

# **A DECISION SUPPORT SYSTEM FOR EVALUATING LOCAL AUTHORITY HOUSING MAINTENANCE STRATEGIES IN THE UNITED KINGDOM**

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**A thesis submitted in partial fulfilment of the requirements  
of Derby University for the Degree of Doctor of Philosophy**

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**PhD**

**January 2014**

## ABSTRACT

### Purpose

The lack of smart resources management and servicescape strategies within the social housing sector in the late 1970s influenced the rise of successive Governments to consider the restructuring of the traditional ‘cumbersome’ Local Authority based structures and approaches toward more ‘enterprise focussed’ management organisations (Sharp & Jones 2012). This change in central Government policy encouraged Local Authorities to assign through outsourcing their housing stock (including associated asset management services) as part of a Large Scale Voluntary Transfer (LSVT) via a process of compulsory competitive tendering to Housing Associations and / or set up Housing Trusts to increase the accountability, efficiency, and effectiveness of social housing and healthcare provision in the local community. As part of this modernisation process, all social housing and community care providers (also known as ‘Registered Social Landlords’ - RSLs) became subject to statutory audits, inspections and regulation, and performance management, to ensure the service quality delivery requirements. More recently, however, changes in the legislative framework have introduced choice-based letting policy, putting the customer first, service delivery and additionally RSLs are required to act as ‘*Corporate Social Landlords*’. These changes have focused RSLs attention on the need to sharpen service responsiveness, especially in the area of housing maintenance management (DETR 2000).

Previous research (Holmes 1985; Spedding 1990; Johnston 1993; Stewart & Stoker 1995; Olubodun 1996, 2000, 2001; Sagoo *et al.* 1996; El-Haram & Horner 2002; Kangwa & Olubodun 2003, 2005; Boussabaine & Kirkham 2004; Jones & Cooper 2007; Prowle 2009; Babangida *et al.* 2012) has mainly concentrated on analysing maintenance management factors at the micro level; developing maintenance models and framework design for operational level. However, in the social housing sector, there have been no studies undertaken to date that have been focused on housing maintenance strategies – for example, how this is formulated, the key drivers of change and the impact on customer orientated service delivery. The purpose of this study is to identify the critical factors that drive the decision-making process in order to formulate responsive housing maintenance strategies and to develop a decision support model to improve customer service delivery of social housing provision.

## **Research methodology**

Through a process of qualitative case study, pilot questionnaire surveys, workshops and qualitative in-depth interviews, the research has identified how the housing maintenance strategies are formulated and how social housing providers could enhance customer service delivery. The study comprised four phases in order to reflect the key objectives of the research. The first phase comprised a review of literature on social housing provision in the UK, identifying relevant changes in the legislative framework, an assessment of the challenges faced by RSLs and the key factors influencing performance of social housing provision. This phase also included undertaking a case study based on five different RSLs to examine the *'real problems'* as to how and to what extent RSLs have adopted their organisation in order to meet the changes and challenges which they now face. The second phase investigated the key service factors impacting on housing maintenance strategy design and development through the use of a pilot study questionnaire directed to the asset managers (participating in the survey) and also included a selection of end users of the services (tenants). This phase identified the differences between the perceptions of service providers and the expectations of the service users. A key feature of this phase entailed conducting a workshop to disseminate findings of the pilot study. The workshop also formed a basis for *'in-depth'* discussions for identifying the key factors, their descriptions, their interactions with each other, their inter-relationships with the tenant type, and their combined impact on formulating responsive housing maintenance strategy. The third phase of the study entailed eliciting qualitative data from the participants using the Repertory Grid (RG) *'in-depth'* interview technique - a psychology tool in order to gain a deeper understanding of the core important *'constructs'* and sub-constructs, their characteristics, their inter-relationships in the design and development of effective housing asset maintenance strategies. The fourth phase of this study entailed the development of a decision support system and the qualitative validation of the relationships found to exist between the constructs examined in phase three together with the testing of the model over a period of two months with four of the participating social housing providers.

