

**AN APPLICATION OF PROJECT MANAGEMENT TO DELIVER LOW COST  
HOUSING AT METSIMAHOLO LOCAL MUNICIPALITY**

by

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## **DECLARATION**

I DECLARE THAT THE TITLE “**AN APPLICATION OF PROJECT MANAGEMENT TO DELIVER LOW COST HOUSING AT METSIMAHOLO LOCAL MUNICIPALITY**” IS MY OWN WORK AND THAT ALL THE SOURCES THAT I HAVE QUOTED HAVE BEEN INDICATED AND ACKNOWLEDGED BY MEANS OF COMPLETE REFERENCE.

**MN MASIKE**

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## ABSTRACT

The study is based on the context of project management; the discipline which employs skills and knowledge to achieve project goals through various project activities. The study concentrates on project management applications to deliver low cost houses (LCH) in the Metsimaholo Local Municipality (MLM). The main purpose of project management application is to enable project managers to track the progress of a project that they are working on. Institutions working on a very large project require project management applications to give periodic updates on the progress of the work that is being done on a project. By using a project management application, the process is made somewhat easier, in the sense that a project manager can just refer and check on the progress him/herself.

Provision of adequate housing for the homeless and others who are inadequately housed in an attempt to reduce poverty and improve quality of people's life has been a huge challenge to the South African government, particularly in the MLM over the years. Globally, legislators on the physical infrastructure of Parliament are pushing for the urgent construction of LCH by the government. The abovementioned challenge has resulted in an enormous housing backlog with poverty, unemployment, economic stagnation and negative behaviour. Financial constrains are seen to escalate costs and this makes the task even more enormous.

The hypothesis for this study indicated that *MLM does not possess sufficient institutional capacity to implement project management for the effective delivery of low cost housing*. The hypothesis and research objectives of the study were validated by means of literature review and empirical surveys. Thirty-four (34) semi structured questionnaires were used to interview participants in the provision of LCH in MLM. The study is made up of five chapters.

The study specifically focused on the application of project management to deliver LCH in the Metsimaholo Local Municipality (MLM).

- This study contends that the application of project management in the public service sector to deliver goods and services has not been scientifically applied in a conscience and systematic manner.
- In the MLM the national, provincial and the municipality efforts are challenged to provide houses for the homeless.
- The increasing population in the MLM has resulted in an enormous housing backlog with poverty, unemployment, and economic stagnation.
- The high demand for housing in the MLM brings about financial constrains and makes the task even more enormous.
- It is realised through this study that the application of project management is lacking; whereby important pillars of project based outputs such as time, quality and cost are not necessarily the resultant finished products of the community tend to inherit.

It is evident from the above that while the MLM has a mandate to provide service delivery it is limited by protocol to take full responsibility in the provision of low cost houses. The provision of LCH requires strengthened co-operative governance in the Free State Province, since the three spheres have important roles to play. In the face of the huge backlogs in housing and human settlement provision, the country urgently needs to develop the technical knowledge and skills necessary to fast track housing delivery.

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## **CHAPTER 1**

### **ORIENTATION AND PROBLEM STATEMENT**

#### **1.1 INTRODUCTION**

This chapter provides an introduction and an overview of the study. The orientation and the background of this study are also discussed. The chapter also presents the problem statement, research questions and objectives, a hypothesis, the aim of the study, and research methodology. The chapter outline is also discussed.

#### **1.2 ORIENTATION AND BACKGROUND TO THE STUDY**

According to Burke & Barron (2007:29) the Project Management Body of Knowledge (PMBOK) defines a project as a temporary endeavour undertaken to create a unique product or service (outcome or result). Knipe, Van der Waldt, Van Niekerk, Burger, & Nell, (2002:17) indicate that projects are undertaken by organisations in order to deliver, construct, maintain or renew facilities. Van der Waldt (2008:7) differentiates between project management and Project Management. He refers to project management as the practice while Project Management is the discipline, the body of knowledge that is the theory. Lewis (2007:8) contends that project management is accomplished through the application and integration of project management processes of initiating, planning, executing, monitoring, controlling and closing. The term project management is sometimes used to describe an organisational approach to the management of ongoing operations. This approach is more appropriately called management by projects and treats many aspects of ongoing operations as projects in order to apply project management to them.

The rate of making use of project management to implement service delivery programmes is on the increase. Van der Waldt (2001:296) indicates that there is an apparent lack of understanding on how to utilise project management on an on-going basis for the operationalisation of institutional strategies and objectives. He recommends that senior management should establish a management by projects approach whereby all functional activities for service delivery are seen as projects.

Further, Van der Waldt (2001:296) contends that for faster responses to needs and demands, better utilisation of resources, and improved control and performance, project-based organisations have the flexibility to maximise their efforts in core institutional projects.

When the Government of National Unity came to power in 1994 it inherited a housing sector with severe abnormalities as a result of the policies of the Apartheid era. The government adopted a housing policy aimed at building one million houses by the year 1994. By the end of 1999 the delivery of the promised one million low-cost houses was not met and the current delivery also experiences problems. The White Paper on Housing of 1994 prioritised the needs of the poor, encouraged community participation and involvement of the private sector. The African National Congress (ANC)'s Reconstruction and Development Programme document of 1994 and the 1996 Constitution also commit to providing housing for the poor. While successes can be noted in this regard there are growing concerns regarding the social and environmental sustainability of these housing programmes (Republic of South Africa (RSA), 1994).

The relaxation of restrictions that were instituted in a form of influx control as well as the emergence of the new government caught the country unprepared for the rural-urban migration pattern never seen before. Faced with the problem of migration, municipalities upholding the ideal of separate settlements refused to release land for development. Waiting lists for houses were kept but land would never be released. This led to community structures leading a fight to seize land for development. Informal settlements that arose such fights were generally characterised by unstructured planning, makeshift shelters, lack of services, dense settlements, no township proclamation, and promotion of urban sprawl, degradation of ecosystem among others (Department of Local Government and Housing, 2009:1).

### **1.3 PROBLEM STATEMENT**

The new dispensation inherited a severe shortage of approximately 2, 5 million households which was increasing by 350 000 households per annum countrywide. Coupled with key challenges of restricted non-availability and the non-affordability of

land the Free State Province has a backlog of 215 000 houses. A total sum of informal settlement was given as 147 156 with additional 52 109 households living in backyards. A number of municipalities in the Free State Province have encountered civic protests from September 2004 as communities were registering their dissatisfaction with poor service delivery (Department of Local Government and Housing, 2009:8).

A study of the research results on real life projects, processes as well as operating behaviours of subjects in public institutions reveal the following failures: contractor fails to complete project on time and within budget; project completed fifteen months late resulting in heavy penalties and cost overrun; insufficient resources; contractor over committed and eventually liquidated as well as contractor documentation not aligned to scope definition. Close scrutiny of causes shows that the afore going failures are as a result of poor project cost, project time, project integration, project quality and project scope management as well as the non viability of tendered rates. According to Samuel (2006:2-3) contractors fail to apply effective project cost management from the outset.

The houses produced in general do meet the standards as set out by government. The focus is mainly on quantity while quality and affordability are not satisfactory. Issues of quality can be linked to an article by Nkosi (2007:4) in Daily Sun, whereby a LCH in Katlehong, Ekurhuleni was reported to have infrastructural deficiencies. The owner of the respective house experienced wall crack ups in her house. Matters like these are common to beneficiaries of the LCH. It is indicated that the ward councillor was informed about the matter but nothing substantial seem to have been done about it. Doucet, Amalraj, Hernani, Ladouceur, & Verma (2007:2-9) argue that quality, cost and work breakdown schedule are some aspects of project management that are particularly challenging. West (2009:1) and Moladi (2009) identify the following challenges embodied in low cost and affordable housing, facing project managers especially in LCH:

- there are geographically dispersed project teams;
- wrong tools are used for the job;
- lack of resources, some resources are overbooked or mismanaged;

- time constraints and work flow control, time is wasted looking for project documents or assets and spending too much time in status meetings looking for project documents or assets and spending too much time in status meetings;
- insufficient funds;
- skills shortage; and
- there is a backlog of 13 000 families without facilities, although the issues were identified before (Scheepers, 2009: 4).

The South African demarcation process has resulted into Local municipalities being dramatically reduced. The majority of the newly incorporated areas are what is formally known as rural areas. The incorporation of rural areas into existing municipalities puts great strain on the municipality budget in terms of service delivery (Department of Local Government and Housing, 2009:3).

Existing residents' movements within the area of jurisdiction of the Metsimaholo Local Municipality (MLM) are monitored on a daily basis to an estimated 24 217 erven for occupation status, illegal occupation or ownership. With regard to land availability agreements, central government is responsible for housing delivery. However, the government is not the land owner and needs the cooperation from municipalities to avail land. Notwithstanding an estimated 13 030 government subsidised houses to the value of approximately R390 million erected since 1994 in MLM, the municipality still faces challenges on matters such as land availability, access to services, cemeteries, development opportunities and housing delivery (Department of Local Government and Housing, 2009:3). Scheepers (2009:4) further highlight that there is a backlog of 13 000 families without housing facilities, although the issue was identified during 2009.

#### **1.4 AIM OF STUDY**

Project management is acknowledged for its processes in realising the developmental mandates in the South African institutions. The implementation of public service delivery depends on effective application of the project management

to attain the intended objectives. In South Africa, there is an outcry about the discrepancies caused ineffective provision of LCH, whereby it is indicated that there are housing backlogs and inappropriate provision of housing infrastructure. This study aims to assess the application of project management in the delivery of LCH in the MLM. This study also analyses the systems and procedures applied in project management when delivering the LCH in the MLM. The study also looks at the relationship between the municipality and the province in the provision of LCH in the MLM. The benefits of project management are also analysed and the challenges encountered in the provision of LCH in the MLM. This study concludes with a series of recommendations for effective service delivery.

## **1.5 HYPOTHESIS**

The need for human settlement makes project management a necessary tool to deliver sustainable low cost housing in Metsimaholo Local Municipality. However, the process depends on sufficient institutional capacity to implement project management for the effective delivery of low cost housing.

## **1.6 RESEARCH QUESTIONS**

Resulting from the orientation and problem statement above the research attempted to answer the following questions:

- What are project management, sustainable development and low cost housing?
- What systems and procedures are in place to apply project management when delivering low cost houses in MLM?
- What are the challenges faced by MLM in the implementation of project management for the provision of low cost housing?
- What recommendations can be provided to improve application of project management to provision of low cost housing in MLM?

## **1.7 RESEARCH OBJECTIVES**

From the research questions above the objectives of the study are as follows:

- To explain the concepts of project management, sustainable development and low cost housing;
- To analyse the systems and procedures that exist in the application of project management to deliver low cost houses in MLM;
- To describe challenges faced by MLM in the implementation of project management for the provision of low cost housing, and
- To offer recommendations that could improve the application of the project management approach to the provision of low cost housing.

## **1.8 RESEARCH METHODOLOGY**

Research methods will include literature review and qualitative empirical research methods.

### **1.8.1 Literature review**

To provide the context of the concepts 'project management' and 'low cost housing'; a literature review will be conducted using journal articles, books, papers presented at professional conferences. Legislative framework on LCH was consulted and this included review of policy documents and regulations. Further study will consult the reports compiled by researchers and government agencies providing information and policies on project management and the provision of low cost housing.

### **1.8.2 Empirical research**

The scope of the empirical study is limited to MLM.

#### **1.8.2.1 Structured Interviews**

The following individuals were interviewed: Executive Mayor of MLM, former Municipality Manager, Manager Housing, Chief Financial Officer and five officials

responsible for project management. The aim of the interviews was to determine the role of project management and the challenges encountered by the implementing officials in the provision of LCH in the MLM. A stratified random sample of forty (40) beneficiaries of the LCH in the MLM were also interviewed.

### **1.8.2.2 Questionnaires**

A structured and open-closed ended questionnaire was designed to collect data from the respective stakeholders in MLM.

## **1.9 OUTLINE OF CHAPTERS**

Chapter 1: Orientation and problem statement

Chapter 2: Theoretical exposition of project management

*Chapter 3: An overview of the application of project management in the provision of low cost housing in the Metsimaholo Local Municipality*

*Chapter 4: Empirical study on the application of project management in the provision of low cost housing in Metsimaholo Local Municipality*

*Chapter 5: Findings, Recommendations and Conclusion*

The next chapter will discuss the theoretical exposition of project management.

## **CHAPTER 2**

### **THEORETICAL EXPOSITION OF PROJECT MANAGEMENT**

#### **2.1 INTRODUCTION**

Project management has been practiced since early civilization in the 1950s. As a discipline, project management developed from different fields of application including construction, engineering and defence. Since 1950, organisations started applying systemic project management tools and techniques to developmental projects. This chapter attempts to define project management as an activity in the public sector. In so doing an outline of the history of project management, its components, approaches, process description and its contribution to community development will be discussed at length.

#### **2.2 UNDERSTANDING PROJECT MANAGEMENT**

The project management era led to innovations within the discipline. Project management is the discipline of planning, organising and managing resources to bring about the successful completion of specific project goals and objectives (Kerzner, 2006:3). Project management, on the other hand, involves project planning and project monitoring and includes items such as:

- Project planning: Definition of work requirements, definition of quality and quantity of work and definition of resources.
- Project monitoring: Tracking progress, comparing actual outcome to predictable outcome, analysing impact and making adjustments. Successful project management can then be defined as having achieved the project objectives: within time, within cost, at the desired performance/technological level while utilising the assigned resources effectively and efficiently and accepted by the customer. The potential benefits of project management are: Identification of functional responsibilities to ensure that all activities are counted for, regardless of personnel turnover, minimize the need for continuous reporting, identification of time for scheduling, identification of a

methodology for trade-off analysis, measurement of accomplishment against plans, early identification of problems so that corrective action may follow, improved estimating capability for future planning and knowing when objectives cannot be met or will be exceeded (Kerzner, 2006:3).

Van der Waldt (2001:300) identifies the main advantages of project management as follows:

- effective communication between projects and the functional departments/directorates;
- allocation and managing valuable and scarce resources across multiple project organisations to ensure that high priority or critical projects get the correct priority attention; and
- repeating early successes achieved by high management focus and attention on early implementation focused on key projects and spreading, repeating and sustaining successes to all projects and across all projects.

While it is important to appreciate the benefits of project management it is also a way to justify our bias towards project management as a strategy of choice. It therefore becomes imperative to discuss the rationale for project management.

### **2.3 RATIONALE FOR PROJECT MANAGEMENT**

Burke (2006:14) indicates that modern day project management is associated with Henry Gantt's development of the bar chart and special project management techniques developed during the military and aerospace projects of the 1950s and 1960s in America and Britain. The growing number of project management institutions (public and private sector, associations and academic establishments), channelled project management to become an accepted practice which is captured and formalised in the global body of knowledge and certificate programmes (Burke, 2006:14).

The value of management by projects and more precisely the value of breaking down pieces of work into manageable portions of assignments has made project

management the inevitable choice not only for the private sector but also for the public service. In order to understand the rationale for project management, the concepts public policy, programmes and projects are discussed in this section.

### **2.3.1 Public Policy**

Service delivery is implemented by means of policy mandates derived from public policy. Bekker (1996:146) indicates that project management was thought of as being applicable only to large industrial projects, and specifically to civil engineering or major construction projects. The author further states that this perception has changed and although project management might be different, the basic concept still applies to the benefit of any project, *albeit* on a smaller scale, and even in small organisations.

#### **2.3.1.1 Developmental policies**

Since the democratic elections in April 1994, the South African government adopted two developmental programmes: the RDP and the Growth, Employment and Redistribution (GEAR) programmes. Both programmes seek to co-ordinate government's developmental efforts into a broad framework of interventions, in pursuit of a common vision of reconstruction, development, growth, employment and redistribution. The RDP sets out a clear vision for housing based on the following four programmes: meeting basic needs; developing human resources; building the economy; and democratizing the state and society. While the housing programme as defined by the RDP is conceptualised within the context of meeting the basic needs, the success of the other programmes have a significant bearing on the housing programme (Bekker, 1996:149).

The implementation of the RDP is strengthened by RDP structures within the three spheres of government in South Africa. This particular section of the RDP policy provides an ideal policy support system for the implementation of projects in local government. The management of the RDP and the realisation of goals and ideals will be impossible without the structures and technology of project management (Bekker, 1996:149).

Many South African local municipalities are faced with a great demand for housing and a shortage of infrastructure for the provision of services such as electricity, water and sanitation. Local government can often provide both managerial and logistical support for project management (Bekker, 1996:150). GEAR also places a strong emphasis on a systemic reduction of the budget deficit, the elimination of government dis-saving and promotion of investment, and the relaxation of exchange controls. Broadly, government's macro-economic strategy, as reflected in the GEAR programme, aims to achieve the following:

- a competitive, faster growing economy which creates sufficient jobs for all workers;
- a redistribution of income and socio-economic opportunities in favour of the poor;
- a society in which sound health, education and other services are available to all; and
- an environment in which homes are secure and places of work are productive (Bekker, 1996:150).

