “local” services, as opposed to “bulk” services. The interface between these is by no means distinct, and depends primarily on the point of view of the person making the distinction. That need not concern us much here, however – the point is that the more the services provided to individual households are aggregated into area-wide needs, the less it matters whether the need for bulk is the result of a larger number of households receiving basic services, or a smaller number of households receiving higher levels of service. Just as long as in both cases provision is, in the determination of bulk service requirements, made for both growth and upgrading.

Before getting to the eight questions that the workshop organisers have asked to be addressed, note that much of this thought piece deals with “services” generally, that is, of all levels and standards, rather than with “basic services” as such. This is inevitable.

The workshop organisers have asked for eight questions to be addressed. These questions are addressed in the thought piece only once a strong contextual foundation has been laid. And it must be noted that the short answer to just about all of the questions is “it depends”. Depends, that is, on the specific site and the specific community – and issues such as the funding that can be available. Which in turn is sometimes a function of the efficiency of the municipality, the state of the appropriate national budgets, and, frankly, political imperatives at the time.

Definitions

The term “services”, as used in this thought piece, broadly includes infrastructure (in particular, civil and electrical engineering infrastructure), and also the infrastructure elements of facilities such as schools, clinics and halls. It does not include transport services (i.e. buses, taxis, etc), churches and any other “services” or service-providing organisations not specifically mentioned.

The term “basic services” generally refers to RDP standards and levels of service. Services lower than that, where they exist, are referred to as “elementary services”, or as no service, as the case may be.

“Level of service” is a specific concept, not to be confused with “standard of service”. The difference is best illustrated by means of examples – as follows –

- a high level of water service would be a water pipe on to the plot and into the house – but this might be to a high standard (well constructed, good quality materials) or to a low standard (poorly constructed, shoddy materials);
- whereas a low level of water service, which might be a communal standpipe 200 m away, could be constructed to a high or low standard.

Services are a means to an end

Services are only a means to an end. The “end” can be variously defined, but for a household it would certainly include greater health and safety and greater access to income-earning opportunities and amenities.

Understanding of this is essential in:

- addressing the end (e.g. enhancing access to services) by the most appropriate means (which may for example not be an engineering service, but could be by education, or an institutional means);
- integrating the service with other means to the same end; and
- selecting levels of service and standards.

Specific characteristics of the community to be served are all-important in making decisions on infrastructure. Also, it must be understood that selection of infrastructure (specifically levels of service) and its planning and design is wittingly or (often) unwittingly made in the context of a set of planning, design, construction, operation, maintenance and upgrading assumptions. The validity of those assumptions needs to be investigated – and, if it is found that they are not valid, then those selection decisions need to be reviewed. (See “Assumptions”, below.)

The decision to provide services to a settlement or proposed settlement, and what services, how and when, must be part of an integrated decision-making and prioritisation process – and then the investment in the services must be part of a package of interventions.

Site- and community-specific characteristics

The provision of services cannot be divorced from site-specific characteristics (e.g. topography) or from community-specific characteristics (e.g. institutional structure or affordability).

No one should have difficulty with the concept that site-specific characteristics such as topography and geotechnical considerations are fundamental to the provision of services (but see at the end of this section). It may, however, be of value to consider why and how community-specific characteristics would affect the provision of services.

For example, the assumption that certain health- and safety-related ends will be achieved if certain levels of service of infrastructure are provided, and that, if complementary services are also provided, this will constitute a sufficient holistic package of health and safety, might be true for more affluent South Africans.

This assumption is, however, probably not true for the less affluent. In a total public sector budget for health and safety services, for example, higher emphasis on only one aspect (say, water and sanitation) could – for the less affluent – reduce the resources available for other services. There is an evident need for a holistic view of the range of services before decisions are made on basic need levels, and before investments are made.