## **Findings**

The key findings arising from this research suggest that the design and development of value for money maintenance strategies within the public housing sector, are not solely based on physical factors related to the age, condition, location, construction type for example, but rather it was found that the majority of the asset management decisions made, were

dependent upon a multivariate of key factors. The study identified 52 key factors, which when grouped together formed seven key cluster (*Customer risk factors, Asset manager risk factors, Tenancy risk factors, Neighbourhood and community sustainability risk factors, Financial and economic risk factors, continuous service improvement risk factors and corporate risk factors*) which are both ‘unique’ and ‘novel’ and are identified as having a direct influence on the formulation of housing maintenance strategy. These factors should not be considered in isolation and are more akin to the business success factors. The business ‘Balanced Scorecard’ (BSC) was evaluated and used as the basis for a ‘*best fit*’ model which was tested against four RSL to confirm its validity and its appropriateness. The responses obtained from these trials has indicated that the BSC provides a working tool capable of enhancing RSL organisational capabilities and service delivery effectiveness but also able to incorporate customer views regarding service delivery.

This research makes major contributions to the existing limited pool of knowledge relating to strategic asset management within social housing sector and in addition, provides an insight into how housing maintenance strategy can be developed to incorporate feedback from customers (tenants) regarding the quality and responsive service delivery. The research also demonstrates the potential value of the BSC approach to the management tool capable of generating a *competitive edge* in line with government policy which is currently directed towards encouraging RSLs to adopt a commercial business approach to their operations. The research also demonstrates that the adoption of a decision support system in the form of BSC has the potential to provide useful assistance to RSLs intending to move away from the traditional public sector approaches to management (a more private sector orientated) approach to their operations. The research also shows that asset managers experience little difficulty in understanding the principles behind the BSC approach and its application. In addition, the cascading effect of BSC in housing maintenance strategy means that the strategy can be converted into measurable actions at the operational levels thereby providing a direct link between strategy and its implementation. Due to the absence of suitable benchmarking data, score rating derived from the RG were adopted by asset managers. This approach was found to be highly sensitive in assessing service delivery constructs. Furthermore, the research revealed that the individual constructs (52 key factors) had a profound influence in relation to the strategy formation and the assessment of customer service delivery. The study found that RSLs need to develop a deeper understanding and awareness of their customers concerns in that these factors may have a major impact in the development of a responsive

housing maintenance strategy and overall improvements on RSLs performance. A close link was found between customer profile, their financial standing and their service expectations, patterns of behaviour and their interaction with their RSLs. High performance expectation was found on the part of affordable customers, presumably reflecting a higher level of social and economic dependency within this group and greater need for access to services thereby challenging RSLs to deliver higher standards of performance including housing maintenance provision. Other customer groups were noted as placing demand on their RSLs to adopt more holistic approach to formulation of housing maintenance strategy and embrace business-like approach to service delivery in order to facilitate a smooth transition from traditional public sector ethos to one closely akin to that associated with the private sector organisation.

### **Practical implications**

The practical implications of this research are, that, if RSLs are to meet the demands of complying with a changed legislative framework, deliver responsive housing maintenance services to reflect the ever-changing customer expectations, and to adopt commercial approaches to the development of housing maintenance strategies, RSLs will need to re-engineer their business processes if the demands are to be satisfactorily accommodated. RSLs must also be prepared to adopt '*smart business*' practices in the future, given that existing Key Line Of Enquiry (KLOEs) approaches now provide an inadequate tool for assessing performance in housing asset management nor are KLOEs sufficiently robust or possessing a sufficient degree of agility for modelling complex service delivery scenarios. As a result of this research, the BSC model has demonstrated its usefulness and its appropriateness to housing maintenance decision making within the current economic conditions and changed regulatory regime. The BSC model is simple in nature but nonetheless sufficiently flexible to allow factors to be added or omitted to accommodate the requirements and structures of individual RSLs.