The most significant goals of GEAR in respect of the capacity to implement the housing programme are those that have to do with the availability of funds for housing. GEAR is clear about promising tighter fiscal policy measures, which are being brought about by a cut in government expenditure and a more cost-effective civil service. The overall theme which runs through the GEAR policy is that "large-scale increases in government spending as a macro-economic strategy will create major macro-economic imbalances in the form of high inflation, serious balance of payments difficulties and poor long term growth and employment prospects." While the GEAR policy does not prohibit increased public expenditure to address certain backlogs, it seeks to minimize the demands placed on the national fiscus (Bekker, 1996:150).

A Housing policy and its implementation must accommodate the parameters set by both the RDP and GEAR, while responding to its challenges.

### **2.3.2 Programme**

Government activities are planned within a set of programmes. A programme refers to a group of interrelated projects managed as an entity in a coordinated way. While programmes have finite start dates, they may last for years or indefinitely (Cook, 2005:125), for example, programme of housing and programme of administration in the respective department.

### **2.3.3 A project**

McGhee and McAliney (2007:3) define a project as a unique, onetime work effort with a defined start and defined end. A project can be considered to be any series of activities and tasks that:

- have a specific objective to be completed within certain specifications;
- have defined start and end dates;
- consumes human and non-human resources such as money, people and equipment;
- have funding limits; and
- is multifunctional i.e. cut across several functional (Kerzner, 2006:2).

Harrison and Lock (2004:194) indicate that before a project can be planned or executed, it must first be defined as this determines what the project actually is along with work needed to deliver its objectives. Various terms are used to describe this project definition. These are: project scope, statement of work (SOW), statement of requirements, specification and contract brief of documentation. The project definition may be different for different phases and companies involved in a project, for example, the project definition for a construction contract may consist of a fully defined project design whilst for an architect it will probably consist of a design brief.

Defining a project is probably the most critical element in the control cycle. It determines all that follows. If a project is incompletely or confusingly defined, the actual project deliverables might be very different from those that the client or project sponsor expected and wanted. At the very least, a poorly defined project can lead to

additional costs and delays in completion. Therefore considerable care must be taken in defining a project and in obtaining the agreement of all parties who have a stake in the respective definition (Harrison and Lock, 2004:194).

The project definition should include the following factors:

- the project objectives or deliverables;
- the project strategies, including the contracting strategies;
- the scope of work statement;
- a summary Work Breakdown Structure (WBS), if possible with its initial specifications, sketches and preliminary drawings;
- a summary schedule showing the proposed start date, target complete date and timings for milestones and WBS elements;
- an indicative budgets or estimates, and any special financial constraints; and
- a health and safety policies for the project execution and where relevant, for post project operating and maintenance (Harrison and Lock, 2004:196).

The primary challenge of project management is to achieve all of the project goals and objectives while honouring the preconceived project constraints (Phillip, 2003: 354). Typical constraints are scope, time and budget. Harrison (1992:3-6) provides four primary reasons for the widespread adoption of professional and advanced project management techniques.

These reasons are as follows:

- recognising project orientation;
- increasing demand for value for money;
- accelerating rate of change; and
- problems relating to a lack of integration (Harrison, 1992:3-6).

Project management is intended to be actualised in a particular set of circumstances for it to yield the intended success. There is therefore a need for a discussion of the ideal framework for project management.

## **2.4 THE FRAMEWORK FOR PROJECT MANAGEMENT**

The sections below discuss the framework for project management which includes the elements of project management, Project Management Body of Knowledge Areas, project management approaches, Prince2 and process-based management.

### **2.4.1 Elements of project management**

The integration of time, cost and quality was initially presented as a triangle of balanced requirements where a change in one parameter could affect the others. This was later joined by scope and the organisation breakdown structure (OBS) to indicate that the scope was performed through an organisation structure (Burke 2006:22). In the 1990s fierce competition from the Far East encouraged leaner and meaner, flatter and more flexible organisation structures, together with a more efficient systems approach. Public institutions found that by using a management – by projects approach they could assign their work to many small project teams, which were able to quickly respond to innovation, new ideas and market completion. The nineties saw increasing deregulation, GATT agreements, reduced tariff barriers and expanding IT facilities and communicating through the Internet (Burke, 2006:25). The introduction of the Personal Computers in the late 1970s and early 1980s with accompanying business software encouraged the growth of project planning software and the use of project management techniques.

Institutions are eager to find strategies that can be utilised to bring about strategic change within a given institution as well as development in a community. The current South African environment lends itself ideally to the application of project management and its principles. The focus on service delivery has intensified and customer care and foreign funding for projects are in the forefront more than ever (Knipe *et al*, 2002). In many organisations there is a general lack of appreciation of the importance of project planning. Another area that was aligned by the authors is the importance of having a clear plan for selecting and developing project managers. The authors continue to emphasise the importance of project portfolio management and alignment with strategy (Knipe *et al*, 2002).

## **2.4.2 Project Management Body of Knowledge Areas**

Project management comprise of nine knowledge areas. These areas are referred as Project Management Body of Knowledge (PMBOK). Burke (2006:2) defines project management as the application of knowledge, skills, tools and techniques to project activities in order to meet stakeholders' needs and expectations from a project. The PMBOK focuses on tactical issues in the planning and management of a project which concentrates on integrating, prioritising, communicating and controlling of multiple projects (Van der Waldt, 2001:299). Van der Waldt (2001:299) further asserts that one of the most critical differences in managing programmes according to a Management-by-Projects approach is that rather than assigning resources to tasks, managers assign tasks to resources.

## **2.4.3 Project management approaches**

There are several approaches that can be taken to managing project activities. The approach employed enables managers to clarify project objectives, goals and more importantly the roles and responsibilities of all participants and stakeholders. The ultimate purpose of any project management system is to increase the likelihood that the organisation will have a continuous stream of successfully managed projects. The best way to achieve this goal is with good project management methodologies that are based upon guidelines and forms rather than policies and procedures (Kerzner, 2006:898-899).

The subsequent paragraphs will discuss different approaches applied for project management.

### **2.4.3.1 The Traditional approach**

A traditional approach identifies a sequence of steps to be completed. The approach by institutions to implement projects varies. Kliem *et al* (1997:11) indicate that the field of project management subscribed to methodologies resembling the rigid, structured, highly rational thinking of business greats such as Frederick Taylor, Henry Gantt and Max Weber for the later part of the nineteenth and twentieth

centuries. The respective methodologies are referred to as traditional project management methodologies (TPMM) (Kliem *et al*,1997:11), and their characteristics are discussed below:

- They assume future predictions. Through estimating, scheduling and risk analysis, a project team may predict the challenges on time and be able to provide remedies for such incidents, for example, if the land demarcated to build houses has risks such as land mines or wet-soil, early predictions may prevent future disasters.
- They involve viewing project as a multitude of different functions participating in a project. Throughout a project's phases, each function is employed narrowly and set aside, much like players in a football team. Involvement occurs only at certain points. Each team member has a role allocated to him/her. Multitude functions enable the project team to run smoothly and it alleviates duplication and redundant team members. For example, housing projects may have multiple functions such as bricklaying, plastering, plumbing and roofing; as a result such functions cannot be undertaken concurrently.
- They focus on cost, schedule and quality. Public projects such as housing, are aimed at developing the community, therefore contractors and officials should consider high quality services for their beneficiaries (Knipe *et al*, 2002:14-15).

Knipe *et al* (2002:15) stresses that the characteristics of the traditional project management method (TPMM) have often led to an unrealistic way of managing projects. To a large extent, TPMM resembled its long-standing relationship with the construction industry. Outside that industry the principles, tools and techniques of TPMM have appeared somewhat akin to fitting a square peg in a round hole.

#### **2.4.3.2 Critical Chain Project Management**

Projects can be managed by means of the Critical Chain Project Management (CCPM). CCPM is a method of planning and managing projects that puts more emphasis on the resources required to execute project tasks. Executives often

describe the following three major challenges encountered in trying to meet project management goals:

- choosing the right projects from among a pool;
- getting each project to completion more quicker; and
- funnelling more projects through an organisation without adding more resources (Kerzner, 2006:912).

Choosing the right project is part of strategic planning (Kerzner, 2006:912). To derive the Critical Chain solution, Kerzner (2006:912) identifies five steps applicable for TOC. Project managers should:

- Identify the system's constraints;
- Decide how to exploit the constraint;
- Subordinate everything else to the above decision;
- Elevate the system's constraint; and
- If in a previous step, the system's constraints have been broken; go back to the initial step (Kerzner, 2006:912).

Kerzner (2006:919-920) describes the steps that can be used to enable managers to implement their project plan for effective control. The execution of the project plans depends on the following steps for enhanced project control. Managers should:

- start with the best schedule that they can derive in the traditional manner.
- resource level the project. The manager should not schedule the project assuming that the resource contention will magically take care of itself. In CCPM the resource contention is resolved upfront.
- should not measure people on completing their tasks on time or on the accuracy of their estimates. If management wants to reward team members, the reward should be based on finishing the project on time or early.
- allow people to work on a Critical Chain task in a "dedicated" manner.
- Implement a project buffer to protect the project's critical Chain. Implement feeding buffers on each feeding path, to protect the Critical Chain from variances on any feeding path (Kerzner, 2006:919-920).

#### **2.4.4 PRINCE 2**

PRINCE, which stands for “Projects in Controlled Environment”, is a project management methodology or approach applicable to the management of projects that were first developed in 1989 by the Central Computer and Telecommunications Agency (CCTA), now part of the UK office of the Government Commerce (OGC). PRINCE2 was intended to serve as a generic approach applicable to management for all types of projects. Apart from available project management methodologies, PRINCE2 is mainly in the public domain and was developed by a UK government agency with the specific intention of providing a standard approach to management of projects in organisations (Morris and Pinto, 2007:225).

#### **2.4.5 Process-based management**

Process management indicates what needs to improve or to be implemented to consistently deliver more effective, efficient and productive results. Process management is mainly concerned with the improvement of current processes and the designing of improved processes. Each functional area within an organisation, such as finance or human resources has its own set of processes to deliver departmental specific objectives. These processes in turn should be well coordinated to ensure that no resources are wasted in achieving the overall organisational objectives. The overall objective(s) of an organisation are derived from the vision and mission statements of such an organisation (Knipe *et al*, 2002:45).

The context of a project also includes the process through which a project is managed. Processes are important for managing projects and such processes should be established in a form of methodology to ensure that team members work together satisfactorily towards the project objectives (Boddy, 2002:39).

The purpose of such mechanisms is to ensure that the project activities have adequate links to the wider context. They provide a channel of communication between projects and wider events. They enable people to know what is going on, what they need to do or where to focus their efforts on. If they work well they can be

more than the sum of their individual members, as people not only contribute their ideas, but exchange them with others to produce creative solutions to project problems (Boddy, 2002:39).

The abovementioned approaches advocate towards effective project management. The respective approaches are linked to each other, whereby they all strive to maintain efficiency in project planning, control, and management of project risks. Abrahamse (2002:8) indicates that for project management to succeed in local government there should be a change in Local Municipality hierarchies, lines of authority and traditional utilisation of resources. Project management goes directly to the heart of achieving effectiveness and efficiency when one considers its profound impact on time, resources and quality.

Methodologies must have enough flexibility that they can be adapted easily to each and every project. Methodologies should be designed to support the corporate culture, not vice versa. It is a mistake to purchase a canned methodology package that mandates that an organisation change its corporate culture to support it. What converts any methodology into a world-class methodology is its adaptability to the corporate culture. There is no reason why institutions cannot develop their own methodology. Even the simplest methodology, if accepted by an organisation and used correctly can increase such an organisation's chances of success (Kerzner, 2006:898-899).

Project management although becomes actualised like a golden thread of events, undergoes a series of steps in what has become accepted as the project life-cycle. The section below discusses the project cycle.

## **2.5 PROJECT LIFE CYCLE**

Cook (2005:126) defines a project life cycle as a collection of phases through which any project passes. The number of phases and their breakdown are dependent on the methodology used. The life cycle consists of project initiation, project planning, project control and project close. A project life cycle generally define what technical work should be done in each phase, for example, is the work of the architect part of

the definition phase or part of the execution phase? The project life cycle also focuses on the project team involvement towards the project design (Knipe *et al* 2002:29).

Project life cycle descriptions may be general or highly detailed. These detailed descriptions may have numerous forms, charts and checklists to provide structure and consistency. Such detailed approaches are often called project management methodologies. Most project life cycle descriptions share a number of common characteristics. The characteristics are as follows:

- Cost and staffing levels are low at the start, higher towards the end and drop rapidly as the project draws to a close.
- The probability of successfully completing the project is lower; hence risk and uncertainty are highest at the start of the project. The probability of the successful completion of the project generally gets progressively higher as the project continues.
- The ability of stakeholders to influence the final characteristics of the product and the final cost of the product is highest at the start, and gets progressively lower as the project continues. A major contributor to this phenomenon is that the cost of changes and error correction generally increases as the project continues (Knipe *et al*, 2002:30).

Care should be taken to distinguish the project life cycle from the product life cycle, for example, a project undertaken to design a new building is only one phase or stage of the product life cycle (PMBOK, 1996:12). A sub-project within projects may also have distinct project life cycles. Project life cycles assist in the management of the sequence of tasks needed to complete the project. They assist in identifying issues and in the decision-making on the issues and also aid in the identification of the work to be done when it is to be done. While many are tempted to look on the project life cycle as simply a descriptive device, it is an important decision and control mechanism for suppliers and the various stakeholders in the project, as well as for the project managers (Healy, 1997:37-38). The following uses of project life cycles as management tools can be identified:

- to maintain an overview of the project;

- to assist in identifying the tasks;
- to break the project sequence into manageable parts;
- to promote a sense of urgency among project management staff;
- to decide on the acquisition strategy i.e. who does what in the project;
- to identify appropriate staff qualities i.e. characteristics, behaviour;
- to integrate activities;
- to time decisions; and
- to guide the level of consistency (Healy, 1997:37-38).

### **2.5.1 Project Processes**

The main challenge for project management is to infuse a project or matrix organisational structure with the existing bureaucratic hierarchical structure (Van der Waldt, 2001:304). By integrating a project structure into the existing hierarchical structure of an institution, functionaries in the various directorates act as project team members for the duration of the project. Once the project is completed, they continue with their usual responsibilities. Van der Waldt (2001:305) identifies advantages for the project structure as follows:

- the project manager has full authority and responsibility to manage the implementation of the project including staff, resources and infrastructure;
- project team members may report directly to the project manager and if staff members are still required to perform specific functional responsibilities, the project manager and the staff member's supervisor must jointly compile a schedule; and
- lines of communication are reduced which makes rapid decision-making possible and if there are projects in the institution which are similar in nature, specialist areas can be combined (Van der Waldt, 2001:305).

It is essential that the application of project management should also be considered against the backdrop of the intended advancement of people. The community in which projects are done is the beneficiary and the need to measure development thereof is important.

## 2.7 PROJECT MANAGEMENT AND COMMUNITY DEVELOPMENT

Van der Walt and Knipe (2001:125) indicate that a full understanding of the concept of development management will enable the public manager to apply the theory of development management and the theory of project management in order to uplift the community it serves. Developmental management is defined as a process whereby a person, community or state manages development activities in order to achieve an objective and to continuously take account of the environmental influences on the process (Van der Walt and Knipe, 2001:125).

Participation in the development process and also in development projects must allow members of the community to use their own views and convictions to address specific conditions and/or problems prevailing in their communities. In addition participation must be acknowledged as a voluntary process that can make a definite contribution to converting or developing the community (Van der Walt and Knipe, 2001:142). The White Paper on a new Housing Policy and Strategy for South Africa (1994) indicates that the development does not entail the delivery of goods and services to a passive community, but rather requires involvement by and empowerment of the community.

The public manager should apply the principles of project management, but also those of the management of diversity and the management of change in the decision making process, which goes hand-in-hand with the identification of needs. The following are aspects that the public manager can do to help the community to become involved in the project cycle:

- draw up a socio-economic and political profile of the community;
- identify development needs;
- determine constraints and the basic services and products that are available;  
and
- draw up an inventory of available resources, services and amenities and their quality (Van der Walt and Knipe, 2001:149).

Van der Waldt and Knipe (2001:132) indicate that the most important values underpinning the concept of local government are democratic in spirit and in public financing, service oriented and efficiency in the use of public funds. Local government serves these values particularly well because of its closeness to the local community; both geographical senses as far as its potential responsiveness are concerned. It means that local government is in an ideal position to cater for the developmental needs of the community. These needs can be arranged in the form of programmes and projects which will have to be implemented by the local public manager. The value of project management and more precisely the value of breaking down pieces of work into manageable portions of assignments have made project management the inevitable choice not only for the private sector but also for public service (Van der Waldt and Knipe, 2001:132).