Returning for a moment to site-specific characteristics. These are of fundamental importance, rendering some sites unsuitable for residential development, or relatively expensive for residential development – or suitable only for certain types of residential development, or of certain types of infrastructure services. To briefly list some of the most important considerations:

- Topography and geotechnical considerations fundamentally affect residential development and services provision in the following ways, among others:
 - floodlines and water courses can determine which land is buildable, and to what purpose building should be limited, or what precautions need to be taken when building in or near these areas;
 - slopes, especially in conjunction with the soil types, can determine precautions that need to be taken in respect of erosion and/or provision for stormwater drainage;
 - slopes can determine which areas are not buildable, or buildable only at considerable expense – can also determine plot sizes and whether road access is feasible or not, and at what cost;
 - the geotechnics can determine the cost of foundations (for example, the need to excavate – and the cost thereof, dependent on soil or rock type).

- Slopes, together with the geotechnics, can set restrictive parameters on water services provision. For example, if the soil is too impermeable and/or the slope is too steep, disposal of grey water on a site is not feasible and/or can become a health hazard – or the site sizes would have to be enlarged – alternatively, waterborne sanitation could be the only environmentally acceptable option.

- The presence (or not) of suitably located bulk services, with sufficient capacity, is an important site-specific characteristic. Considered, of course, together with the cost and feasibility of increasing that capacity.

- Other considerations include rainfall and orientation.

Before leaving the issue of site-specific and community-specific characteristics. Whenever “cost” is mentioned, who would be paying the cost must be borne in mind. For example, a particularly sore point with municipalities is the extent to which they have over the years been expected to fund the capital development of and operation and maintenance of the bulk services needed by subsidised housing developments.

2. What are appropriate basic services/ facilities?

Assumptions

The planning, design and construction of services is wittingly or (often) unwittingly made in the context of a set of assumptions. These assumptions relate not just to planning, design and construction, but also to operation, maintenance, upgrading and eventual replacement. The spirit of these assumptions is suitably captured in the following set of questions:

- How will the service (including its chosen level and standard of service, technology and so on) suit the conditions expected in practice – and which will thereafter actually be encountered in practice? Examples of these conditions are –
 - geotechnical and groundwater conditions;
 - type of housing and its density; and
 - intensity of use of the service (for example: how many persons anticipated to use the service, and how much will they actually use it)?

- What will housing densities be initially and in the future? What will numbers of people be initially and in the future? (See “Densities and services”, below.)
- How well will the service be designed and constructed (i.e. workmanship)?
- How well will the service be operated and maintained:
 - by the individual users; and/or
 - by the corporate agency (community, NGO, private company, local government, etc) mandated to do the operation and maintenance? ¹
- Other elements upon which the success of alternatives is dependent include, principally, assumptions as to institutional capacity, enforcement of regulation, monitoring of use, and adequacy of funding for operation and maintenance.
- What complimentary services are required? For example, if a water service is provided, will sanitation also be provided, or at least a means of dealing with greywater?

It must further be noted that reported experience of services infrastructure in South Africa is that incorrect use, abuse, neglect and vandalism are by no means uncommon. Also that maintenance often ranges from insufficient to non-existent. This should heavily influence design and construction decisions, and should also require that the process of planning, and seeking to influence future operation and maintenance, must be done with great care.

Levels and standards of service – references

The standard reference work on levels and standards of service (all levels and standards -- not just basic services) has for many years been “Guidelines for Human Settlement Planning and Design” (commonly known as “The Red Book”). (“Compiled under the patronage of the Department of Housing by the CSIR.” © 2000, CSIR, Pretoria. Reprinted 2005.) ²

The blurb says almost all that is necessary:

“This document provides performance-based guidelines for informed decision-making. The purpose is essentially to indicate the qualities that should be sought in South African settlements, and to provide practical guidance on how these qualities can be achieved. The document is therefore

¹ This is a big elephant in the room. An element of a service (e.g. an element of engineering infrastructure) is invariably designed and constructed on the basis of an assumed operation and maintenance regime. If, then, the operation and maintenance falls far short of anticipated, the element of infrastructure is sure to fail prematurely. (Simple example: if it is assumed that a part will be regularly greased, but this greasing does not take place, the part will wear prematurely.) The only antidote is to design and construct something more robust – but this carries a higher initial capital cost. All (competent) design and construction is therefore predicated on an assumed operation and maintenance regime, and attempts to minimise life-cycle cost, but at the same time to take a calculated guess on the possible risk profile, and try to make appropriate provision for that.