### **Academic implications**

To date, most housing asset management have concentrated on the technical and cost aspects of maintenance management aimed at the micro level and have attached little attention to the needs of strategic management or the potential significance of the customer. These earlier researches have limited application to the needs of strategy management particularly under the current conditions which social housing providers are now required to operate (Sharp &

Jones 2012). This study is first of its kind to attempt to evaluate housing maintenance strategy giving considerations to end user '*the customer*' dimension in service delivery within the social housing sector.

This study has adopted a novel approach to this area of research by employing a technique frequently encountered in clinical psychology, based upon the use of a Repertory Grid – a qualitative tool for triadic elicitation of key drivers with a view to providing a robust tool for assisting housing asset managers involved in the development of housing maintenance strategy. The RG personal interviews with senior asset managers revealed hidden and latent factors, which would not have been easily identified had a quantitative questionnaire been used. The hidden constructs which were identified as a result of the applications of this technique are considered to be 'akin' to business success factors.

### **Originality**

This study is also unique in that it has given particular considerations to the provision of housing maintenance service as perceived from the view point of the end users rather than directing itself to the constructional and technical aspects of housing asset management. Also, the research recognises the need for asset managers to become more aware of the implications of social factors and the need for these aspects to be incorporated into strategic maintenance models. A further unique aspect of this research is that it has endeavoured to obtain an insight into the cognitive processes (mind mapping and analytical mental processes) behind the decision making of asset management, in order to identify and understand the nature of the drivers behind these processes to develop a rational decision support model for assisting in the rational formulating of housing maintenance strategy.

### **KEYWORDS**

Social Housing, Registered Social Landlords, Social Housing Providers, Customer Service Delivery, Asset Managers, Customer, Tenants, Repertory Grid

## **DEDICATION**

**DEDICATED TO THE LORD GOD ALMIGHTY  
AND  
ACCOMPANY OF HIS DIVINE SAINTS**

I would also like to take this opportunity to extend my love, thanks, appreciation, and gratitude to my wife Randhir Kaur and my daughters Prabhsimrat Kaur, Jaspreet Kaur and my son Manpreet Singh with this research have been made possible through their continued help and encouragement. *I dedicate this thesis and all my work to them.*

## ACKNOWLEDGEMENTS

There is an old saying that ‘a single hand cannot tie a bundle’ I am indebted to **Prof Michael Okoroh** for his invaluable assistance, contribution, enthusiasm, encouragement, guidance, and direction proved an inspiration through this research. I am also indebted to my ex student and a very close friend, **Dr Peter Gombera** for his unreserved support, invaluable assistance and guidance in shaping the direction of this research and despite his busy schedule at work he managed to find time for me. I would like also like to thank **Dr Christine Jones** my second supervisor for her assistance and support.

I would like to acknowledge the countless asset managers, Housing Associations and their tenants who contributed and collaborated throughout this research and gave generously their time knowledge and experiences. Thank you, without such input this research would not have been possible.

My special thanks to **Jaspreet Sagoo and Manpreet Sagoo** for helping with the graphics and **Clair Denby, Irene Glendining, Prabhsimrat Sagoo and Robert Stevenson**, for reading through the manuscript and trying to make sense of my scrambled thoughts and providing useful comments and suggestions.

I would like to thank the Prof Paul Ivy (Dean), Faculty of Engineering and Computing at Coventry University for financially supporting this research.

I would like to express my gratitude to late **Bibi Ji Balwant Kaur Ji** of Bebe Nanaki Gurdwara for giving me a chance to be part of the later years of your life. **Baba Ji, Bhai Sahib Bhai Mohinder Singh Ji** of Guru Nanak Nishan Sewak Jatha, long may you continue to have a profound influence on my life and teachings and have taught me that compassion, love, and affection, transparency, integrity, selfless services, simran and memories are things that no one can take away.