Abrahamse (2002:8) also indicates that for project management to succeed in local government there should be a change in local municipality hierarchies, lines of authority and traditional utilisation of resources. Project management goes directly to the heart of achieving effectiveness and efficiency when one considers its profound impact on time, resources and quality. While there is due recognition for the disadvantages of the implementation of project management approach in government undertaking there is also sufficient empirical evidence on the application of project management approach with considerable rate of success. In large departments such as Trade and Industry, Local Government helps to convince that the odds are by far outnumbered if the proper modalities of management by projects are carefully implemented. Samuel (2006) concludes that among the challenges facing government infrastructure service delivery programme, the most critical variable is poor application of project management.

## **2.8 CONCLUSION**

Infrastructure development costs are high and use government spending derived from public funds. Poor application of projects hampers service delivery and impacts on the lives of beneficiaries of government services.

This chapter discussed project management as a discipline which employs skills and knowledge to achieve project goals through various project activities. The chapter also provided a brief overview of project management, its purpose, activities, and responsibilities. The project life cycles and their phases, along with the processes and activities of project management were also discussed. The next chapter will discuss the application of project management in the context of delivering low cost houses in Metsimaholo Local Municipality.

## **CHAPTER 3**

### **AN OVERVIEW OF THE APPLICATION OF PROJECT MANAGEMENT IN THE PROVISION OF LOW COST HOUSING IN THE METSIMAHOLO LOCAL MUNICIPALITY**

#### **3.1 INTRODUCTION**

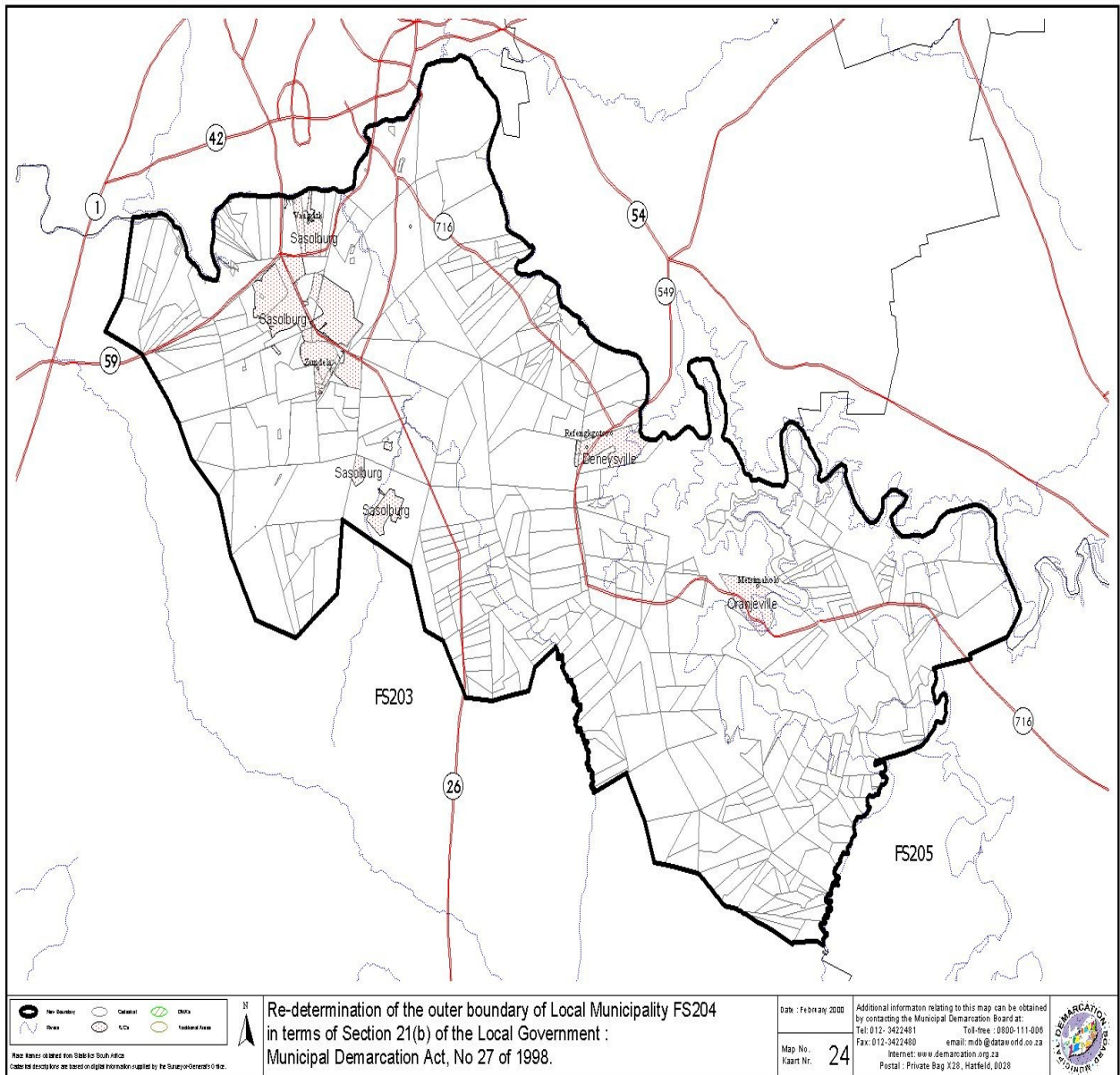
The provision of low cost housing (LCH) has become an indispensable process in development. The provision of adequate housing for the homeless and the inadequately housed in an attempt to reduce poverty and improve quality of people's lives has been a huge challenge to the South African government over the years. In developing countries, the provision of low cost houses has become an indispensable process of development. This chapter gives the background description of the Metsimaholo Local Municipality (MLM)'s LCH project. The concept LCH is defined in this chapter. The need and effects of the LCH are discussed in the chapter. The framework of the LCH in the MLM is analysed, and this analysis includes the current housing allocation, the types of housing infrastructure and the projects put in place to ensure provision of LCH in the MLM. The legislative framework and housing strategies will also be discussed. The chapter also describes LCH and its goals. The role and activities involved in the application of project management in the provision of LCH in the MLM is also discussed in this chapter.

#### **3.2 OVERVIEW OF THE METSIMAHOLO LOCAL MUNICIPALITY**

The South African demarcation process in 1998 resulted in local municipalities being dramatically reduced. The majority of the newly incorporated areas were formally known as rural areas. The incorporation of rural areas into existing municipalities placed a great strain on municipal budgets in terms of basic service delivery backlogs, including the allocation of housing infrastructure in the country. MLM is a category B municipality and comprises of three towns with their corresponding townships, namely, Sasolburg and Zamdela (township), Denneysville and Refenggotso (township) as well as Orangeville and Metsimaholo (township). The

Figure 3.1 below indicates the location of MLM (Metsimaholo Local Municipality (MLM), 2010).

**Figure 3.1 Map showing Metsimaholo Local Municipality**



Source: (The DPLG, 2010)

### 3.2.1 Municipal population and socio-economic profile

The MLM is located in the northernmost corner of the Free State Province, which forms part of the Vaal Triangle [*Vanderbijlpark, Vereeniging and Sasolburg region(s)*]. It forms part of the new category B local municipality FS 204, with a

geographical area of approximately 1705, 4253 km<sup>2</sup>. The real Gross Domestic Product (GDP) growth for 2007/2008 for municipalities is expected to be around 4, 4%. The Consumer Price Index (CPIX) remains within the 3 to 6 percent target range (average forecast 5, 1%). The MLM contributes 68, 1% to the GDP in the Fezile Dabi District Municipality. The hub of economic contribution in this municipality is the manufacturing and coal mining sectors. The 2009/2010 Medium Term Revenue and Expenditure Framework submitted to Council on 2 June 2009, *inter alia* confirmed the following further data:

- Operating Expenditure of R483 948 000.00, and
- Capital Expenditure of R176 427 000.00.

The figure above “*exclude*” capital projects focused on housing delivery, estimated at R225 Million for batches of 500 houses. The population growth rate for Zamdela only represents 175.76% over 12 years, which is indicative of the huge challenges for a local municipality (MLM, 2010). MLM houses approximately 25, 2% of the Northern Free State region’s population, namely: 173, 300. Table 3.1 below provides the distribution of the population according to the township established in the MLM.

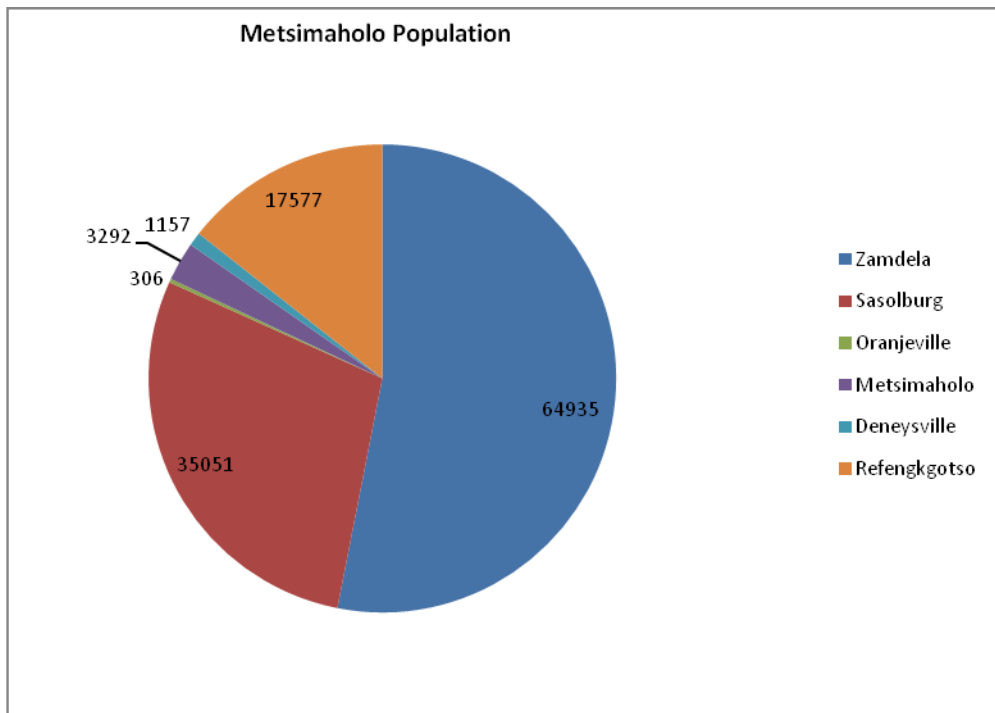
**Table 3.1 MLM population distribution**

Town/Township/Rural Area	Number of Erven (houses)	Population
Sasolburg	10 227	35 051
Vaalpark/Roodia	4 850	8 064
Zamdela	18 777	64 935
Deneysville	2 330	1 153
Refengkgotso	4 101	17 577
Orangeville	1 309	306
Metsimaholo township	1 721	3 292
Farms	3 612	Not determined

Source: (MLM, 2010).

The next section presents the distribution of the MLM population. Figure 3.2 below outlines the distribution of the MLM population.

**Figure 3.2 A diagram showing population distribution in MLM**



**Source: (MLM, 2010)**

The (MLM, 2010) indicates that the gender differentiation in the MLM is similar to the national and provincial character; as the females add up to 55% Female whereas the males counts up to 51%. Zamdela seems to have a large population within its jurisdiction and it is the first urban area/ Location established in the MLM. As compared to Sasolburg, the population ratio is below the one of Zamdela. This is caused by the fact that Sasolburg is an industrial area and an economic hub or the central business district of the MLM. Refengkgotso is the second largest township within the MLM. The townships Metsimaholo, Orangeville and Deneysville are newly established townships of the MLM, and these are the areas that are in need of redevelopment earmarked by government (MLM, 2010). However, a population of such a magnitude needs accommodation and shelter. Invariably it will be the responsibility of each individual household to seek and provide itself with a dwelling place but due acute unemployment the need for low cost housing is increasing in South Africa.

The section below defines the concept LCH.

### **3.3 DEFINITION OF LOW COST HOUSING**

The concept of LCH can be found all over the world and its meaning differs according to its context and discipline. The concept may differ within the context of the developed and the developing countries. For example, in the developed countries such as United States of America, LCH can be considered affordable for a low or moderate income earner if that household can acquire use of that housing unit (owned or rented) for an amount of up to 30 percent of its household income (Miles et al, in Oladapo, 2001:3). Whereas in the developing countries like South Africa, the LCH refers to those houses developed for people who do not have shelter and who cannot afford to buy their own houses (Masango, 2005). The National Building Research Institute (NBRI, 1987) further states that the concept of LCH relates to dwellings developed for the poorest sections of the South African population. The low-income groups are generally unable to access the housing market through the mortgage institutions (Oladapo, 2001:3) as a result they depend on government social assistance to own a house.

In South Africa the LCH is in various forms. There is free housing provided to the poor, mostly these categories fall within the indigent categories and they are unemployed. There is also LCH rental housing, which is occupied by low income earners. It can comprise a variety of forms of tenure, excluding immediate individual ownership (Social Housing Focus Trust (SHIFT), 2006:1).

### **3.4 INTERNATIONAL TRENDS ON HUMAN SETTLEMENTS**

The construction industry is a major player in the economy, generating both employment and wealth, however, many projects experience extensive delays and thereby exceed initial time and cost estimates. Sweis *et al* (2007) refer to a host of causes of construction delays in residential projects which were identified and classified according to what they refer to as Drewin's Open Conversion System. Sweis *et al* (2007) indicates that the shortage of manpower (skilled, semi-skilled, unskilled labour) has been a serious delay for residential construction projects in Jordan.

Provision of housing infrastructure is on the agenda of many global governments. Requirements for housing infrastructure are the same throughout the world. In the next sections the author provides some highlights on international experiences regarding housing issues.

### **3.4.1 Ghana**

International policies aimed at directly providing housing for the low-income households have had significant influence on Ghana's policy direction over the years. Successive governments have adopted these policies without altering them for local circumstances (Azumah, 2003:13). The National Shelter Strategy represents the modest direction of housing policy in Ghana. The strategy, which is the main working document of the Ministry of Works and Housing officially recognises the private ownership of houses and also permits organisations and individuals belonging to different economic sectors to build houses for sale and hire (Azumah, 2003:13). The Ministry of Works and Housing in Ghana with assistance from the United Nations formulated the abovementioned strategy, with the following objectives; with the aim to:

- accelerate home improvement and the upgrading and transformation of the existing housing stocks;
- improve the environment of human settlements with a view to raising the quality of life through the provision of good drinking water, sanitation and other basic services,;
- make shelter programmes more accessible to the poor;
- promote greater private sector participation in housing delivery by creating an enabling environment through the elimination of constraints and improving access to resource inputs;
- create an environment conducive to investment in housing for rental purposes, and
- promote orderly consolidated urban growth to promote greater private sector participation in housing delivery by creating an enabling with acceptable minimum provision of physical and social infrastructure (Azumah, 2003:13).

### **3.4.2 Middle East**

The Middle East region has been experiencing a boom in construction due to wars as well as the high prices of oil resulting in access liquidity and thus a higher demand for investment opportunities. The Jordanian residential construction boom has been accompanied by shortages in foreign manpower leading to higher wages and thus adding to the financial burden on the contractor. This explains the contractor's reliance on cheap, unskilled labour (Sweis, Sweis, Buhammad, and Shboul, 2007). Additionally this fact is very revealing in the results of the research conducted by Sweis *et al* (2007) in that it ties with the high ranks given and the owner to poor planning and scheduling of projects and the incompetent technical staff assigned to the project. Using the terminology of the Drewin's Open Conversion System, it can be clearly argued that the major causes are related to the internal environment of the system especially that of the contractor, and the input factors relating to labour, while the exogenous factors have very little or negligible effect on the project delay (Sweis *et al*, 2007).

### **3.4.3 China**

Liu *et al* (2003) indicates that the reforming and open door policy started in China at the end of 1970; the country has accelerated its economic development at an impressive rate and has risen as an important economic force in the world. To accommodate the national rapid economic expansion demands for building and infrastructure, China's construction industry has achieved extraordinary growth and dramatic development; however there were no independent professional management companies in the Chinese construction market until 1988. According to Liu *et al* the practice of establishing a construction project in China always involved a temporary organisation, the Project Preparatory Office (PPO). This was set up by the project client to take over the duty of project management on behalf of the client. Professional construction supervision (CS) was set up by the Ministry of Construction in China in 1988 to replace the traditional PPO practice (Liu *et al*, 2003)

Given China's unique economic and political environment, Liu *et al*, (2003) argues that it was natural that Chinese construction should have some different

characteristics compared with its counterpart-construction project management in the West though the essence of the systems is quite similar.

It has been estimated that at least 600 million urban dwellers in Africa, Asia and Latin American live in “life and health threatening homes” because of the very poor housing and living conditions and the lack of adequate provision for sanitation, drainage, removal of garbage and health care. Increasing number of urban poor are also homeless in both developed and developing countries with the current estimate of homeless population being over 100 million (Paudel, 2010).