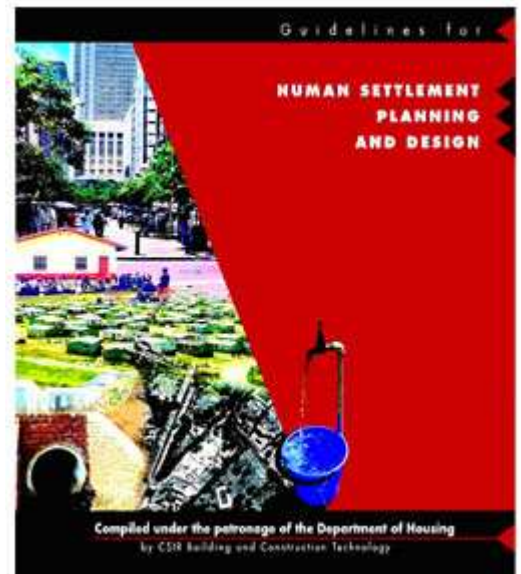
² Now no longer in print, it can however be readily accessed from: http://www.csir.co.za/Built_environment/index.html or directly at: http://www.csir.co.za/Built_environment/RedBook/

intended to be educative, providing ideas and useful information, and not as a substitute for innovative planning and engineering practice.

“The purpose of this document is not merely to assist professionals in producing efficiently serviced ‘townships’, but rather to create sustainable and vibrant human settlements. In this context, a ‘human settlement’ is regarded as any built environment where people live, work and play, with the proviso that only residential areas, and other developments associated therewith, are considered in this book.

“The document consists of two volumes, with volume 1 focussing primarily on planning issues (chapters 1 to 5), and volume 2 (chapters 6 to 12) dealing with engineering services.”

This book sets out, among other things, the levels and standards of service for each of the engineering sectors (e.g. energy, stormwater drainage).



More detailed references are available on levels and standards of service for specific sectors. For example, with respect to water services: “Guideline: water supply service levels: a guide for local authorities” (Department of Water Affairs and Forestry, November 2000).

If some of these references have been around for quite a while, that reflects that the intensive discussion of the 1990s has tailed off considerably since then. In a sense it is felt by services professionals that other issues – particularly those issues and principles set out in this thought piece, and the need to deliver where the big wins can be had, have become the far more important and urgent issues that need to be dealt with. (The biggest issue of all that has been emerging is the coming tsunami of infrastructure having generally not been well maintained, and therefore requiring repair and rehabilitation – together with much infrastructure reaching or approaching its sell-by-date, and requiring upgrading or replacement.)

The process of development of services is not further dealt with here, other than acknowledging that services should be upgradable without demolishing what is already there. Which is not the same as saying that services should be built in such a way as to enable upgrading without to some extent scrapping what has already been built – that is generally not possible to achieve anyway.

Levels of service – selection

While the principles of levels of service selection are common to all types of infrastructure, how this is carried is hugely dependent on the levels of service involved – that is, the alternative technologies and service elements (e.g. elements of engineering infrastructure) available, and the characteristics – principally cost (capital and operational), but also convenience and amenity to users, upgradeability and so on – of each.

These principles are best illustrated by a particular example. The example chosen here is that of water supply.

Firstly: broadly, what alternatives are available?