A very special thanks to my beloved wife **Randhir Kaur Sagoo**, and my children **Prabhsimrat Kaur Sagoo, Jaspreet Kaur Sagoo and Manpreet Singh Sagoo** for their love, support and endurance throughout this period of this research and beyond. Thank you

for being with me, looking after me and for bearing with me - 'you are always on my mind' - and may Guru Ji bless you all with his treasures and safeguard you all the time.

To my parents my father late **S. Lal Singh Sagoo** and mother **B. Charan Kaur Sagoo** for their love and affection and without whom I would not be here today. To my in-laws my father late **S. Bikram Singh Chagar** and mother Late **B. Prakash Kaur Chagar** – thank you for being my parents and dear friends. **God Bless you all.**

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## Glossary of Terms

AC	Audit Commission
AMLO	Arms Length Management Organisation
BRE	British Research Establishment
BSC	Balanced Scorecard
BSI	British Standard Institute
CCT	Compulsory competitive tendering
CIH	Chartered Institute of Housing
CIOB	Chartered Institute of Building
DCLG	Department for Communities and Local Government
DERM	Department of Environment and Resource Management - Queensland Government Australia.
DETR	Department of the Environment, Transport, and the Regions
DHS	Decent Home Standards
DoE	Department of the Environment
DTI	Department of Trade and Industry HC Housing Corporation
LSVT	Large scale voluntary transfer
ODPM	Office of the Deputy Prime Minister
RICS	The Royal Institution of Chartered Surveyors
RSL	Register Social Landlord
TSA	Tenant Service Authority
TQM	Total Quality Management
APH	Analytic Hierarchy Process

# CHAPTER 1

## INTRODUCTION

### 1.0 Background

Successive Governments have legislated extensively, aspiring to improve the nation's health and its housing conditions. Other than for the limited contribution of a small number of voluntary philanthropic bodies, the state became the primary provider of social housing in the UK, particularly after the end of the World War of 1914-18 'homes fit for heroes' (Smith 1977). With the advent of the Thatcher administration in the late 1970s a series of policies were introduced with the intention of rolling back the role of the state in housing provision. This resulted in the traditional social welfare approach towards the provision and management of social housing being displaced by a more market directed approach. The adoption of this alternative approach from the late 1970s radically transformed social housing through the imposition of the processes of externalism and managerialism. Externalism reduced the existing role of local authorities as the main providers of social housing, through the promotion of voluntary stock transfers to Housing Associations and trusts. Managerialism resulted in the introduction of a set of tools intended to increase the accountability, improve efficiency and the effectiveness of social housing providers. As part of the process of modernisation, local authorities and the social housing providers became subject to audits, inspections, performance measurement, and the requirement to adopt best value frameworks (Malpass & Murie 1999; Stewart 1996; DETR 1997). These processes created a new context for the management and provision of social housing with local authorities ceasing to be the primary providers of social housing and were replaced in that role by Arms Length Management Organisations (ALMOs) in the form of housing trusts and Registered Social Landlords (RSL).

According to Cave (2007) there are in the order of 4 million homes in the social housing sector in the UK, accommodating approximately 8.4 million people. Local authorities manage 32% of this total with ALMOs managing 20% and housing associations managing 48% of the social housing stock, Cave (2007).

## 1.1 Rationale for the Research

According to Randell (2011) the fabric of the social rented housing stock was aging, and in a state of serious disrepair as a result of local authorities having failed to improve the condition of their stock and to meet the requirement of the fitness standards. This failure was seen as the result of poor application of Asset Management policies, lack of strategic planning, funding constraints, and local neighbourhood issues - poor quality of tenants (local authorities had the role of housing provider of last resort and accordingly had limited choice in the acceptance of prospective tenants), affordability, anti-social behaviour and lack of attention to detail in customer care and service delivery (Randell 2011; Sustainable Development Commission 2006).