#### **3.4.4 South Africa and the Netherlands**

South Africa and the Netherlands share ideas and knowledge on replacing informal dwellings with sustainable settlements. In 2003 the two countries signed a memorandum of understanding on cooperation in the field of social housing for low to medium income people that excludes immediate individual ownership. The partnership resulted in the development and publishing of the “Municipal Social Housing Policy Toolkit”, an instrument for a municipality to develop its own social housing policy (Sweis *et al*, 2007).

### **3.5 AIMS AND OBJECTIVES OF LOW COST HOUSING**

LCH is part of Social Housing Programmes. Social housing is intended to promote improved quality of life and the integration of communities by providing affordable high standard housing (Social Housing Focus Trust (SHIFT), 2006:1). It is also aimed at subsidised housing with the added benefit of regenerating the area where the housing stock is located (SHIFT, 2006:1). The Directorate Economic Development and Planning’s goal is, subject to fiscal affordability. The MLM also aims to increase housing delivery and hostel re-development on a sustainable basis to a continuous level of 1`000 units per annum until the housing backlog is overcome by 2020.

The Vision of the Directorate Economic Development and Planning is to eradicate backlogs within its area of jurisdiction and focused on two main areas, namely: Urban Settlements; and Rural Settlements.

- *Decent living:*

With this the government aims to "bring quality housing to the poor on a scale which has not been on the agenda before (Van der Linde, 2005).

- *Eradicating informal settlements:*

*There is high rate of informal settlements in the MLM. The LCH are aimed to provide housing to residents of informal settlements and this is geared to be fulfilled by 2014 (Van der Linde, 2005).*

- *Reducing backyards dwellers:*

The MLM comprises of homeless residents who live in the backyards, those living in council housing, those with no housing at all (Van der Linde, 2005). Therefore the government wishes to provide housing to these residents.

- *Creating Sustainable livelihood:*

On the other hand the LCH serves as a model for tackling urban development in the country (Van der Linde, 2005) caused by urban decay. These includes products and services such as the special community re-development projects, incorporating environmental management with effective social and community sustainable modelling (Low Cost Housing International (LCHI), 2005: 3). The process is managed by viable and sustainable independent institutions which encourage the participation of residents in managing their own communities (SHIFT, 2006:1).

In the North West the government planned to rid the squatter camps in the province by building 22 000 houses a year for the next three years (Masango, 2005). Whereas in the Cape Town, there is a multi-million rand N2 Gateway Project that was aimed to benefit over 100 000 people who squat along the highway leading from Cape Town International Airport into the Mother City (Van der Linde, 2005).

### **3.6 THE NEED FOR HOUSING AND ITS INFLUENTIAL FACTORS**

For this study a house is used interchangeably to the concept shelter. Paudel (2010) defines the concept shelter as a livelihood. Paudel (2010) further indicates that a

chance for an individual to have access to safe and healthy shelter is essential to a person's physical, psychological, social and economic well being and is a fundamental part of basic livelihood. Access to housing infrastructure is the first entry point to human liberalisation. Human needs are endless; however such accomplishment must be complemented by socio-economic factors such as education and employment. However, greater numbers of population of the world lives either without or very temporary shelter (Paudel, 2010). The overwhelming shelter problem in the developing countries has resulted in the proliferation of slums and squatter settlements (Paudel, 2010). The gap between the demand and availability of housing units is a disturbing factor and is becoming unmanageable as its hysterically expanding (Paudel, 2010).

- *Poverty and limited access to resources:*

Paudel (2010) indicates that *poverty and limited access to resources* have compelled to look for low cost housing options.

- *Growing population:*

The world population has grown in a hysterical manner. The influx of population into the urban areas such as the MLM has led to unprecedented growth in population.

- *Migration:*

Migration is one of the problems facing developing countries (Paudel, 2010). The migration is seen to occur within the adjacent areas within the Free State Province, whereas some causes of migration arise from rural underdevelopment which encourages people to search for better opportunities elsewhere (Paudel, 2010). For instance the migration could result from unemployment, ageing by farm labourers, resettling of farmers. The Free State Province is known for its riches in agricultural farming. As time passed by, some of the farm owners sold their farms to reside in another province or abroad (Australia, England or Britain). Therefore, some of the new farm owners decided to retain the farm residents whereas some new farm owners decided to forcefully remove the farm residents.

Some of these farm residents have resided in these farms for a long time (since birth or in their youth days). Some of the farm workers are ageing and their health status could not afford to perform the farm duties, as a result they would either resort for old age pension, or resign, whereas others are retrenched. Urban settlements in

developing countries are at present growing five times as fast as those in the developed countries. All these situations results to homelessness and unemployment (Participant Observation).

These circumstances lead to urban settlements growing five times as fast as those in the developed countries (Paudel, 2010).

### **3.7 EFFECTS ON HOUSING PROVISION**

The effects to the provision of housing are influenced by the factors mentioned below. The researcher of this study starts with the institutional challenges and then followed by challenges based on the demand of housing delivery.

#### *Supply of housing delivery*

The following challenges of housing delivery have been identified by the Department of Local Government and Housing (In Free State Provincial Government, 2007:47):

- The non-existence of township registers;
- The unavailability of suitable land and serviced stands;
- The slow release of state land;
- The lack of readiness and preparedness in respect of accreditation of municipalities;
- The lack of capacity in administrative matters, project management, technical and financial matters, and housing structures within the Province;
- The lack of proper policies, structures and the continuous updating thereof;
- The lack of bridging finance and contract administration expertise;
- The lack of detailed housing delivery plans at the municipal level;
- The lack of alignment and coordination of infrastructure and housing development in municipalities;
- The non-availability of deposit-taking structures;
- Inadequate stakeholder management;
- The lack of spatial integration between the former black and white towns;
- The lack of research on alternative building methods and materials, and
- Unreliable information on the housing subsidy system (Department of Local

Government and Housing, 2005 *In* Free State Provincial Government, 2007:47).

### *Demand of housing delivery*

The following are the effects that arise from the demand of housing delivery.

- Environment

*The influx of people migrating to the urban areas has a tremendous effect on the environment.* This has a negative impact on the management of garbage, sewage and other sanitation problems affecting to people's health condition. For example, there is environmental pollution caused by informal housing and illegal dumping, since the refuse removal vehicles are unable to access the areas as they are not planned according to the municipal zoning (Participant Observation).

- Informal housing

As mentioned above that the LCH is meant to eradicate the informal settlements. Such jurisdictional areas are unplanned housing infrastructure at the end of the day they lack proper service delivery and basic services. Some of these settlements are built temporarily and they lower the standard of the MLM and other urban areas. The informal housing is prone to health hazards, infectious diseases such as cholera, malaria and other contaminating diseases. During rainy seasons such places become victims of disaster such as flood which wash away their belongings and fires caused by illegal electricity connections in such informal households (Participant Observation).

- Supply of basic services v/s Backyard dwelling and safety

Nationally, 71,14% of households rent accommodation, and 71,76% of people renting in metropolitan areas live in formal structures. Black households comprise the largest percentage of renters, followed by coloured households (Burger, 2009:311). Due to unemployment by these beneficiaries, there are a number of backyard dwellers in these houses. Most of these dwellings are erected from corrugated iron and wood. Furthermore, these backyard infrastructure are not

planned per head counts or family. In such instances the dwellings are unsafe and not connected to the basic supply of water, electricity and sanitation. Such overpopulation results to burst of sewerage pipes, shortage of water caused by low water pressure. There are also electrical power cuts caused by illegal connections in these dwellings (Participant Observation).

- Fraud and corruption

There are people who abuse government's good intention to house its people. In some instances you find that people occupy the LCH illegally, some due to desperation to own a house whereas some are just victims of fraudsters who sell the LCH to homeless community members. In the MLM, there are cases whereby by acquiring houses they were not entitled to would be dealt with by the law (Participant Observation).

- Poverty v/s dishonesty

The LCH is meant to offer housing infrastructure to the homeless. Masango (2005) addresses serious concerns about the houses built in South Africa. During the study the researcher found that some beneficiaries sold their houses to raise some money for themselves and their families (Masango, 2005). Some were found to be letting their houses to those who want to rent, especially those who are employed far from their homes. Some have set up businesses in their homes and do not live in those houses.

The study also found that some beneficiaries have built huge mansions after acquiring the houses (Masango, 2005). This is quite disturbing, because government have injected a lot of money to build these houses. There is no harm for one to extend his/her house, but the disturbing factor is that the beneficiary brings the whole building to the ground and rebuild the house from the scratch. These issues are obvious to the researcher of this study.

The section below analyses the legal framework for low cost housing in South Africa.

### **3.8 LEGAL FRAMEWORK FOR LOW COST HOUSING IN SOUTH AFRICA**

The achievement of strategic goals, administration processes and activities of a municipality is regulated by legislation. The *South African Constitution (1996)* enshrines the right of everyone to have access to adequate housing and makes it incumbent upon the state to take reasonable legislative and other measures within its available resources to achieve the progressive realisation of this right. In response to this Constitutional imperative, government has, in terms of the *Housing Act, 1997 (Act No 107 of 1997)* introduced a variety of programmes which provide poor households with access to housing opportunities. The policy principles set out in the White Paper on Housing of 1994 aimed to provide poor households with houses as well as basic services such as potable water and sanitation on an equitable basis.

The legal requirements, among others, stipulate that the land on which houses are built is a capital asset no different from any piece of land owned by the municipality even if it is normally sold to the occupants thereof at a nominal/ incentive land price. The disposal of such land is regulated by legislations such as the Section 13 of Act 56 of the *Municipal Financial Management Act, 2003 (Act 56 of 2003)*. The Free State provincial government fulfils its services through the application of the following legislative mandates:

- Housing Act, 1997;
- Prevention of Illegal Eviction from and Unlawful Occupation of Land Act, 1998;
- Rental Housing Act, 1999;
- Home Loan and Mortgage Disclosure Act, 2000;
- Generic Public Service Legislation;
- Housing Consumer Protection Measures Act;
- Public Service Act;
- Employment Equity Act;
- Skills Development Act;
- White Paper on Transformation of Public Service, and
- Public Service Regulations (Free State Department of Local Government and Housing, 2003:7).

The National Home Builders Registration Council (NHBRC) was further established in terms of the Housing Consumers Protection Act, 1998 (Act No 95 of 1998) to regulate the house-building industry and to offer consumer protection through a warranty scheme from 1 April 2002. Furthermore, the legislative framework stipulates that houses which need to be delivered must now comply with the norms and standards of the National Building Regulations and minimum technical standards of the NHBRC; be constructed by builders that are registered with the NHBRC and ensure that all houses constructed are enrolled with the NHBRC.

In South Africa the construction of LCH is regulated by housing policies as well as by the Housing Project Process Guide which was developed for three specific programmes, which are mostly utilised for subsidised housing development, namely:

- The Integrated Residential Development Programme,
- The Upgrading of Informal Settlements Programme, and the
- Rural Housing Subsidies: Communal Land Rights Programme (DOHS-1, 2009:23).

The programmes discussed above are realised by means of the national housing strategies. This strategy is discussed below.

### **3.8.1 The National Housing Strategy of South Africa**

LCH in MLM is part of the urban renewal and urban redevelopment programmes. The right to housing is one of the fundamental human rights which South Africa as a country recognises and takes care of (Azumah, 2003:12). Housing is meant to address the basic human need for shelter and security by providing protection against excessive climatic conditions and unwanted intrusion from insects, rodents, and from environmental nuisances such as noise that may be injurious to human health and well being (Ogunfiditimi and Thwala, 2008:2). Housing production, access, affordability and maintenance of existing stocks in a habitable condition still remain some of the most intractable problems facing the nine provinces in South

Africa. In spite of national and international efforts aimed at developing appropriate shelter policies and strategies, no effective remedy has been found to cure the housing ills (Azumah, 2003:12). An overview of South African national housing strategies is discussed below.

### **3.8.1.1 The Housing Development Agency**

The former Minister of Housing, Lindiwe Sisulu launched the Housing Development Agency (HDA) on 17 February 2009. The launch of the HDA was aimed to ensure the co-ordinated acquisition of suitable land. HDA is seen as an action that will allow for the acceleration of the development of human settlements nationally. Currently the HDA is working on four (4) projects across the country as announced at its launch (Department of Human Settlement-1 (DoHS-1), 2009:16). HDA projects are administered through a Public-Private Partnership. The PPP human settlement is a mixed use and mixed income development. It was envisaged that 50 000 affordable and sustainable housing tenure options will provide homes to 200 000 people. The agency also visualised the creation of 100 000 jobs during construction (DoHS-1, 2009:17). The four pilot projects include:

- A Public-Private Partnership between Ethekwini municipality and Tongaat Hullett, Cornubia;
- Northern Cape Informal Settlement Programme,
- The City of Johannesburg's project, and
- Alstood at Lephalale Ext 102 (DoHS-1, 2009:17).

### **3.8.1.2 The Breaking New Ground Strategy**

Since government programmes have challenges such as ever increasing waiting lists of home seekers, shoddy work done by mostly BEE appointed contractors and scarcity of resources. These factors necessitated the housing programme to be reviewed. The review was undertaken from the outcomes of the programme and the changes in the South African socio-economic context. In September 2004, the Cabinet approved a comprehensive plan towards the creation of sustainable human settlement commonly referred to as *Breaking New Ground* (BNG) (DoHS-1,

2009:17). The BNG focuses beyond the principles of services infrastructure (the provision of water, roads, electricity and sanitation). The strategy also moves towards a more holistic development of human settlements, which includes the provision of social and economic infrastructure. The BNG require all stakeholders to plan the provision of facilities such as parks, playgrounds, sports fields, crèches, community halls, taxi ranks, satellite police stations, municipal clinics and informal trading facilities (Campbell & Mshumpela, 2008:8-9).

### **3.8.1.3 The People's Housing Process**

The People's Housing Process (PHP) is a low-income housing delivery approach promoting the involvement of the beneficiaries in the development of their own houses (Ogunfiditimi and Thwala, 2008:2). The Peoples Housing Process is a self-help housing mechanism which allows groups of people to work together to pool their resources and contribute their labour to build homes. By supplementing the standard housing subsidy with savings, additional loans or labour, communities implementing the PHP are able to build bigger and better homes. The PHP process also builds human capacity and brings communities closer together (Campbell & Mshumpela, 2008:2).

The PHP is supported by the National Housing Policy. The policy focuses on poor families in both urban and rural areas, using capital subsidies to allow people to build their own homes. It also assists people in obtaining access to technical, financial, logistical and administrative support to build their own homes, on either an individual or a collective basis. PHP projects have been proven to be better than standard housing developments, but only 10% of houses to date have been delivered using this method (Campbell & Mshumpela, 2008:2).

### **3.8.1.4 The Youth in Housing Programme**

The Youth in Housing Programme (YHP) was developed to empower the youth of South Africa and a pilot project was initiated in Ivory Park and it commenced in December 2008. The programme is spearheaded by the national Department of Human Settlements and Commission for Youth Development Agency. The programme is aimed at promoting comprehensive skills such as technical, theoretical

and practical skills relevant in the Human Settlements sector industries (DOHS-1, 2009:23). The programme also serves as part of the strategy to alleviate unemployment among the youth while contributing to the effort to eradicate the current backlog of 2, 2 million houses for those who cannot afford to provide homes for themselves. The programme also serves as a participatory mechanism to promote community participation in building decent homes for the needy and for those without the necessary qualifications to pursue higher education (DOHS-1, 2009:23).

### **3.9 LOW COST HOUSING IN THE METSIMAHOLO LOCAL MUNICIPALITY**

The vision of the local municipality is to “strive to be a leading municipality in delivering effective, affordable and sustainable quality services to its communities” (MLM, 2010). Strategic objectives of the MLM council are established in the following areas:

- *Institutional*: Monitoring, Governance, Performance Management;
- *Economic*. The objective looks at Local Economic Development and poverty alleviation;
- *Social*: The objective aims to Improvement level of Health Services, Education, Youth Development, Welfare Service Provision, Culture Enhancement, Safety and Security, Disaster Management, Gender Equity and HIV/AIDS;
- *Infrastructure*: the objective focuses on Acquisition of Land, Housing Delivery (Water Provision, Sanitation and Storm Water, Electricity Provision), Refuse Removal, Landfill Sites and Cemeteries and Telecommunication; and
- *Spatial & Environmental*: the objective provides for Future Land Uses (Sport & Recreation, Public Transport, and Environmental) and Land Reform (Agriculture) (MLM, 2010).

To implement the abovementioned strategies the municipality created five Directorates responsible for Administration, Finances, Engineering Services, Social Services and a Directorate for Economic Development and Planning. The directorate for Economic Development and Planning consists of three divisions,

namely, the Economic Development Division; Urban Planning Division, and Housing- and Property Management Services Division (MLM, 2010).

Through consciously planned housing delivery projects, the MLM tries to correct the spatial disparities of the apartheid era and to ensure that integration happens between housing and other service provision such as infrastructure development, roads, transport, education, health, safety and security. Although the Housing Sector Plan of MLM is developed separately, it is destined to form part of the MLM Integrated Development Plan (MLM, 2010).