“Government defined the basic level of water supply as 25 litres of potable water per person per day within 200 m from each dwelling. Such services should be at least 98% reliable and be provided at a minimum flow rate of 10 litres per minute to satisfy typical peak demands of a communal street tap system.

“Water supply which does not comply with all the criteria of the basic standard is considered a rudimentary level, but may still satisfy the specific needs of a community. These may include run-of-river abstraction, spring protection, wind-driven pumps and handpumps.

“Higher levels of services exceed some or all of the basic standards. Most customers associate higher levels of service with examples seen in established urban areas, which mostly comprise conventional metered, full pressure house connections with flush toilets and internal bathing facilities. The conventional system is but one of the available technologies and needs to be reviewed against other technologies for appropriateness in both urban and rural areas.” (DWAF 2000, page 6)

Second: what makes a higher level of water supply service?

“A higher level of service can be:

- an improved access to water
- higher pressure of water supply
- higher quantity of water use
- improved quality of water
- improved reliability of supply (e.g. [ensured with the help of] enlarged water storage)
- better cost-efficiency of supply
- improved customer service (e.g. customer involvement, reliable billing system).

“As these aspects are interrelated, a higher level of the one (e.g. higher pressure) may result in a lower level of another (e.g. lower affordable quantity), thus providing a net benefit that is not meeting expectations.” (Ibid, p6)

Third: what are the factors to be taken into account in determining what, for a specific circumstance, is the most appropriate level of service?

It must be sustainable:

- technically (effective, reliable, operational, maintainable and upgradable)
- financially (affordable, equitable, cost-recovery)
- socially (customer’s choice, customer satisfaction, customer service)
- environmentally (environment and customer health, water reserve and resource use, waste)
- managerially (institutional, administrative and operational capacity, support and mentoring). (Ibid, page 6)

To this must with discretion where necessary be added specific criteria such as job creation.

“Technology options are grouped according to the customer’s access to water supply points:

- rudimentary systems (access generally greater than 200 m from dwelling)
- basic systems (access within 200 m from dwelling)
- distributed yard tank systems (water in the yard)
- roof tank systems (water in the house)
- conventional house connection.

“These groups are further categorised in terms of their water pressure at the point of supply, as follows:

- rudimentary systems
- communal street taps
- low-pressure yard connections
- medium-pressure house connections
- full-pressure house connections.

“Each is evaluated in terms of:

- financially [including the effect of subsidies]
- level of service criteria
- technical suitability
- social suitability
- managerial suitability
- environmental suitability. (Ibid page 7)

The remainder of the 30-page “Guideline: water supply service levels: a guide for local authorities” (ibid) sets out the broader costs and benefits/drawbacks of alternative service options.

The weighting of each of these evaluation criteria varies significantly from place to place and from time to time. It is self-evident that changes in the relative weighting can lead to significantly different levels of service being chosen for otherwise similar developments – that is, similar site- and community-specific circumstances. The biggest example of this in the last 10 years was the sudden decision by government to introduce free basic services – that changed the pattern of level of service options almost overnight.

In conclusion: “No single technology is the answer. Communities and individual households differ in their expectations, their affordability [including the effect of subsidies] and hence their choice. All options have their advantages and disadvantages and should be reviewed under site-specific conditions.” (Ibid, page 32)

Broadly similar considerations apply to other services. For example:

- Sanitation. (See particularly:
 - “factors affecting the choice of a sanitation system”;
 - “evaluation of sites” (CSIR 2000, Chapter 10)
- Roads. (See particularly Chapter 8, and particularly that Table 8.2 lists levels of service options.) (CSIR 2000)

For others – see the appropriate sections of The Red Book (CSIR 2000), and other references.

Finally: Determination of the appropriate level can in South Africa be a very political issue, with expectation on the part of many communities and their political representatives that they will receive a higher level of service than simply basic. This can for example imply an expectation, even in water-stressed areas, that households will receive waterborne sanitation.