Previous researches (Holmes 1985; Spedding 1990; Johnston 1993; Stewart & Stoker 1995; Olubodun 1996, 2000, 2001; El-Haram & Horner 2002; Kangwa & Olubodun 2003, 2005; Boussabaine & Kirkham 2004; Jones & Cooper 2007; Prowle 2009) concentrated primarily on analysing maintenance management factors at a micro level - development of maintenance models and framework design for use at the operational level. Whilst other researchers (Malpass *et al.* 1993; Malpass 2000; Malpass & Mullins, 2002; Pawson 2009) have attempted to examine the housing policy and its impact and provide a wider understanding of factors related to managing social housing. This research had attempted to provide a greater insight into the factors potentially influencing decision making in social housing. However, these researchers failed to provide a predictive model capable of accommodating a range of variable factors (holistic model) and of general applicability to resolving strategic housing maintenance management problems, future planning and objective monitoring of the results of management decisions.

The degree of effectiveness of housing maintenance strategies will largely depend upon a wide range of multivariate factors such as: location of estates managed and their layout, the nature and characteristics of physical assets to be managed (age, state of repair, degree of obsolescence, and adaptability to changing demands for example). Together with relevant political policy, legal obligations and constraints, economic and investment considerations including access to finance, degree of social deprivation and tenant income and end-user/stakeholders/customer related needs (and other factors will be in some form of dynamic relationship with one another) can be accommodated and resolved (McGeorge & Betts 1990).

Some of these business factors can be pre-determined especially in relation to new build housing projects, where the physical stock is being designed to satisfy identified end user requirements. Other factors can only be determined during the course of the life cycle management of an asset i.e. the decision to refurbish as opposed to demolition and replacement of an asset. Any model capable of general application to the solution of housing maintenance management strategy must be able to accommodate the influence of a set of underlying and uncertain dynamic factors such as, political considerations, statutory regulation, environmental issues, micro and macro economic factors related to supply and demand of affordable housing, tenant type and tenant behaviour, physical condition of assets and its geographical/location related factors, an appreciation of the factors which are responsible for disrepair and deterioration of the housing stock and business continuity considerations (Malpass & Mullins 1991; Malpass *et al.* 1993; Mather 2004).

In view of the narrowness of previous research and the lack of a useful and workable predictive model capable of meeting the needs of managers engaged in the maintenance of social housing, this research focuses on the analysis of the processes behind making of strategic decisions by asset managers. It has the intention of developing a model capable of providing an understanding of the drivers behind those decisions, to enable the development of a useful predictive rational quantitative model as a tool for managers engaged in developing social housing maintenance strategies. As an integral part of this research, 'usefulness' of decision-making models will be reviewed.

## **1.2 Aims and objectives**

This research sets out to develop a decision support model for evaluating local authority housing maintenance strategies within the UK.

In order to investigate and satisfy the above aim, the research sought to address the following objectives:

1. Critically analyse the key factors used by Social Housing providers in managing their existing housing stock.

2. Define the nature and characteristics of maintenance strategies to distinguishing between 'planned preventative maintenance', 'corrective maintenance', emergency maintenance as an aid to understanding the approach adopted in assessing the overall maintenance requirements of the publicly owned housing stock.
3. Determine and provide an understanding of the characteristics of RSLs as Landlords and tenants as customers and the knowledge gap that exist between their expectations of the Landlord's obligations in customer care.
4. Ascertain how housing managers can develop customer care strategies to upkeep housing stocks.
5. Develop a decision support model or a predictive model for evaluating an effective maintenance management strategies in the social housing stocks.