### **3.10 CURRENT HOUSING SITUATION IN MLM**

A relatively small formal housing stock, low and progressively decreasing rates of formal and informal housing delivery in South Africa. These have resulted in a massive increase in the number of households forced to seek accommodation in informal settlements, backyard shacks and in overcrowded conditions in existing formal housing (Government Communication and Information System (GCIS), 1994). The following living conditions exist in the MLM as identified by GCIS (1994). Some of the housing structures are presented in Appendix 5.

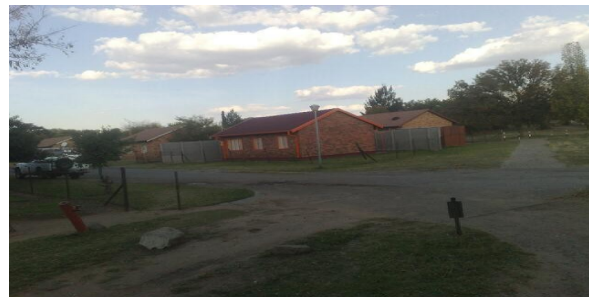
#### *Urban formal housing*

Approximately 61% of all urban households live in formal housing or share formal housing with other families. The total formal housing stock in South Africa is estimated to be 3.4 million units. These include formal houses (RefengKgotso, Zamdela), flats (Sasolburg), townhouses (Vaalpark) and retirement homes (GCIS, 1994).

**Picture 3.1 LCH in MLM**



**Picture 3.2 Houses for high incomers**



*Source: Photographic surveys captured in April 2012 by Author (Masike)*

The pictures above symbolise the formal housing. Picture 3.1 is a LCH captured in Zamdela Location. Picture 3.2 represents a house for the higher income bracket owners.

### *Urban Informal housing*

Approximately 1.5 million urban informal housing units exist in South Africa at present. These include around 620 000 serviced sites delivered by the old provincial authorities and through the Independent Development Trust's (IDT) Capital Subsidy Programme, as well as almost 100 000 unused (sterilised) serviced sites. Delivery of serviced sites through the IDT's Capital Subsidy Scheme and by the four (old) provincial authorities is estimated to have reached levels in excess of 120,000 per annum over the last three years, but has declined this year (GCIS, 1994). In MLM there is still (June 2006) an urgent need to accommodate an estimated 2 500 informal settlements, residing next to the sewer plant in RefengKgotso.

### **Picture 3.3 Urban Informal housing in Deneysville**



*Source: Photographic surveys captured in April 2012 by Author (Masike)*

This type of housing is an informal housing captured in Deneysville. This type is not regarded as such as illegally constructed. The state provides land for the beneficiaries and the beneficiaries built their housing structures and they are provided with basic services such as water, sanitation, waste removal and electricity.

### *Hostels*

An estimated 5.2% of all households presently reside in private sector and public sector hostel accommodation. Approximately one third of all public sector hostels (58 in all) housing approximately 100,000 people have been or are in the process of being upgraded (GCIS, 1994).

### *Squatter housing*

GCIS (1994) indicates that 13.5% of all households (+-1, 06 million) live in squatter housing nationwide, mostly in free-standing squatter settlements on the periphery of cities and towns and in the back yards of formal houses. Low rates of formal housing delivery coupled with high rates of new household formation have resulted in a massive growth in the number of people housed in squatter housing. This form of housing remains the prevalent means through which urban households are accessing shelter in South Africa at present. It is estimated that approximately 150,000 new households per annum house themselves in this way. The recent rapid increase in the number of land invasions is a further indication of this. In the short-term particularly, policy responses from all tiers of Government will have to be pro-actively responsive to this fact (GCIS, 1994).

**Picture 3.4 Squatter Housing: MLM**



**Picture 3.5 Sanitation facility: squatters**



Source: Photographic surveys captured in April 2012 by Author (Masike)

The above housing structures represent the Squatter Housing found in the MLM. Picture 3.4 showcase the housing structures that are erected in previously unused land. Whereas picture 3.5 represent the sanitation (toilet) structure used by

surrounding residents in the squatter area. Such toilets are mostly serves as communal toilets, which unhygienic and unsafe.

### *Rural housing*

The Free State comprise of rural and urban areas as indicated above. It is reported that two thirds of the 17.1 million people estimated to live under the poverty datum line (PDL) live in rural areas. Of the 14.5 million people estimated to live in the rural areas, the far greater part resides outside the commercial farming areas. There is a mix of both formal and informal house structures but what they generally share in common is inadequate access to potable water and sanitation, and a general insecurity of tenure (GCIS, 1994).

### *Farm worker housing*

The economy of the Free State, same as that of the North-West province is boosted by agricultural activities. The estimates on farm worker households vary considerably between one to one and a half million households in South Africa. Since 1990, farm owners received subsidies towards the building of 20 140 approved farm worker residences. Farm workers do not have security of tenure, and are therefore reluctant to put earnings into housing. Consequently, the living conditions of farm workers are among the worst in the country especially the hostel-type accommodation for seasonal workers (GCIS, 1994).

## **3.11 STRATEGIES IN PLACE FOR HOUSING DEVELOPMENT IN THE MLM**

Initiatives for housing development arise because of the gap that exists in a particular municipality. A variety of factors influence these developments to take place. The Department of Local Government and Housing identified the several challenges associated with the delivery of housing in South Africa. The challenges identified include the following:

- The non-existence of township registers.
- The unavailability of suitable land and serviced stands.
- The slow release of state land.
- The lack of readiness and preparedness in respect of accreditation of

municipalities.

- The lack of capacity in administrative matters, project management, technical and financial matters, and housing structures within the Province.
- The lack of proper policies, structures and the continuous updating thereof.
- The lack of bridging finance and contract administration expertise.
- The lack of detailed housing delivery plans at the municipal level.
- The lack of alignment and coordination of infrastructure and housing development in municipalities.
- The non-availability of deposit-taking structures.
- Inadequate stakeholder management.
- The lack of spatial integration between the former black and white towns.
- The lack of research on alternative building methods and materials.
- Unreliable information on the housing subsidy system (Department of Local Government and Housing in Department of the Premier: Free State Provincial Government, 2007:47).

The following are the priority focus areas and the strategic delivery activities that will be undertaken by the MLM in order to realise the objectives stated above. The expected output for each strategy, the responsible agency to implement the strategy, the resources required to realise the strategy including the timeframe within which the strategy is to be implemented are outlined in the main report.

The housing development strategies for the MLM are listed below and the summary of the activities is shown in Appendix 2.

- Housing Sector Plan Review;
- Land invasion control;
- Spatial Development Planning;
- Acquisition of suitable land;
- Identify and develop suitably located land for housing development;
- Provide mass housing delivery;
- Build quality houses;
- Houses should be planned to acceptable standards;
- Prioritise South African Residents for Housing;
- Reduce time taken to process subsidy applications;

- Formation of Project Steering Committees to ensure the collaboration of developers, ward committees and councillors in the speedy execution of projects;
- Fair Allocation of housing subsidies to all towns;
- Promote the involvement of black companies in the housing market;
- Proper disposal / transfer of erven to rightful owners;
- Future Planning, and
- Compilation of a living housing waiting list that also caters for people needing serviced stands (MLM, 2010).

The abovementioned strategies for the MLM forms part to guide the housing projects planned for the MLM. Some of these strategies are discussed together with the section on the application of project management in the provision of LCH in MLM.

### **3.11.1 Eradication of the housing backlog in the MLM**

The increasing demand for low cost housing brought a challenge to government whereby projects are being developed to fill the gap and to develop the homeless. Since the early 1990s, the MLM Council was forced to initiate measures to eradicate the housing backlog. There are projects in place to eradicate these backlogs. Despite the planned LCH projects in MLM, there is a backlog of housing delivery. Considering the above the municipality together with the Free State provincial government are in process to eradicate housing backlogs in the municipality. The backlogs in the MLM are presented in table 3.2 below. The measures and time-frames are indicated by the MLM towards achieving their intended goals.

The government uses the following methods to combat the housing problems in the country. The respective methods are listed below.

- *Slum-clearance*: Informal settlements were seen as “a blight and a criminal misappropriation of land” and massive demolition programmes were accomplished, without provide any new housing for the people.

- *Greenfield development:* A non-developed area is developed to a residential area with all services included within the sites/houses. Often large scale projects.

**Table 3.2 MLM Housing Backlog**

<b>Description / Action Plan</b>	<b>Backlogs</b>	<b>Erven created / <u>Rental Units</u></b>	<b>Residents placed / <u>To be placed</u></b>	<b>Balance in backlogs 2012</b>	<b>Time Frame</b>
Refengkgotso (Mooi Plaats – Themba Khubeka)	7`700	2`500	1`700	6`000	2011
Zamdela (Mooi Draai)	6`000	3`000	1`700	4`300	2013
Zamdela Hostel 4 Upgrading to 420 x CRU`s	4`300	420 ®	308	3`992	2013
Hostel 3 Upgrading to 800 x CRU`s	3`992	800 ®	411	3`581	2014
Hostel 2 Upgrading with 70 x Outstanding Rental Units	3`581	70 ®	70	3511	2014
Nic Ferreira 74 Sasolburg Ext 1 = CRU`s	3`511	74 ®	74	3437	2014
Purchase of 36 x Plots and planning for 2`000 erven Refengkgotso	3`437	2`000	1`500	1`937	2016
<b>OUTSTANDING</b>	<b>1`937</b>	<b>0</b>	<b>0</b>	<b>1`937</b>	

Source: (MLM, 2010)

- *Public housing*: There was a belief in most countries that only the public sector could provide shelter for the low income population. Public housing is a provider method that offered fully built dwellings but it was too expensive for the poor and they couldn't afford them. Instead this became housing mostly for the middle class.
- *Roll-over approach*: All shacks and infrastructure is taken away and a method to generate housing is applied, for example public housing.
- *Low-cost housing*: The idea was to increase the house production but with reduced costs. Despite minimum standards, which usually included a toilet, two rooms plus a kitchen and a minimum plot size it became too expensive for the poorest.
- *Self help housing*: This is a concept that includes both *core housing*, *site-and-service* and *aided self-help*. The strategy is to support people so they can build or finish their houses by themselves when the government provides them with the basic planning.
- *Settlement upgrading/In-situ upgrading*: The focus is to improve existing informal settlements through implementation of the essential minimum infrastructure and services which is missing.
- *Infill development*: Construction of new physical environments, filling in on land within the existing boundaries of urban development (Ackelman & Andersson, 2008:12).

The following section describes the project management application and low cost housing provision

### **3.12 PROJECT MANAGEMENT APPLICATION AND LOW COST HOUSING PROVISION**

Institutions responsible for LCH have recognised project management as a unique market niche within international housing and community development projects. The recognition is associated with an increasing demand for low cost housing globally (LCHI, 2005:3). Projects are “temporary” and project management involves proper planning, organising and managing resources to bring about the successful

completion of Specific Projects goals and objectives. Hart *et al* (2005) indicate that experience in Southern Africa suggest that development projects seem to be considered as linear journeys from point A to Z with little consideration given to timing, duration, cost and external influences. Scant attention has been given to how they achieve their intended goals and how this process unfolds. Today this tendency has changed and it is recognised that projects undergo a series of phases from their conception to completion (Hart *et al*, 2005).

These phases are collectively known as the project management cycle. Phases can overlap, run parallel and even loop forward or backwards depending on what transpires during each phase. It is asserted that projects and their phases are unlikely to be free from both internal and external influences according to Gardiner and Lewis (1995). This cycle offers a framework by which the project can be defined and put into operation in terms of its goal, objectives, outputs and outcomes, and it also serves as a management tool for plotting and tracking the resources, costs and progress or developments during each phase. Hart *et al* (2005) pointed out that it can also be used for monitoring and evaluation purposes.

The development of housing for the poor in South Africa is two pronged: firstly, to fast track housing delivery to accommodate homeless people; and secondly to empower, support and enable beneficiaries to build their own houses (Campbell & Mshumpela, 2008:2). Projects require lots of planning, organisation, communication, and coordination between members. Popular project management applications address the following functions in getting things done:

- Project planning;
- Task management;
- Document sharing;
- Contact management;
- Time tracking;
- Communication tools;
- Issue handling;
- Reports, and
- Notifications (Eklund, 2008).

Gathering, analysing, documenting and controlling a project's requirements are key to a project's success (Project Management Consulting, 2010). A large number of the housing projects have been implemented throughout the country to deliver in terms of Housing Policy framework. Since 1994, housing in South Africa has undergone fundamental changes and about 1 877 958 million houses have been delivered. Despite the huge delivery of housing to the poor, South Africa still has a significant housing backlog that is being addressed by a comprehensive housing policy (Ogunfeditimi and Thwala, 2008: 2)

### **3.12.1 Project planning**

The Municipal Systems Act (RSA Act no 32 of 2000) requires all district and local municipalities to compile an Integrated Development Plan (IDP). The IDP should reflect the Spatial Development Framework (SDF) in order to set out objectives that, amongst others, “reflect the desired spatial form of the municipality, determine spatial priorities and give effect to the principles contained in the Development Facilitation Act no 67 of 1995”. One of these objectives is to “promote efficient and integrated, environmental sustainable land development” through “Integrated employment and living opportunities; discourage urban sprawl; and correct historical distorted spatial patterns” (Campbell & Mshumpela, 2008:5).

Planning is a fundamental function of the project team. It determines what the team wants to attain and how it should go about doing so. Some strategic issues need to be considered before any detailed design work can be entertained. This is strategic planning or “master planning” (CSIR Building and Construction Technology, 2005:4). The whole purpose of Master planning is to facilitate the accomplishment of a project's objectives. Which objectives or goals drive the process really depends on the state of mind of those formulating them, but generally should spell out the why, where, what, when and how of the endeavour. Land use planning should be a consideration of what land resources are available and what they are suitable for, both in the short term and longer term (CSIR Building and Construction Technology, 2005:4). CSIR Building and Construction Technology (2005:4) identifies four principles that apply to master planning LCH plans, namely: *sustainable development, integration with other disciplines in the planning team, policy impact*

*assessment, and strategic impact assessment.* The following paragraphs will relate the application of project planning principles in the MLM.

### **3.12.1.1 Sustainable development**

Access to basic services such as water, sanitation and electricity measures should be closely intertwined for improving the housing condition of the local populace (Azumah, 2003: 34). It was observed that some LCH projects in the Gauteng Province do not have access to electricity, which is the source of heating and cooking. Furthermore, project planning requires a clear understanding of what the customer wants and needs from the outset. In MLM, the provision of LCH focuses on sustainable development towards water usage and saving. It was observed that the current LCH projects installed a shower in the bathrooms, and the elderly and disabled beneficiaries were dissatisfied with the innovations since it does not allow them adequate access to use their bathrooms. Sustainable development is considered to be achievable only if participation occurs and beneficiaries become participants and actors in their development according to Burkey (1993).

### **3.12.1.2 Policy impact assessment**

The South African government used it as a way of intervening in the population distribution through planning houses in towns where employment opportunities were planned (Azumah, 2003:12). The housing projects implemented should be close to economic and employment opportunities. Most of the LCH projects implemented by the MLM are located far away from economic and employment opportunities and as such leads to informal businesses in the townships flourishing as sometimes people cannot afford a transport fare to town. Proper planning may also make customer to be happy with a completed house which meets their social challenges. Careful and thorough study of the requirements is necessary, especially where beneficiaries are elderly and disabled (Project Management Consulting, 2010).

### **3.12.1.3 Strategic impact assessment**

The spatial location of housing projects should be in line with sound planning principles since most of the housing projects implemented by MLM are on the periphery of towns and cities (Campbell, & Mshumpela, 2008:8).

### **3.12.1.4 Integration with other disciplines in the planning team**

Government functions require cooperative governance. Housing provision is not a stand-alone project therefore there should be consultation with other stakeholders. The respective stakeholders in LCH projects in MLM may be responsible for installing electricity, water and sanitation, roads, education sector, health sector, safety and security and the business sector.

### **3.12.2 Project cost and budgeting**

The limited resources available from the *fiscus* however necessitate the prioritisation of the most vulnerable groups as well as the provision of housing, security and comfort to all over time. MLM is expected to render administrative and technical activities such as deeds searches, duplication costs, building plan approvals, the relocation and connection of cables and the connection of sewer pipelines. All procurement processes must occur within the prescripts of relevant legislation and in a fair, equitable, transparent and competitive manner (Department of Human Settlements-2 (DoHS-2), 2009:5).

Where development projects are carried out with limited funds, the question of “minimum allowable standards” always comes to the fore. It is in these cases, especially, that the development equation becomes a question of balancing the low capital cost at the development stage against high maintenance costs for the rest of the time (CSIR Building and Construction Technology, 2005:3). Therefore, financing is important for the project team (Azumah, 2003:34).