Resolution of this should be through mechanisms such as the Integrated Development Plan (IDP), the Comprehensive Infrastructure Plan (CIP)³ and the Water Services Development Plan (WSDP), which are among the plans that each municipality is statutorily obliged to prepare. In practice, however, these plans individually, and their integration, usually leaves much to be desired. Strong efforts have been made in recent years by National Treasury and DPLG to improve municipal planning practice.

The booklet “Questions and answers on basic household sanitation” (DWAF, undated) provides a neat summary, in respect of sanitation, of the process that should be involved in determining the appropriate level.

This process should commence by considering the sanitation strategy of the municipality, as expressed in the WSDP. This sanitation strategy should include:

- “the existing service levels available to households;
- proposed new services, and levels of service proposed;
- that health and hygiene education are to be provided;
- estimated capital and recurring costs of providing these services;
- cost to households for service payments;
- availability of grant funding;
- the implications for the overall municipal budget; and
- how the service impact of the investment will be measured and monitored.” (DWAF, undated, page 13)

As to what kinds of service levels should be provided in respect of any particular development, the booklet states inter alia:

- “... sanitation decisions in the new urban developments are often taken by housing specialists who install flush toilets without considering the range of other technical options available
- “[also] without considering whether the waste treatment works has spare capacity [and] whether the sewer system can cope.
- “Residents need to be closely involved in planning new settlements and upgrades to services in existing settlements. Municipalities need to ensure that residents have the information they need to explore the range of options open to them, and to assess the implications of those choices.
- “Flush toilets are most people’s first choice – but this choice is not always informed by accurate information on the monthly costs of waterborne sanitation.”
- “The level of sanitation services may be one of a range of options. It is important to note that the options selected are not only dependent on

³ “The Comprehensive Infrastructure Plans addresses sustainability in terms of the technical, environmental, institutional, financial and social economic issues involved in service delivery, taking cognisance of the integration and interdependencies between the different services.” (DPLG 2008.)

affordability by the residents, but also on a number of other factors – including the availability of water, environmental conditions, and the availability of skills.

- “Experience has shown that on-site dry sanitation systems are safe and pleasant to use, can be incorporated into the house, and have a far lower maintenance cost than many waterborne systems.” (Ibid, pages 15 and 16)

3. The next five questions

What process(es) can be followed to provide these basic services as part of a Managed Land Settlement (MLS) process?

The first, and extremely important, point that needs to be made is that design of services must be undertaken at the same time as the town planning is done, and together with it – not after it or even slightly lagging it. Significant efficiencies and economies in both services construction cost and services operation and maintenance cost can be obtained if the town planning process is informed and strongly influenced by services considerations -- and significant diseconomies will usually result if it is not.

Still more important: services considerations must play a significant role even in the choice of site. Topographical and geological factors, bulk services capacity, and many other services issues can be so significant as to sway the choice away from one site, in favour of another. ("Assumptions", above, sets out some of the questions that need to be asked at feasibility planning stage.)

Generally –

- higher densities in the sense of smaller plots will bring down the price of services per plot;
- higher densities in the sense of more people per plot will bring down the price of services per person (relevant here to comment on the national trend to reduction in numbers of persons per household);
- higher densities in the sense of double story housing, or multi-storey, will bring down the price of services per household;
- different shapes of plots will affect the price of services per plot – for example narrower frontages will enable the same length of pipe to service more plots;
- different types of housing can affect the price of services per plot – for example, linked housing (as opposed to the reported popular demand for a space on the plot to enable the residents to walk around the house), and especially if the house is placed forward on the plot – this will bring down the price of services per household.

The above by no means exhausts the possibilities for the saving of infrastructure costs through housing and services layouts and the sharing of services. Other possibilities include:

- collective utility services points (see below);
- the sharing of connections by adjacent houses, with only the last metre or so being separated, in order to enter each house separately and in:
- if houses are linked (for example semi-detached, or row houses), then further savings in services costs can result;
- taking the above to the (literal) next step, even greater savings in services costs can be had in apartments, especially low-rise walk-up apartments.