Based on the key objectives, the research questions that emerged from this study are summarised as follows:

- What are the challenges posed to RSLs by changes in the regulatory framework under which they are required to function in today's economic climate?
- What are the roles and responsibilities of RSLs? and what are the key factors affecting the development of maintenance management strategy in relation to social housing stock?
- How do RSL relate to their customers (to what extent do they understand their customer expectations) and to what extent are they successful in achieving a satisfactory standard of customer service delivery?
- What are the critical factors influencing the development of housing maintenance management strategy and the quality of customer service delivery?
- How to develop and evaluate a 'best model' capable of encapsulating the entire core business function of RSL organisations?

### **1.3 Research Methodology**

The choice of research methods is an important part of any research. This research adopts a combination of qualitative and semi quantitative research methodologies (see Chapter 5). The approach to this research can be divided into the following four main phases:

Phase 1: Literature Review;

Phase 2: Preliminary Study;

Phase 3: Data collection and analysis;

Phase 4: Model development, validation and conclusion.

#### **1.3.1 Phase 1: Literature Review**

The literature review included all activities required to prepare the proposal describing the overall research objectives. The major activities of this phase are:

- Literature review of the subject matter - this included review of books and journals; and extensive interview of experts and professionals in the research area;
- Examining the history and the challenges encountered in the social housing sector in relation to maintenance management together with an examination of key factors influencing formulation of a maintenance strategy;
- This enabled a critical review of the present knowledge relating to Decision Support Systems to be undertaken within the context of the social housing and maintenance management decisions.

#### **1.3.2 Phase 2: Preliminary Study**

The preliminary study included undertaking an extensive case study of five Local Authorities which was followed up by two pilot studies, one with asset managers and with tenants, which identified a number of key factors considered by the respondents which have an impact on asset management strategies. The results of the pilot were disseminated via workshops held with asset managers and tenants' focus groups. The workshops provided a basis from which to develop key themes for this research and further 'dry runs' and played a vital role in developing the primary research and shaping major 'in-depth' interviews for the Repertory Grid data

### **1.3.3 Phase 3: Data collection and analysis**

This phase focussed on data collection using a qualitative approach based on Kellys' (1955) personal perception concept theory known as RG. The key phases include:

- Initial pilot study – the development of a questionnaire based survey and analysis of the initial findings in order to select the most suitable way forward in developing the research methodology;
- Workshops assisted with the development of the interviews for both asset managers and customers to ensure that the constructs identified were sufficiently accurate in order to finalise the repertory grid variables as constructs;
- The main data was elicited via in-depth RG interviews with asset managers and customers, the results of which were analysed using Minitab, WebGrid 5 and Idiogrid. statistical analysis software packages.

### **1.3.4 Phase 4: Model Development and Validation**

This phase focused on establishing the specific research strategy for this work and developing the models. The main activities associated with this phase included:

- Review of additional literature to identify the key factors influencing the decision making process and appropriate methods for statistical analysis.
- The data collected from the RG interviews was used to advance the model of Decision Support System for Evaluating Social Housing Maintenance Strategies in UK.
- The model was tested over a period on 2 months by 3 asset managers drawn from 3 different social housing providers together with customers. Additional advice was also obtained from academics in the field of facilities management.

## **1.4 Organisation of the thesis**

The remainder of this thesis is divided into eight chapters:

Chapter 2 provides an overview of social housing in a historical context, the regulatory framework in which, social housing organisations are required to operate and an examination

of performance measures. This chapter also examines the challenges currently faced by RSLs in the provision of social housing.

Chapter 3 evaluates maintenance management within a social housing context and highlights the multi-variant factors which influence maintenance management of social housing, together with a range of infrequently considered potential factors. Numerous building maintenance framework and performance management models are also discussed in this chapter.

Chapter 4 reviews the nature of decision support systems / models and their potential usage within the social housing sector. These models embrace three broad dimensions i.e., numerical, subjective matters and how decision/performance is to be measured. This chapter categorises how social housing providers performance can be measured in different ways i.e. construction project performance, construction productivity, quality measures, financial measures and stakeholders'. Several business models were examined and Balanced Scorecard (BSC) was selected as being the most appropriate.