### **3.12.2 Project task management**

Project task management requires coordination by team members, since this may prevent internal conflicts and external (community reaction) conflicts. The municipality should enforce a project management team which will comprise of a project manager, consulting engineers, developer and contractors. The project manager is responsible for managing the project and the consulting engineers inspect the draft foundations of the LCH constructed. The project developer should ensure that the contractors appointed by the developer, shall at their cost appoint project managers to manage the project. The Developer also confirms the names and contact details of the project managers and consulting engineers appointed by the contractors to the Council. Projects are broken down into phases, which enable the team members to share tasks and to avoid duplication. Van der Walt, (2001) indicates the following as key variables which enables team members to function efficiently:

- customer orientation;
- work Breakdown Structure (WBS) and control;
- project performance and baseline (budget); and
- measuring and evaluation.

### **3.12.4 Communication tools**

Acting on the abovementioned actions involves the communication of progress to appropriate participants of the project, their management and customer, as well as taking actions to correct deviation. Communication in project management should look at land availability agreements. The respective agreements should cover the following arrangements:

- ownership vest with the Council until transfer has been finalised; and
- conveyance arrangements.

### **3.12.5 Reports**

The MEC responsible for housing in the Free State Provincial Executive Council on a quarterly and annual basis receives reports from the municipality to inform the

provincial government about available erven/beneficiary for development. The report includes erven where persons might not qualify for government subsidised houses. For this purpose the Division Properties maintain an erf data base (occupational record) of Zamdela, Refengkgotso and Metsimaholo. Further information is provided by Ward Councillors on waiting lists. Yet despite this globally acknowledged mass delivery of homes for the poor, municipalities are still faced with a backlog of almost 2.1 million home units. Thus, there is a growing need for government to effectively apply the project management strategy in order to meet the housing demand (DoHS-1, 2009: 7).

### **3.12.6 Project quality**

A failure to ensure quality management is a contributor to project cancellations. Quality management is more than testing. It involves ensuring that an appropriate process exists from the project's inception (requirements) through development, to the variety of testing phases and deployment. Quality management also addresses control over proper documentation and where necessary, training or training development (Project Management Consulting, 2010). (Project Management Consulting 2010) emphasise institutions to use the following tools towards effective execution of projects, namely: requirements management; customer management; testing methodologies; test planning; measurement of quality and requirements-based testing (Project Management Consulting, 2010). The respective tools for quality management are discussed below.

- Project schedules to safeguard themselves from failures.
- *Measurement of Quality*: The provision of LCH is a continuous need for community members, and their expectation differs. The project leaders should measure quality in terms of the outputs to be released. Measuring quality enables project leaders to provide accurate and sustained housing delivery, which can not jeopardise the lives of the vulnerable communities. A typical example for this is the disaster which occurred in Free State Province and Gauteng Province (Ekurhuleni Metro- Boksburg), where LCH were destroyed due to heavy winds and storm in September 2011 and October 2011

- *Requirements-based testing*: Requirements-based testing is a method for ensuring whether a deliverable meets the project requirements. The aim of this is to ensure that the project's resources were used effectively and cost effectively. Sometimes media informs that the LCH built in a particular area did not meet the standards of the project requirements. Failure to apply this element may endanger the lives of the beneficiaries (Project Management Consulting, 2010).

The author believes that the effective and well managed projects can bring joy to vulnerable communities, and it may reduce unnecessary legal cost caused by communities suing government for inefficiency. In MLM the standards and buildings requirements are (at this stage) regulated by the MEC for Local Government and Housing by means of Land Availability Agreements and the Council insists on the submission of building plans for pre-approval. The Council insists on inspections of the development (foundation level, wall plates level, and roof level and completion stage).

Quality of LCH is also measured by issuing of "*Happy Letters*" to beneficiaries. "*Happy Letters*" serve as a checklist for issuing houses to its beneficiaries, whereby recipients are required to indicate whether they are satisfied with the houses allocated to them. In cases where recipient are not satisfied, maybe due to tap leakage, un-installed electricity cables, cracking on the wall, broken windows or un-lockable doors then the "*Happy Letters*" can be withdrawn until the identified errors are rectified. Effective quality management in LCH projects is undertaken by means of the (National Home Builders Council) NHBC who serve to inspect built houses built for ensuring quality on materials and method of construction (MLM, 2010).

### **3.12.7 Project risk and challenges**

All projects have risks. These could include resource shortages, late changing requirements, budget shortfalls and overly high problem report rates. Good project management requires managing against risks. The top risks should receive regular attention (Project Management Consulting, 2010). Risk in the provision of LCH in MLM may be associated with the following reasons:

- contractors not meeting the deadlines;
- bad weather conditions (rainy seasons which was experienced in October 2010 and November 2010);
- lack of resources by contractors, for example scaffolding, trucks/vehicles to remove material from one site to another;
- incompetence by contractors, for example lack of building skills, and
- lack of cooperation by material suppliers which results in the late delivery of building material (Campbell & Mshumpela, 2008:4).

### **3.12.8 Projects and the participation of civil society in policy formulation**

Participation is a process through which stakeholders can exert influence and share control over priority setting, policy-making, resource allocations and access to public goods and services. A policy may be considered effective if it successfully effect change in the target group behaviour with a minimum of resistance. Further, it must be specific enough to clearly delineate expected behaviour without being so rigid that it does not allow local implementation flexibility and above all, it must make sense within the contest of other policies that are in effect and it must be practical in terms of implementation (Azumah, 2003:34).

On a daily basis, media coverage indicates that community members are dissatisfied with the provision of LCH. The increase of protest by community members is a concern, but with proper planning and public participation in the MLM can eliminate unwarranted protests. Policy formulators should therefore know the priorities of the target beneficiaries and the way they would have liked the programme to be implemented if they had involved them (Azumah, 2003:34).

Sustainable development is considered achievable only if participation occurs and beneficiaries become participants and actors in their development, according to Burkey (1993). Hart *et al*, (2005) citing Brown and Tandon (1993) identified the following seven principles of participation:

- *local identification*: the problem or required intervention is identified in the community by the local residents;

- *local conceptualisation*: local people are involved in setting the project agenda and goal and in the generation, recording and analysis of data;
- *local control*: local people are involved in the management of the project and gradually assume control of the process and the use of the outcomes;
- *shared ownership*: there is a joint or shared ownership of the project and the outputs or the products of this process by all parties directly involved;
- *equity*: the terms researcher or development agent are applied to all participants, both those with and without formal training as well as to insider and outsider alike; and
- *empowerment*: the process strengthens people's awareness of their own abilities and resources while supporting their mobilisation and organisation.

Chambers and Low (1989) indicate that at project level, the participatory strategies should continue to strive for different degrees of consultation, negotiation, participatory ownership, responsibility and ultimately empowerment. This should be done because stakeholders at this stage anticipate good results and the demand is uncontrollable.

The municipality should bring on board relevant stakeholders in the planning stages of the PHP projects (relevant provincial departments and organisations). This will assist when municipalities want to develop amenities. The National Department of Housing should increase the subsidy amount so that municipalities could be able to build a proper 40 square metre house or more (Campbell & Mshumpela, 2008:10).

### **3.13 CONCLUSION**

The provision of adequate housing for the homeless and the inadequately housed members of society in an attempt to reduce poverty and improve quality of people's lives has been a huge challenge to South African government over the years.

The chapter defined the concept LCH and the state of housing in South Africa. The application of project management for LCH provision is important, since it will enable the government sector to operate effectively and at lower costs. The study discussed

the role of project management in the provision of LCH. Project management is considered to be a valuable instrument in public policy implementation. It is understood that the application of project management makes a meaningful contribution in the life of policy implementation. It is evident that project management can enable project leaders to safeguard and manage its activities in a meaningful way.

The chapter also proved that the application of project management alleviates conflict between the state and the public. It also alleviate risk, and enables coordination through public human resource. Public funds are scarce and as such project management enables managers to use funds and resources appropriately.

The next chapter will discuss results of the study undertaken in the MLM for this study.

## **CHAPTER 4**

### **EMPIRICAL STUDY ON THE APPLICATION OF PROJECT MANAGEMENT IN THE PROVISION OF LOW COST HOUSING IN METSIMAHOLO LOCAL MUNICIPALITY**

#### **4.1 INTRODUCTION**

The purpose of this chapter is to collate results of the empirical research, based on the interviews which were conducted and the responses to the questionnaires which were distributed. The empirical research was conducted by means of a field study using structured questionnaires. The research was conducted to establish the experiences and perceived effects from LCH stakeholders towards the application of project management in the provision of LCH in MLM. The chapter explains the methods employed and presents the results of the study conducted.

#### **4.2 RESEARCH METHODOLOGY**

The following sections will explain the data collection process followed in this study.

##### **4.2.1 Literature Review**

A literature review is based on the assumption that knowledge accumulates and that people learn from and build on what others have done (Neuman, 2006:110). Chapters 2 and 3 described the theory of the study relating to project management and the application of project management. The literature study formed the basis of the development of the structured questionnaires. The questions were designed on the application of project management which were tested and measured in practice. The author consulted the books, periodicals, scholarly journals articles and institutional documents and its legislative frameworks on LCH as a base of literature review for this study.

## **4.2.2 Research Methods**

The sections below describe the methods used in this study.

### **4.2.2.1 Qualitative and quantitative research**

The study focused on qualitative and quantitative research. Qualitative analysis involves systematic interpretation of data from a variety of methods to construct meaningful concepts and explanations of the phenomena in question (Hancock, 1998:2). The collection of words generated by interviews and observations need to be portrayed and summarised. The researcher seeks relationships between the various themes that have been identified, or to relate behaviour or ideas to biographical characteristics of respondents such as age and gender (Lacey and Luff, 2007:6). Quantitative research was used in empirical surveys wherein questionnaires were used to measure the study population and for analysing data with statistics (Neuman, 2006: 153).

### **4.2.2.2 Interviews**

Semi-structured interviews were used for this study. Interviews are used to obtain primary data from another person (Neuman, 2006: 304). For this study, interviews played an important role in obtaining firsthand experience and to understand the scope of project management. Interviews were used to structure the questions in accordance with the research objectives. Interviews were useful in a sense that they served as a communication tool between the researcher and the respondents. The study conducted face-to-face interviews.

### **4.2.2.3 Questionnaires**

A questionnaire according to Emory and Cooper (1991) is defined as a “pre-formulated, written set of questions to which respondents record their answers, usually writing rather closely defined alternatives”. A questionnaire is probably the most common and inexpensive instrument that can be used to study the incidences of project management application on the delivery of low cost houses (Emory and

Cooper, 1991). The questionnaires used in this study were designed to obtain responses from officials and low cost houses' residents in the MLM.

The questionnaire as a data collection method was chosen for the following reasons:

- the researcher knows precisely what type of information is needed;
- the associated time and cost involved are low in comparison to, for example, an interview method; and
- it offers the respondents anonymity and the convenience of answering the questionnaires when it best suits them (Emory and Cooper, 1991).

The following are disadvantages of using the questionnaire:

- A poor response rate is associated with the questionnaire;
- the nature of the questions asked may be limited in that they have to be self-explanatory and unambiguous;
- one does not have the ability to expand on any given answer; and
- the quality and volume of the information received is greatly determined by the willingness of the co-operation for the respondent (Emory and Cooper, 1991).

Two questionnaires were designed for this study. The first questionnaire was designed and sent out to selected councillors, officials and programme managers. The aim was to obtain information from the respective officials on their different backgrounds and understanding about the application of project management on the provision of low cost houses in MLM. The second questionnaire was designed and sent out randomly to low cost houses residents and others on the waiting list. The aim of this questionnaire was to determine the level of satisfaction on the provision of low cost houses in the three townships of MLM.

#### **4.2.2.3.1 Questionnaire design**

As indicated above the study used both qualitative and quantitative approaches to gather information. The questionnaire comprises of likert scaling, which consist of a scaling of four ratings. Further the questionnaire was designed on closed ended questions. The questionnaire was designed with the purpose of obtaining data

regarding specific areas in order to be able to determine whether the MLM applies project management techniques in the provision of LCH. Areas on which questionnaire focused were:

- *Basic understanding of Project Management:*

This section covers questions to determine whether the organisational structure of MLM makes an inherent provision of project teams in housing delivery. It further probes whether or not the MLM offers training on project management and if the IDP reflects issues pertaining to project management.

- *Project management implementation in low cost housing:*

This section continues to probe whether or not the MLM embarks on the delivery of LCH through projects. It requires of the respondents to list projects being undertaken and to state whether projects are delivered on time. The questions extend further to invite respondents to state challenges experienced in the application of project management.

- *Housing provision and service delivery:*

This section investigates the way in which the alleviation of poverty is done using the project management. The questions extends to partnerships formed in order to address service delivery programmes. It calls on the respondent to indicate the level and quality of infrastructure for housing delivery especially with regard to personnel and budget.

- *Public participation in the provision of low cost housing:*

This section aims to ascertain the participation level of communities on LCH decision making. And to understand the tools used for enhancing public participation on LCH.

#### **4.2.2.4 Unit of analysis**

Unit of analysis varies for every research. It can be a word, phrase, a theme, a plot, a newspaper article or a character (Neuman, 1997:274). Unit of analysis is found to be the most important part in research, since a researcher decides on the unit to be

investigated (Neuman, 1997:277). For this study the unit of analysis is based in MLM; and it includes project management and the LCH. The focus is based on the actions undertaken for applying project management in the provision of LCH.

#### 4.2.2.5 Unit of observation

Data collection in the field of research requires a prior definition of the units of observation to be used on the analytical unit (Food and Agricultural Organisation, 2011). The unit observation for this study was based on the implementing officials of the LCH. The study also observes the behaviour of the beneficiaries of the LCH in the MLM. Therefore the study observed the outcome of the application project management and its impact to the beneficiaries of the LCH which is the government programmes on poverty alleviation.

#### 4.2.2.6 Sample

The study made use of stratified sampling. The selection of communities interviewed was done in a manner that permitted obtaining a stratified sample in terms of geography. Qualitative researchers draw their representative sample from a huge number of cases to intensely study the sample cases (Neuman, 2006:220). The study targeted to interview project managers and programme managers responsible for the delivery of low cost housing in MLM. Table 4.1 below describes how questionnaires were distributed.

**Table 4.1 Distribution of questionnaires**

Participants	Questionnaires distributed		Questionnaires not received		Questionnaires analysed	
	Number	%	Number	%	Number	%
Councillors	10	20	4	8	6	12
Officials	10	20	5	10	5	10
Residents	30	60	7	14	23	46
<b>Total</b>	<b>50</b>	<b>100%</b>	<b>16</b>	<b>32%</b>	<b>34</b>	<b>68%</b>

Questionnaires were hand delivered with exceptions where face to face interviews were conducted with some officials and randomly selected occupants of low cost houses. The respondents for LCH in MLM were selected from the established LCH. The study intended to interview 50 participants.

The researcher issued 50 questionnaires. Thirty four questionnaires were returned. sixteen questionnaires were not returned.

### **4.3 EMPIRICAL FINDINGS: APPLICATION OF PROJECT MANAGEMENT IN THE PROVISION OF LCH IN MLM**

Questionnaires were distributed by hand and via e-mail to various targeted stakeholders at the MLM offices and to the provincial Department of Local Government and Human Settlement in Bloemfontein. Participants were briefed on the objective of the survey and a time frame for responses was communicated to respondents. By the end of the second week most participants had already responded and while only a few had to follow up but cooperated anyway.

The answers to the questionnaires were analysed to identify the current state of the application of project management in the provision of low cost housing.

#### **4.3.1 DATA REPORT ANALYSIS**

The results of the data gathered will be represented in the following manner:

- the purpose of the key area;
- the result for each question will be described; and
- an analysis will be provided regarding the respective results.

The purpose is to determine respondents' basic knowledge of the concept of project management, for example, whether it is formally a policy practice in the MLM.

### **4.3.2 QUESTIONNAIRE: INSTITUTIONAL**

The aim of this interview was to determine the effective application of project management in the delivery of low-cost houses in MLM.

#### **QUESTION 1**

**Question 1.1: Officials were asked whether the MLM's organisational structure provides for project teams on housing delivery.**

Ninety percent (94%) of respondents indicated that there are no project teams in the organisational structure of the MLM. Six percent (6%) did not know about the existence of the project teams in the MLM.

**Question 1.2: Officials were asked if the MLM offers any accredited training on project management.**

More than half (60%) indicated that the MLM offered opportunities for individuals and teams to be trained on project management. A total of 27% respondents believe that the courses offered are not binding and are done voluntarily for own personal development; while 13% indicated that there is no opportunity for training on project management.

**Question 1.3: Officials were asked if the MLM IDP contains issues pertaining to project management in the delivery of housing.**

95% of the respondents indicated that there is no provision in the IDP for project management in the delivery of houses. The remaining five percent indicated that they were not sure whether there is provisioning or not.

**Question 1.4: Officials were asked if the MLM performance plan contains the successful delivery of projects**

Ninety four percent (94%) of respondents indicated that they do contend with projects to which they are made to be answerable but that does not form part of the performance appraisal. The remaining six (6%) percent indicated a "yes" response without any comments.

**Question 1.5: Officials were asked whether the MLM adopted management by project as a vehicle for housing delivery.**

Almost all respondents (99%) indicated that there is no question that the municipality could adopt such an approach as they do not deliver houses from the municipal setting. The remaining one percent was not sure of or not there is particular inclination towards project management or not.