All of the options listed save infrastructure services construction costs, yes, and sometimes operation and maintenance costs also. But they can have a downside – such as the reduced inaccessibility, to service crews, of mid-block services. Decisions need to be taken in the planning and design phase, and trade-offs made – such as: how often would the infrastructure need to be accessed, and how difficult is that access likely to be 10, 30 or even 60 years after its construction?

Whereas all the above is written more from the point of view of engineering services provision, much of the same – that is, higher densities reduce the unit costs of providing services – applies to other services. Clinics, for example – if it is assumed that clinics need to be provided within certain parameters of distance and time from households, a higher housing density will generally mean, everything else being equal, that a clinic would to the average person be physically closer than would be the case if there were a lower housing density.

The distinction is sharpest where the service provided is at its most basic. That would generally be where communal services, as opposed to services to individual residential sites, are considered. A good example of this is the provision of a water standpipe to a community. Another good example, somewhat more sophisticated, is in respect of the “collective services (utilities)” points described at some length in Chapter 5.7 of “The Red Book” (CSIR, 2000). (In this chapter, collective services points are punted as an option for the provision of a range of services at the lowest cost. However it must be mentioned that the need for extra-careful operation and maintenance of these facilities has no doubt militated against their general adoption. So, too, has government’s promise that services backlogs will be eliminated.)

“Cost” in this instance is firstly the initial capital cost. But it could also be the operation and maintenance cost. A good example of that is the cost of providing a transport service – the higher the residential densities, the more likely it is that a public transport operation will find it financially viable to provide a service that will reach physically closer to each individual household.

And of course reduction in unit costs enables more people, for the same budget, to receive a service – and/or enables the same number of people to receive a higher level or standard of service.

What process(es) can be followed to upgrade the services to ‘full’ services in future and continually improve and maintain these services?

Again, best illustrated by an example, and by reference to The Red Book. Thus see

- “Upgrading of sanitation facilities” and
- “Appendix B: upgrading of existing sanitation systems”, subdivided into:
 - “Basic upgrading alternatives” and
 - “Upgrading routes for the various sanitation systems”. (CSIR 2000, Chapter 10)

The choice of level of service to be upgraded to must be informed by the same considerations as those expressed towards the end of the above section “Levels of service – selection”.

Of course one always needs to ask why the services should be upgraded above “basic” and, if they were, what the consequences are likely to be. The section “Levels of service -- selection” is as pertinent when decisions are to be made with respect to possible upgrading as it is pertinent to initial development.

For a topical example: whereas many communities in water-short areas have an expectation that their RDP level of service will be upgraded (for example, on-site sanitation upgraded to waterborne), bulk services capacity could be such that upgrading is not feasible. In water-short areas, for example, the water resource is currently stretched to its limit -- and the comment by DWAF quoted earlier, in "Levels of service -- selection" (waterborne sanitation "is but one of the available technologies and needs to be reviewed against other technologies for appropriateness" (DWAF 2000, page 6) should apply.

How would this process of providing basic services work/ differ for a 1) state driven, 2) community driven and 3) private sector driven MLS processes?

In principle, it would not differ at all. More important than on which of the three types of institution is driving, are factors such as history, political will, funding, and site and community characteristics.

How would this process of providing basic services be funded/ financed?

It depends on the services and on the site-specific circumstances. Capital costs of engineering infrastructure services within the housing development, and including those on housing sites, are usually an integral part of the housing funding package. That is, part of the housing subsidy grant.

The boundary of what is fundable by the housing subsidy grant has at times been ill-defined. While funding of the provision of bulk services is usually the responsibility of the municipality (which can use own funds or will access, among other sources, MIG), funding of the feeder services between what is clearly "housing development" and "bulk" is at times territory that is contested by the municipality, the developer, and the housing funder.