Chapter 5 discusses the research methods used and justifications for scope of study, methods of data collection and analysis techniques employed. This chapter mainly concentrates on the research framework, the analytical tools adopted and the step by step approach taken in this research.

Chapter 6 primarily presents the data analysis from the pilot study. The analysis of the pilot study utilises very simple statistics of averages and general frequency in the form of tables. The results of seminars and workshop are also discussed as these, shape the direction of the main repertory grid framework and survey.

Chapter 7 provides a detailed analysis of the RG data interviews with asset managers and customers. The analysis of the data is carried out using specific software packages (Minitab, WebGrid5 and Idiogrid) which are explained in detail so that any underlying trends or relationships between constructs and elements can be identified and understood.

Chapter 8 presents the single model that is reflective of the summary based on the findings in Chapter 7. This chapter also explores the theoretical rationale underlying the decision

support system and the model is validated by 4 RSLs to confirm its accuracy and suitability for the formulation of housing maintenance strategies in the UK.

Chapter 9 concludes the findings of this thesis. The principal results are summarised and recommendations for further research on the subject are offered.

# **CHAPTER 2**

## **AN OVERVIEW OF SOCIAL HOUSING PROVISION IN GREAT BRITAIN**

### **2.0 Introduction**

This chapter provides an overview of the development of social housing provision within a historical theme to contextualise the development of the main research theme. The chapter also assesses the impact of legislative intervention and its effects on social housing provision and the housing management function. The chapter also includes an evaluation of impact on the present challenges encountered within the social housing with particular reference to the need for the physical management of housing stock, together with the achievement of an enhanced level of tenant satisfaction.

### **2.1 Historical Background**

#### **2.1.2 The Mid 20th Century**

The early to mid 20th Century brought a rapid growth in speculative house building activity and unprecedented growth in the Building Society movement, encouraging a greater level of owner occupation. This in turn contributed to the growth of suburbia which came to be dominated by the middle class owner occupier (Ineichen 1993). However, for the first time, poorer families had the opportunity to live in council homes. Lowe (1993) suggests that it was for this reason that council homes first began to acquire a poor reputation, as the quality of workmanship and materials used in construction were reduced to allow the charging of rents affordable by poorer families.

According to Shapely (2008) during the Second World War approximately 200,000 houses were totally destroyed by enemy action, 3 million dwellings suffered some degree of war damage and a quarter of a million houses were so severely damaged that they were deemed to be uninhabitable. There was a mass expectation that everyone would have access to good affordable housing and that rent control in some form would continue, together with security of tenure.

### 2.1.3 Post-War Years

By the end of the Second World War, the people of Britain were eager to return to normal life after years of living under war-time conditions. A White Paper - *Housing* (Cmnd 6609), identified three objectives: to provide a separate dwelling for each family; speedy completion of the outstanding pre-war slum clearance schemes and the reduction of over-crowding; and finally, as a long term objective, the progressive improvement in the condition of the housing stock generally.

By the end of 1946, approximately one and a quarter million occupied dwellings and 107,000 un-occupied dwellings, which had suffered war damage, had been repaired for occupation. Furthermore, nearly 80,000 units of pre-fabricated accommodation and 52,000 new permanent houses had been produced (Smith 1977).

In 1946 the provision of permanent housing was stimulated by the Housing Financial Provision Act, which provided higher subsidies to local authorities and set a national target for new housing construction of 240,000 dwellings per year. The incentive to build more council houses proved to be successful and by 1948, public sector housing completions had risen from virtually nil to 195,000 and when added to the 33,000 private sector houses completions added a total of 228,000 dwellings to the national housing stock.