**QUESTION 2**

*Project Management implementation in LCH*

The purpose of this section was to establish whether projects are a feature of the delivery processes of low cost houses and whether or not the houses or units built are delivered on time.

**Question 2.1: Officials were asked whether the MLM embarked on the delivery of low cost houses through projects.**

An almost unanimous response at 99% from respondents indicated a “no” answer with the resultant commentaries that the MLM does not provide houses but only acts as a liaison office to the provincial government.

**Question 2.2: Officials were asked whether municipal projects were completed on time for the delivery of houses in MLM.**

Here once more respondents indicated that there is a huge backlog in housing delivery, and ninety six percent indicated that there is no timeous delivery of low cost houses. A further four percent remained uncertain.

**QUESTION 3**

*Housing provision and service delivery*

The purpose of this section was to ascertain if the MLM has programmes that were geared to deliver houses as a form of alleviating poverty and creating jobs at the same time. Furthermore, the intention was also to determine if there were other role

players in the provision of low cost houses who are working in partnership with the local municipality to provide service delivery. Lastly, the purpose of this section was to describe the challenges faced by the MLM in the implementation of project management for delivering LCH to the community of MLM.

**Question 3.1: Officials were asked if there is a relation between the municipal housing programme, project enhancing job creation and the alleviation of poverty.**

Respondents (85%) indicated that they believed there is a programme in place. The 15% that is silent indicated in a comment that there is no programme in place and members of the community are provided employment whenever houses are being built.

**Question 3.2: Officials were asked if there are incentives in the MLM for businesses who comply with the implementation of project management in the delivery of LCH.**

57 % of the respondents indicated that there are no incentives while the remaining 43% indicate that there are incentives. No comments are included in both cases to substantiate the different viewpoints.

**Question 3.3: Officials were asked whether there is a working relationship between the MLM and businesses towards the provision of low cost houses.**

85% of respondents believed that there is a working relationship between business and MLM on low cost housing; while the remaining 15% say there is no relationship.

**Question 3.4: Officials were asked whether the MLM has an adequate budget and staff for the provision of low cost housing.**

There is unanimous agreement (100%) that there is no adequate budget and staff for the provision of low cost houses. Further comments in this instance state that this is irrelevant to the Municipal Council as the provision of houses is the competency of National Government. They indicated that the Municipality does not budget for low cost houses but allocation is done by the provincial government.

**Question 3.5: Officials were asked to indicate if there are backlogs for spending the budget on the delivery of low cost houses.**

Respondents (100%) indicated that there was no backlog experienced in the spending of the budget of low cost houses.

**Question 3.6: Officials were asked if there is external funding for low cost housing projects.**

Sometimes government receive donations from private sectors, international organisations established towards community development. In this regard 100% of the respondents indicated that the municipality does not receive any external funds to build the LCH.

**Question 3.7: Officials were asked to indicate whether a service level agreement exists between the MLM and the Provincial Department of local government and Human Settlement for rendering low cost housing.**

The respondents (57%) indicated that there is a service level agreement which includes the Land Availability Agreement signed between the Provincial Department of Local Government and Human Settlement (compare with page 61 for consistency) on behalf of the contractor. The remaining respondents (43%) indicated that they are not aware of the service level agreement between the MLM and the Provincial Department of local government and Human Settlement.

## **QUESTION 4**

### *Public Participation in the provision of low cost housing*

The purpose of this section was to determine the level and the extent of public participation in the provision of low cost houses. A close relationship between the municipality and other structures such as the District Forum, Provincial and National Government as well as Intergovernmental agreements are probed in this set of questions.

**Question 4.1: Officials were asked to indicate if the Municipality has a public participation programme with regard to the provision of low cost houses.**

Respondents (57%) indicated that there are public participation programmes in place for liaising with community members of the MLM. They further indicated that participation begins with the identification of housing needs from which the Municipality then submits a request to the province. The MLM is informed about the planned activities and about the names of the beneficiaries approved for the provision of LCH. It was also indicated that the beneficiaries on the approval list are invited to meetings together with all relevant stakeholders. The 43% which responded in the negative sense did not comment to substantiate their claim.

**Question 4.2: Officials were asked to indicate if the Municipality's housing and poverty alleviation issues are discussed in political structures such as the District Co-ordinating Forum/Portfolio Committee.**

All (100%) respondents affirmed that the Municipality's housing and poverty alleviation issues are being discussed in relevant forums.

**Question 4.3: Officials were asked to indicate if there is a working relationship (co-operation) with the district municipality regarding the Municipality's low cost housing issues.**

At least 57% of the respondents replied positively (yes), while 43% said no to this question. In both scenarios there were no comments to substantiate claims.

**Question 4.4: Officials were asked to indicate if the Municipality received any support from Provincial and National Government in implementing the low cost housing provision mandate.**

All (100%) of the respondents said yes, meaning that there is support from the provincial government to local government.

**Question 4.5: Officials were asked to indicate if there is an Intergovernmental Relations (IGR) agreement with other municipalities/ government departments in promoting provision of houses.**

57% of respondents agreed that there is agreement with other municipalities/government department in promoting provision of houses; while 43% indicated that there is no agreement.

**4.3.3 QUESTIONNAIRE: OCCUPANTS AND APPLICANTS OF LOW-COST HOUSES**

The purpose of this questionnaire was to determine the level of satisfaction of the beneficiaries of low cost houses and also to ascertain the socioeconomic status of such communities. The questions were designed to determine the evaluation a respondent has of the low cost house.

**Question 1**

*The aim of the questions for this section was to determine the logistical and general knowledge of the beneficiaries of the LCH, about the challenges they encountered and the opportunities for owning a LCH.*

**Question 1.1: Residents were asked to indicate if they applied for LCH.**

It is a 100% positive response (yes) to this question that indicated that the application process is a standard practice in the MLM.

**Question 1.2: Residents were asked to indicate the duration for the application and receipt of their LCH.**

The responded indicated that the waiting period after applying for the houses took them between three months to five years. The timeframe towards the application of LCH differs, whereby some respondents indicated that they waited for a long time (4-5 years) for feedback regarding their application.

**Question 1.3: Residents were asked to indicate if there are enough houses for all people who qualified for LCH applications.**

On daily basis, through media, it is reported that LCH are insufficient, sometime you hear complaints that people applied for the respective houses for more than five years, and you wonder if such allocations will be sufficient. The survey results reports that 60% of respondents indicated that there are enough houses while the remaining 40% indicated that there were insufficient houses. Examples of this can be associated with the LCH provision in Alexandra in the Gauteng province, where it was reported that the houses were allocated to un-deserving residents, whom are indicated to form part of the foreign nationals.

**Question 1.4: Residents were asked to indicate the institution responsible for LCH applications and the waiting list.**

A 100% of participants indicated that the MLM handled their application for houses.

**Question 1.5: Residents were asked to indicate if they had paid a deposit to be included on the waiting list.**

100% of respondents indicated that there is no deposit paid for low-cost houses.

**Question 2**

*Client expectations*

Questions 2.1 to 2.5 expected respondents to reflect the client satisfaction with the houses built for them.

**Question 2.1: Residents were asked to indicate whether the MLM holds meetings to inform them about developments.**

86% of the respondents agreed that meetings are held about developments. The remaining 14% indicated that they were unsure as to whether meetings were held or not.

**Question 2.2: Residents were asked to identify if there are members of the community employed to work on the LCH projects.**

The percentages in the responses replicate the above question whereby 86% indicated a yes answer, while 14% indicated a definite no.

**Question 2.3: Residents were asked to indicate if the houses are built according to their liking.**

Here again all respondents at 100% indicate houses are not built according to their liking.

**Question 2.5: Residents were asked to indicate whether the houses are big enough to accommodate their families and furniture.**

Like in the previous question respondents registered a resounding no at 100% negative.

#### **4.4 CONCLUSION**

Despite the housing demand and backlog the MLM does strive to attain best results in terms of providing LCH to its beneficiaries. In this chapter the research methods were discussed. Furthermore, the chapter provided the results of the survey conducted at MLM. The next chapter will provide a summary for this study.

## **CHAPTER 5**

### **FINDINGS, RECOMMENDATIONS AND CONCLUSION**

#### **5.1 INTRODUCTION**

In Chapter Four the results obtained from the respondents were analysed. This chapter presents a summary as well as findings that have emerged from the interviews conducted in MLM. The chapter also provides a synopsis of the study in a form of a summary of each of its chapters. The realisation of the objectives as outlined in Chapter One will be offered. The findings from the observations conducted are also outlined in this chapter. A series of recommendations are offered for effective project management in the provision of LCH.

#### **5.2 SUMMARY**

The sections below will provide a summary of the previous chapters.

##### **5.2.1 The overall aim of the study**

The aim of the study was to investigate the application of project management to deliver low cost housing in the MLM. The investigation was achieved by means of literature review, participant observations and empirical surveys conducted in MLM. The sample study consisted of representatives from the MLM and the Provincial Department of local government and Human Settlement responsible for housing provision and community members of the MLM.

This study served as an evaluation tool to MLM, whereby the researcher intended to verify whether project management can serve as a flexible tool in the provision of LCH. The objectives were met through the use of literature study and empirical survey.

## **5.2.2 Summary of the preceding chapters**

### *Chapter One*

*Chapter One* provided the introduction and the problem statement for this study. The problems identified were drawn from the literature study consulted. Chapter One played an important role in this study since it assisted the researcher to plan the study and to select objectives relevant to this study.

### *Chapter Two*

*Chapter Two* dealt with the theoretical exposition of the concept 'project management'. The chapter explained the concept and the context of project management. The content of the chapter assisted the researcher to broaden his knowledge on the use of project management in the arena of LCH.

### *Chapter Three*

*Chapter Three* discussed the application of project management in delivering LCH. The study explained the concept LCH as associated with the social housing programme. The chapter also discussed the focus areas towards the application of project management in LCH provision.

### *Chapter Four*

This chapter discussed the methodology used for obtaining data. The methods used assisted the researcher to obtain accurate information. The chapter also outlined the sample designed for this study, which included the officials in the Department of Housing, councillors and residents in the townships of Zamdela in Sasolburg; Refengkgotso in Deneysville; and Metsimaholo in Oranjeville. The chapter also presented the results of the surveys conducted in MLM.

### *Chapter Five*

In this final chapter the author provides a summary of the preceding chapters. The chapter also provides recommendations and a conclusion based on the literature study and a survey conducted.

### **5.3 RESEARCH FINDINGS**

The following paragraphs will discuss the findings of the study, based on the literature review and the results of the empirical study conducted at MLM.

#### **5.3.1 Project Management implementation in low cost housing**

The researcher found that the province allocates subsidies to a group of beneficiaries starting from 50 units upwards and this approach is called Project-Linked Subsidy Programme. The Project-Linked Subsidy Programme is applicable throughout the province and in other projects to be undertaken in the MLM in the future, especially a project called Community Residential Units (Hostel Development) in Zamdela Township. Other projects such as Social/Rental Housing cannot be implemented because of bureaucratic processes and long administrative processes relating to participation requirements. Some projects are however completed on time while others are delayed and as such impact on governments' mission to provide housing infrastructure to its deserving communities.

#### **5.3.2 Housing provision and service delivery**

The MLM has no housing mandate but it supports efforts and initiatives of the Provincial Department in the provision of housing. Housing delivery gives the municipality an opportunity to employ local labour and to enhance economic activity within the area. 100 units of subsidies are worth R 7,2m. The 'Land Availability Agreement' is applied for managing housing functions allocated to municipalities.

In almost all municipalities, housing is an integral part of corporate services monitored by the MLM. There is a high rate of housing backlog and shortage of funds within most municipalities. Invariably this hampers service delivery.

#### **5.3.3 Public participation in provision of low cost housing**

The provision of LCH is a lengthy process which may take about two to three years. It was found that the beneficiaries are informed about the housing developments in

the MLM. Participation in the provision of LCH begins with the identification of housing needs from which the MLM then submits a request to the province. The approved beneficiaries are called to attend numerous meetings aimed at providing them with updates on the housing developments. The participation for the provision of LCH is undertaken through public meetings organised jointly by the NLM and the Free State Provincial Legislature and Provincial Department of Local Government and Human Settlement. Stakeholders such as the construction companies who will be building the LCH are also invited to the meetings. Such meetings are held in accessible venues such as the Zamdela community halls, in the case of Zamdela Township, RefengKgotso community hall for the residents of RefengKgotso as well as in respective wards of the prospective beneficiaries.

## **5.4 OCCUPANTS OF THE LCH**

### **5.4.1 General questions**

It was found that the process to allocate houses to beneficiaries takes a long time, and as a result residents become impatient and frustrated. Isaacs-Martin (2009:153) indicates that communities, along with interest groups, have been unable to access information regarding housing provision and municipal councillors are considered to marginalise community members. According to Isaac-Martin (2009:153) poor communication has led to the belief among communities that government is plagued with corruption and nepotism. The project lifespan results in unwanted conflicts between government and residents. Homeless people believed that they are not a priority in terms of housing provision; it is assumed that the informal sectors are the prioritised issues. There is also housing backlogs, caused by incomplete projects. In some cases houses were allocated to wrongful owners. Some community indicated that every time when they visit the office responsible for LCH management, they always receive responds indicating that they are on the waiting list. It was found that the housing backlogs are caused by the high rate of migration from other provinces and the transition to adulthood. The demand is also caused by evictions from the farms by farm owners (old and new farmers) whereby evicted communities do not have a place to stay, as they depended on the respective farms for employment and residential purposes.

### **5.4.2 Client expectations**

It was found that the process of public participation was seen as crucial towards the provision of LCH. There are normally public/beneficiaries meetings arranged through ward councillors. Meetings are also held with subcontractors. A Community Liaison Officer is appointed from within the community. Subcontractors are local and 70% of labour is also local. Each municipality is given to use three different designs to give beneficiaries an opportunity to choose from. The size of the unit is 50m<sup>2</sup>, relatively bigger than the previous size of 40m<sup>2</sup>. The researcher also understands that this is a subsidy government is assisting deserving communities with. To make the house bigger the beneficiaries just have to complement what the government provides.

## **5.5 TESTING THE HYPOTHESIS**

The hypothesis for this study assumed that *“The need for human settlements makes project management a necessary tool to deliver low cost housing in the MLM”*. This statement was validated by means of literature review and research methods applied in this study. Indeed the application of the project management in the provision of LCH is accurate, however there are loopholes within the process. The loopholes found were the housing backlogs found in the MLM. Furthermore, the project management process still needs to be strengthened for enhancing the political will and commitment by the contractors employed by the Free State Province. However, the project management process is still acknowledged for its contribution for enabling the policy implementers to maintain efficiency and accuracy during service delivery.

## **5.6 RECOMMENDATIONS**

This research revealed that the application of project management in the provision of low cost housing in the MLM is either not applied or it happens by accident. The role of oversight played by the Municipality does not ensure that it is able to take charge of the building of houses.

It is in the light of the above that the researcher hereby make the following recommendations:

- Project Managers must be trained within the municipal structures in order to be effective in facilitating service-delivery mechanisms.
- The promotion of community participation must be aimed at addressing the backlog of service delivery in terms of provision of low cost houses. MLM need to re-orientate communities to accept project management as a new methodology for community participation and service delivery.
- Project Management requires a change in local municipality hierarchies' lines of authority and traditional utilisation of resources. Project management can be beneficial if implemented in local municipalities. Some of its benefits are as follows:
  - the project Manager will have complete control of the project;
  - completion times can be reduced;
  - better control of expenditure can be ensured;
  - quality control can be ensured , and as such can I result in;
  - improved transparency, as the whole Local Municipality, the community leaders and the community will be on board from inception to completion.
  - Project management, today has multidisciplinary application value. It is therefore important that organisational provision be made to ensure that project management is integrated into the existing Category B municipalities.
- Clear lines of authority, communication and responsibility of the project team members' needs to be defined. The municipal manager can successfully fulfil the role of a project manager in smaller municipalities, but it is recommended that a professional project manager rather fulfil the project manager's function.

## **5.7 CONCLUSION**

Project Management, an accepted sub-discipline in the field of commerce and administration, has not enjoyed enough attention in the local municipal arena.

Project management has grown as a discipline from one that received relatively little acceptance to the one that is recognised today as being essential to and almost inclusive of all other disciplines. One of the major advantages of project management is that it does not require a ridged organisational structure but a fairly flexible one.

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**APPENDIX 1**

08 September 2010

**TO WHOM IT MAY CONCERN**

This certifies that Mr MN Masike is conducting research on his Masters Degree. The title of his Mini-Dissertation is “An application of project management to deliver low cost housing at Metsimaholo Local Municipality”

Mr Masike looks for assistance of respondents to co-operate in completing questionnaires and for interviews. The purpose is mainly academic.