The various infrastructure capital funding streams from DPLG (principally CMIP), DWAF, and others, were consolidated years ago into MIG. Eskom still however funds electricity infrastructure.

All the above refers to the capital expenses of funding the services. However by far the greater portion of expenses associated with providing a service over the planned life is in respect of the operating and maintenance cost -- invariably so in respect of engineering infrastructure. (Studies from DWAF and others show that on average, the operating and maintenance cost of water supply infrastructure over the lifetime of an infrastructure element such as a reservoir, pipe, pump or treatment works, is between three and four times the cost of initial construction.)

In respect of basic services and "indigent" (as defined) households, the cost of operation and maintenance is supposed to be funded by national transfers (the "equitable share") to municipalities, and the households concerned then receive "free basic services" up to defined limits of supply per household per month. While the equitable share serves its purpose in many municipalities, there is widespread evidence that in many other municipalities one or more of the following lead to shortages of funding for operation and maintenance -- and hence to poor operation, under-maintenance, and consequent unreliability of service:

- whereas the equitable share is not a conditional grant, municipalities too-often utilise part of it for other purposes, and that part does not go to services operation and maintenance;

- the estimates of indigent households are in some or either way incorrect, and therefore the equitable share does not match the funds needed in order to supply free basic services to the indigent;
- households take more than the defined limits of supply per household per month, thereby putting additional strain on the equitable share budget.

The consequence of all of this, as noted, is underfunding of operation and maintenance, adversely affecting service delivery.

The operation and maintenance budget for services supply in a municipality has of course also to cover services to those households not deemed "indigent", and to non-residential areas. Here, too, the consequences of frequently inadequate revenue streams (through, for example, households that ought to pay for services, not paying), reflect further on underfunding of operation and maintenance.

While none of the issues sketched in the last two paragraphs immediately above are the responsibility of developers to resolve, nor within their power to resolve them, developers need to take account of this when deciding where to develop, what services to provide, and so on. Putting it simplistically by means of an example: there would be no point in going to expense in making provision for future upgrading from basic service levels, if it is clear that the municipality responsible for operation and maintenance of services cannot even cope with operating and maintaining basic service levels.

What role would different role-players play in this process of developing basic services?

Again, it depends -- particularly on the specific site, the specific community, who is driving the development, who is funding the development -- and on how involved each wishes to be and is capable of being. Who is driving is less important than the ability of the different roleplayers to carry out their responsibilities.

However it needs to be noted that significant dysfunction in many of South Africa's municipalities is important in so many respects to service delivery at all levels.⁴

Developers in these areas need to understand that they have to deal with a municipality that may have very low capacity, and furthermore a high propensity to be unable to provide for even minimal operation and maintenance of municipal services. The municipality will certainly be highly dependent on transfers of national government for its income – in some cases for above 90% of its income. Developers also need to note there have in such municipalities been many instances of the municipality receiving grant funding for the provision of infrastructure, the infrastructure being built and commissioned, and that in a matter of just a few years the infrastructure having so much deteriorated that the service has become erratic or has even ceased completely.

In any event, in choosing a level of service in a dysfunctional municipality, there should be a bias towards a lower level of service and a more robust standard of

⁴ Indicators of the presence of ineffective municipalities have been plotted many times, most recently by Department of Cooperative Governance and Traditional Affairs, which identified the approximately one-quarter of South Africa's local municipalities that are to all intents and purposes dysfunctional. ("State of local government in South Africa: overview report: national state of local government assessments", COGTA, October 2009.)

infrastructure. This is for the simple reason that a less competent municipality, while possibly not able to carry out its operation and maintenance responsibilities in respect of a higher level of service, is less likely to fail at operation and maintenance of the infrastructure for lower levels of service.