Yours sincerely

**MRS LB MZINI**

**LECTURER: PUBLIC MANAGEMENT**

**APPENDIX 2**

<b>HOUSING DEVELOPMENT STRATEGIES</b>	<b>ACTIVITIES</b>
Housing Sector Plan Review	To update / review the Sector Plan on annual basis
	To replan according to changing community needs
	To do capacity planning (organizing)
	To re-plan for division of work, to establish standards for performances (command)
	To implement control standards, to compare achievements to planned targets
	To monitor and do research work on resident movements
	To monitor community needs on annual basis
	To secure projects on the IDP in time
	To secure funds for projects in time
Land invasion control	Discourage people from invading land
	Discourage Councillors or officials from allocating land
	Encourage people to apply for serviced stands with the Municipality
	Report any form of land invasion to the Municipality within 48 hours
	To establish an Erf allocation Policy
Spatial Dev Planning	To plan for expansion of towns in time
Acquisition of suitable land	In line with SDF to acquire land in time for planning purposes
Identify and develop suitably located land for housing development	Identify suitably located Municipal or Government-owned land for housing development.

	<p>In the event that the land belongs to private owners, purchase adequate land to provide stands to cover backlogs on informal settlements currently on undeveloped land and 4`000 backyard dwellers who need own stands</p>
	<p>Survey and plan the land to provide for at least 2`000 stands per annum</p>
	<p>Service stands created</p>
	<p>Allocate / re-locate stands to residents in low income categories (Below R3`500 pm income)</p>
Provide mass housing delivery	<p>Apply for housing subsidies from the Provincial Department of Housing to provide 2`000 houses per annum to cover both the backlog and the new housing need over five years</p>
	<p>Promote other housing programmes such as People’s Housing Process, Institutional Housing, Middle-income Housing, rental housing, hostels redevelopment and farm worker housing</p>
	<p>Allocate subsidies to programmes in terms of agreed percentages stated in the Housing Sector Plan</p>
	<p>Investigate the condition of housing in the farms and develop housing policy in this regard</p>
Build quality houses	<p>The Municipality to inspect the construction of houses from foundation to completion to ensure that quality houses are built</p>
	<p>Enforce compliance with Land Availability Agreements, high standard SABS approved materials for raft foundations, bricks, frames, roofs, services and connections, relocation of electrical cables and pre-paid meters, etc.</p>
	<p>Enforce compliance to building regulations, NHRBC standards and municipal by-laws</p>

	Project Steering Committees to be formed involving the developer, ward committee members, beneficiaries representatives and other local stakeholders to oversee the execution of the project
	Developers should be discouraged from leaving building materials in the yards for too long as this leads to the theft of materials and the subsequent building of poor quality houses
	Members of the Projects Steering Committee should be involved when beneficiaries sign Happy Letters to ensure that indeed beneficiaries accept quality houses
	Building plans to be pre-approved and submitted
Houses should be planned to acceptable standards	Prevent houses being built with toilets at street front
	Prevent houses that are built to the point of encroaching into other residents' stands / over building lines and boundaries
	Houses to be built within approved townships, in line with and within General Plan approved boundaries and to ensure that servitudes are not overlapped
	Provide sufficient erven space to enable the extension of houses when the need arises
Prioritise South African Residents for Housing	Take stock of the people living in each ward during the compilation of the housing waiting list, considering in particular the origin of the residents ( <i>i.e. whether SA citizen or immigrant</i> ) including people living in the informal settlements and backyards
	Identify South African citizens for housing project purposes
	Compile a separate list of non-South African citizens indicating their country of origin and the legality of their presence within Mangaung
	Make a submission to Council for policy decision around the housing needs of non-South African citizens

Reduce time taken to process subsidy applications	Appoint staff to administer the processing of subsidy applications
	Backlogs not to be recorded per “ <i>Waiting Lists</i> ”. Act on internal “ <i>Erf allocation / Occupational Data Base</i> ” (also regarded as a `life waiting list`) to identify resident movements, potential beneficiaries and backlogs.
	On announcement of a project, identify and assist beneficiaries in filling application forms
	Capture data on Provincial data system for evaluation purposes
	Interact with the Provincial Department of Housing about the need to be accredited to process applications locally
	Establish linkage with the Provincial Housing Subsidy System
	Purchase computers for housing subsidy data capturers
	Train personnel on administering the Housing Subsidy System
Formation of Project Steering Committees to ensure the collaboration of developers, ward committees and councillors in the speedy execution of projects	Projects Steering Committees to be formed in all housing projects made up of the developer, ward committee, councillor and local stakeholders
	Keep Minutes of Projects Steering Committees
	Submit projects reports to the Housing Department
Fair Allocation of housing subsidies to all towns	Allocate subsidies to towns according to agreed percentage allocations
Promote the involvement	Establish a Database of service providers

of black companies in the housing market	Implement government procurement legislation in appointing service providers in particular the preferential procurement system which prioritise black empowerment and the empowerment of women in housing development projects
	Coordinate and involve black companies in capacity building programmes run by the Department of Public Works or other institutions
Proper disposal / transfer of erven to rightful owners	Transfer attorneys appointed by MEC. Processes to be expedited with local attorneys and control
	Title Deeds to be released to beneficiaries as soon as possible
	Formalise erven in Refengkgotso (Mooiplaats) and Zamdela (Mooibraai)
	Compile and update occupational lists of all current occupants of erven in Zamdela, Refengkgotso and Metsimaholo
	Assist occupants ( <i>including orphans and widows</i> ) who were sold stands by owners to obtain them through the lawyers
	Upgrade Lease Hold titles to ownership
	Encourage residents to have registered titles to their stands
	Issue ownership certificates in Estate cases
	Encourage residents not to dispose of houses within 8 years ( <i>pre-emptive right period of government</i> )
Future Planning Compilation of a living housing waiting list that also caters for people needing serviced stands	Appoint officials to manage the compilation of a housing waiting list
	Applicants to enlist with the Municipality which will verify that indeed the applicant resides within the Municipality

	<p>The Municipality to use a standard form, which categorises applicants in terms of income, disability, pensioners and HIV/AIDS victims. The list should also cover residents who only need serviced stands</p>
	<p>Lists should be forwarded to the Housing Department</p>
	<p>Housing Official to keep the lists separate per ward</p>
	<p>A Housing Committee convened by the Housing Councillor or the Portfolio Committee on Housing (served by the Housing Manager as the secretariat) should decide on the allocation of subsidies taking into account the allocation percentages</p>

## APPENDIX 3

### QUESTIONNAIRE: INSTITUTIONAL

The purpose of this questionnaire is to determine whether or not there is an effective application of project management in the delivery of low-cost houses in the MLM

Please return the questionnaire within a week. If you require any further information you are respectfully encouraged to contact me on 016 973 9121 (w)/ 0822025844 or drop me an e-mail: [masikem@edu.fs.gov.za](mailto:masikem@edu.fs.gov.za).

#### QUESTION 1

<b>1. Basic understanding of Project Management</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>COMMENT</b>
1.1 Does your municipality's organisational structure provide for project teams in housing delivery?				
1.2 Does your municipality offer any accredited training on Project Management?				
1.3 Does your IDP contain issues pertaining to Project Management in the delivery of housing?				
1.4 Does your performance plan contain successful delivery of projects?				
1.5 Has your municipality adopted Management by Projects as a vehicle for Housing delivery?				

## QUESTION 2

<b>2. Project Management implementation in low-cost housing</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>COMMENT</b>
2.1 Does your municipality embark on delivery of low-cost houses through projects?				
2.2 If yes, kindly list those projects?				
2.3 If No, what are the challenges?				
2.4 Are projects embarked on delivery of houses completed on time?				
2.5 If No what are the challenges?				

## QUESTION 3

<b>3. Housing provision and Service Delivery</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>COMMENT</b>
3.1 Does your municipality have housing delivery programme and related projects enhancing job creation and alleviating poverty?				
3.2 Are there any incentives in your municipality to business for complying with the implementation of project management in the delivery of low-cost housing?				
3.3 Is there any working relation with business on provision of low-cost housing?				
3.4 Does your municipality have adequate budget and staff for provision of low cost housing?				
3.5 Are there any vacancies in the organisational structure for delivery of houses?				
3.5 Do you have any backlogs for spending the budget on delivery of low cost housing?				
3.6 Do you have any low- cost housing projects funded by external donors (e.g.				

conditional grants)				
3.7 Does you municipality have a service level agreement with the Provincial Department of Housing or local municipalities for rendering Low-cost housing?				
3.8 If Yes are the targets agreed upon with Provincial Department of Housing being met?				
3.9 If No what are the challenges?				

#### QUESTION 4

<b>4. Public Participation in provision of low-cost housing</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>	<b>COMMENT</b>
4.1 Do you have public participation programme on the provision of low-cost houses?				
4.2 Are municipality housing and poverty alleviation issues discussed in the political structures like District Co-ordinating Forum/ Portfolio Committee?				
4.3 Is there any working relationship (co-operation) with the district municipality regarding municipal low-cost housing issues?				
4.4 Does your municipality receive any support from Provincial and National Government in implementing low cost housing provision mandate?				
4.5 Do you have any Intergovernmental Relations (IGR) agreement with other municipalities/government departments in promoting provision of low-cost houses?				
4.6.if yes, what are key focus areas /priorities				

**Thank you**

## Appendix 4

### QUESTIONNAIRE: OCCUPANTS AND APPLICANTS OF LOW-COST HOUSES

The purpose of the questionnaire is to determine the level of satisfaction of the community offered low cost houses and also to ascertain the socio-economic status of such communities.

#### QUESTION 1

1.General	YES	NO	N/A	COMMENT
1.1 Did you apply for the LCH house?				
1.2 How long did you wait for a LCH house?				
1.3 Are there enough houses for all who apply?				
1.4 Where did you apply to be on a waiting list?				
1.5 Did you pay a deposit to be on a waiting list?				
1.6 If yes, how much?				

#### QUESTION 2

2. Client expectations	YES	NO	N/A	COMMENT
2.1 Are there meetings held to inform you about project development?				
2.2 Are you or any member of the community employed to work on the project?				
2.3 Are houses built according to your liking?				
2.4 If No, what are the challenges?				
2.5 Are houses big enough for family and furniture?				
2.6 If No, what are the challenges?				

**Thank you**

## APPENDIX 5

### HOUSING INFRASTRUCTURE IN THE METSIMAHOLO LOCAL MUNICIPALITY

The content below provides an outlook of the housing infrastructure in the MLM. The pictures presented in this section were captured by the researcher of this study (Masike) in April 2012. The intention of this section is to share the challenges encountered by the state and the community with regards to the housing need in South Africa. The data is obtained from the literature reviewed during this study. This section use the examples derived from Burger, 2009; Ackelman & Andersson, 2008; and Vestbro, 2007. There is a dire need for public rental housing for the poor, which the Department of Human Settlements aims to address by means of various options. The department has formulated an affordable rental-housing programme for people in the low-income bracket who may live in housing stock arising out of:

- public-sector hostels provided for the purposes of housing migratory labour in the previous dispensation
- municipal rental stock
- new high-rise housing stock (Burger, 2009:145).

The table below provides insights about the houses delivered during the financial year 2008/09

#### Appendix Table

PROVINCE	NO OF HOUSES DELIVERED
Eastern Cape	20 180
Free State	14 667
Gauteng	80 469
KwaZulu-Natal	36 068
Limpopo	16 686
Mpumalanga	17 626
Northern Cape	4 914
North West	15 912
Western Cape	31 011
<b>Total</b>	<b>239 533</b>

Source: Department of Human Settlements in (Burger, 2009:310).

## **Informal Settlement**

Since the 1960s, cities in developing countries around the world have faced a high rate of urbanization and increasing poverty. The result is uncontrolled development of non-planned urban settlements, through illegal invasion of land and construction of shelter, where people live in poor housing and living conditions. These places have through history been named differently, and so even today. Common expressions are slums, shantytowns and squatter settlements, but the most appropriate concept is 'informal settlement'. The settlements can be described in several ways (Ackelman & Andersson, 2008:6). The pictures below describe the informal sector housing structures in the MLM.

### **Appendix Picture.1 Newly established location/section**



Source: Author, 2012 (photographic surveys during the field surveys)

**Appendix Picture.2** Informal Organised pattern, lacks road infrastructure. The housing structure has one window in the kitchen side.



Source: Author, 2012 (photographic surveys during the field surveys)

**Appendix Picture.3 Newly built structure (the zink is shinny- brand new)**



Source: Author, 2012 (photographic surveys during the field surveys)

**Appendix Picture.4 Unhygienic conditions (illegal dumping)**



Source: Author, 2012 (photographic surveys during the field surveys)

**Appendix Picture.5 Sanitation (toilet) structure and serves as a communal facility.**



Source: Author, 2012 (photographic surveys during the field surveys)

## **METHODS FOR IMPROVING HOUSING (CONDITION: DECENT HOUSING)**

The improvement of the housing condition in informal settlements can be done in several ways. Ackelman & Andersson (2008:12) provides some of the methods below that can be combined with each other to make a complete approach to fight the housing problem. Ackelman & Andersson (2008:12) identified the following methods that the state intended to apply for housing development, namely: Core housing, Settlement Upgrading, Site-and-service, In-situ upgrading, Greenfield development, Infill development.

### ***Core housing***

Core housing can generally be explained as an approach that includes the basic structure for a dwelling but with a minimal level of services, finishes or size. This is a kind of self-help housing and the idea is that when more finance becomes available for the owner the house should be easy to extend (Ackelman & Andersson, 2008:12).

### ***Settlement Upgrading***

Settlement upgrading has come to mean many things but in the simplest meaning it is a package of basic services as water and sewage supply. Also secure land tenure has become an essential part of the upgrading process. In these projects the houses are often accepted as they are but there are also examples when whole quarters have been rebuilt. Settlement upgrading can be seen as similar to the wide concept of slum improvement and the opposite of upgrading are according to slum clearance and relocation. Because of the wide definition of upgrading, it can look rather dissimilar in different projects (Ackelman & Andersson, 2008:13).

### ***Site-and-service***

Another self-help housing method is site-and-service. Vestbro (in Ackelman & Andersson, 2008:13) says that in site-and-service no house construction at all is provided, the residents only get a plot and services such as water supply, roads and a few social services. The idea of self-help housing is that people are able to build their own house which gives them the chance to form the house after their own finance and needs (Vestbro in Ackelman & Andersson, 2008:13).

### **Appendix Picture.6 Site-and-service**



Source: Author, 2012 (photographic surveys during the field surveys)

### **Appendix Picture.7 Site-and-service**



Source: Author, 2012 (photographic surveys during the field surveys)

### ***In-situ upgrading***

In-situ is Latin and means *in the place*. Sometimes it is also called the English word *on-site*. In-situ upgrading means upgrading an existing informal settlement with as little relocation of the residents as possible (Ackelman & Andersson, 2008:14).

### ***Greenfield development***

A greenfield development is when an undeveloped area is taken under possession and is being built as a residential area. In greenfield projects all services are included

within the plots/houses and it involves security of tenure. (Ackelman & Andersson, 2008: 15).

### ***Infill development***

In common language infill is associated with densification. Another definition of infill development in the concept of informal settlements is filling in on land previously set aside for uses which are no longer a priority, for example an underutilised public open space or an additional school site. The main thing with infill is to use already existing infrastructure and services. In large scale of infill development, the process is very similar to greenfield projects except that it doesn't require as much new infrastructure as in greenfields. Infill development can also happen in land which is well-located according to job opportunities and transports and not only in residential areas. The correlation between infill development and the formalisation of informal settlements is often very close (Ackelman & Andersson, 2008: 15).

### ***Roll-over approach***

In a roll-over approach all shacks and infrastructure are taken away from the land which results in a loss of recognition within the community when the structure and movement pattern are being demolished. The installation of layout and infrastructure follows the same procedures as in greenfield development but it is usually impossible to create enough sites to accommodate all the residents and consequently some of them have to be relocated elsewhere (Ackelman & Andersson, 2008: 15).

### **Housing reforms: Low Cost Housing**

As part of the housing programme, government provides a 40-m<sup>2</sup> house with two bedrooms, a kitchen, lounge and separate bathroom to qualifying households earning from R0 to R3 500 a month. The focus on security of tenure aims to encourage poor households to invest resources in housing and building an asset. In March 2009, South Africa's housing-delivery programme received a boost with the launch of the new Housing Development Agency that will address the issue of land

acquisition. The banking sector has pledged more than R40 billion towards the provision of affordable mortgage products (Burger, 2009:144).

#### **Appendix Picture.8 Incomplete LCH**



Source: Author, 2012 (photographic surveys during the field surveys)

#### **Appendix Picture.9 Better living conditions in the LCH**



Source: Author, 2012 (photographic surveys during the field surveys)

#### **Appendix Picture.10 Rental accommodation in the LCH: unplanned for service delivery in the respective households**



Source: Author, 2012 (photographic surveys during the field surveys)

**Appendix Picture.11 High income earners housing**



Source: Author, 2012 (photographic surveys during the field surveys)

**Appendix Picture.11 High income earners housing**



Source: Author, 2012 (photographic surveys during the field surveys)