Also, when developing in municipalities such as these, it would be as well if, when basic or higher levels of service are commissioned, the previous, lower-level infrastructure available to the community not be neglected. After all, the community might at some time in the future have to fall back on using it. (A rural example could be that the existing borehole-dependent or protected spring-dependent system not be neglected when a higher level of service is provided. If the higher level service breaks down, a community that has neglected its borehole or protected spring might find that it has to go back to using unprotected sources, such as fetching the water from a river.)

4. Challenges, opportunities and key issues

What challenges/opportunities can you foresee and how can they be overcome / built on?

- The **principles of the provision of public infrastructure** ⁵ **must underlie important decisions** on the provision of infrastructure services.
- The **benefits of services can be accessed in several different ways, and therefore a programme to provide services should if possible not be limited solely to one or other of these** – dependent of course on consideration of the particular circumstances of any community. ⁶
- In the interests of the quality of life of all citizens and of the economy, much greater efforts than hitherto should be made to **ensure service quality and reliability**.
- Given how essential it is that infrastructure be empowering rather than disempowering, and that delivery can be disempowering if it turns people into passive recipients of services rather than actors in their own development, there should be strong **encouragement of ways in which households can earn income directly from being part of the service provision chain**. Depending on the circumstances, this could require a number of proactive measures, including programmes to develop and grow microenterprises and small CBOs in ways that are most effective for them to deliver the service and at the same time to be sustainable ⁷. Another measure could be undertaking work in a more labour-intensive manner. All these, in turn, require generally much-improved conceptualisation and implementation of, for example, procurement procedures, microenterprise financing, and design and packaging

⁵ As set out in the section “Principles and definitions”.

⁶ For one example only, consider the financial aspects of a programme. This could include microloans for household-scale sanitation improvements or for equipping an entry-level infrastructure construction or maintenance enterprise or CBO.

⁷ For example the concepts of microenterprise franchisees, developed by the WRC, for operation and maintenance of water services infrastructure.

of tasks in order to make them appropriate for individuals, organisations and enterprises based in the communities to undertake them.

- Infrastructure must reach communities with the **right combinations of services, and the right levels of service**. Too often in South Africa, expectations far exceed real need, and even further do they exceed affordability, with the result that some communities are given inappropriately high levels of service, which then can't be sustained, subsidies notwithstanding. Subsidies need to be applied in a more discriminating manner – in particular, they must reach the lower-income groups for which they are intended. More effective preparation, and implementation, of plans such as the IDP, CIP and WSDP, should reduce incidences of this kind.
- More needs to be done to investigate alternatives – such as **alternative technologies and alternative planning and servicing concepts** – and then to implement them, and monitor and evaluate the results.
- **Local government failure is a challenge** that cannot be addressed by a services programme. National government is aware of the problem, and will, one trusts, address it.⁸

What are the +/-3 key issues that need to be addressed to make the provision of basic services work in a MLS programme?

The three are:

1. Understanding that services considerations are fundamental to site selection, to site feasibility study, and to town planning.

In particular:

- Services considerations must play a significant role in the choice of site. Topographical and geological factors, bulk services capacity, and many other services issues can be so significant as to sway the choice away from one site, in favour of another.
- Design of services must be undertaken at the same time as the town planning is done, and together with it – not after it or even lagging it. Significant efficiencies and economies in both services construction cost and services operation and maintenance cost can be obtained if the town planning process is informed and strongly influenced by services considerations.

2. Understanding that the best ways to help households to receive the benefits of basic services might not all involve simply building tangible infrastructure.

In more detail:

- Appropriate services (i.e. which services)
- Appropriate levels of service
- Targeted free basic services – all who should get it do get it

⁸ See, of particular importance, the discussion in the section "How would this process of providing basic services be funded/ financed?" above -- and especially that part that refers to operation and maintenance.

- Reliable supply
- Targeted incentives - accountability
- (For some) Jobs in the chain (see below).

3. Understanding that people can derive income from being part of the service provision chain

Consider income opportunities from:

- Infrastructure new construction
- Infrastructure maintenance
- Infrastructure operation.