According to Kirby (1979), more than 800,000 council homes were built within the six years following the end of the war compared with 180,000 in the private sector. However, it became apparent that the building industry had become overloaded. Consequently, the target for new homes was reduced with production over the next three years (1951 – 1954) being limited to approximately 170,000 homes per year. Under the Housing Act 1949, the obligation of local authorities to provide housing for the working classes was removed. The implication of this action was that local authorities were now seen as a general housing provider and having a responsibility for meeting housing needs of all classes and not only for the working classes.

In November 1953, another White Paper; *Housing, The Next Step* (Cmnd 8996) was published, setting out the Government's proposals for a re-orientation of housing policy. Its recommendations were adopted the following year in the Housing Repairs and Rents Act, of

1954, that included an important provision contained in Section 9. This provided a definition of minimum standards of fitness for human habitation in the form of a twelve point standard. Until 1954, whether a dwelling was fit or unfit was determined against the general standard of accommodation in the district and subsequently against requirements of the local bye-laws. This Act introduced a uniform national standard requiring all local authorities to assess the condition of a property against a common standard of fitness. It also provided the Government with a basis upon which to objectively assess the number of unfit dwellings throughout England and Wales. This standard, incorporating minor amendments, formed the basis of Section 4 of the 1957 Housing Act and subsequently Section 604 of the Housing Act 1985, which remained in force until 1989. According to Malpass and Murie (1994), by 1956 the Government had already begun giving consideration to more economic ways of building council houses and it was becoming clear that the Government would expect that in future the private sector would meet general housing needs. English (1982) believes that it was from this period that pre-fabrication and system building began to be introduced with a view to reducing construction cost and de-skilling certain operations.

The trend towards cheaper factory produced dwellings continued throughout the 1950's and 1960's and contributed to what has been described by Curtis (1984) as *'The Great British Housing Disaster'*. This was the result of a number of factors, including poor standards of workmanship, inadequate design and technical experience, a shift away from the traditional architect led design to contractor led design and build procurement, a lack of proper supervision and site control and an abdication of design by local authorities. These problems were further compounded by a dilution of craft skill within the industry and centrally applied pressure to provide the maximum number of dwellings at minimum cost.

English (1982) identified the increasing rate of slum clearance as key reasons for the Government's encouragement of *'system building'*. Kirby (1979) was of the opinion that the construction industry was urged to find ways of meeting the demand for housing. When the Labour Government returned to power in 1964 it promised to provide new *'system built'* housing at an increased rate of up to 500,000 completions per year until 1970.

According to Malpass and Murie (1982), by 1964 the Labour Party had been out of office for thirteen years, during which time their approach to the issue of private ownership had radically shifted. It was now believed that private ownership of housing was something that every

household should aspire to. It was for this reason that the Government felt that there should now be an equal division of resources between private and public housing provision and ownership. The numbers of publicly built houses increased to 159,300 in 1967, mainly to keep pace with the private sector.

## **2.2 Major Changes in Provision of Social Housing and Policy Since 1970**

### **2.2.1 The Conservative Government - 1979 to 1997**

In 1979, the newly elected Conservative Government policies consisted of the promotion of home ownership, reviving the private rental sector and the sale of council houses to sitting tenants. Through a combination of privatisation and deregulation, policies moved municipal housing out of the Public Spending Borrowing Requirement (PSBR). This policy was designed to reduce public expenditure, rather than addressing housing need which was described as *'in crisis'* by the housing lobby group.

One of the cornerstones of the policies was the promotion of home ownership through *'right to buy'* discounts with a view to expanding its share of the working class. New policies included the *'rents to mortgages'* and *'rent a room'* schemes together with the introduction of a *'common hold'* extending the scope of previous leasehold enfranchisement legislation. The Government also made commitments to secure a better deal for council tenants, through the *'tenant's charter'*, *'housing action trusts'* and the *'large scale voluntary transfer'* of stock from local authority control. To ease the impact of economic recession the Government attempted to reduce public expenditure, by reforming the Housing Benefit system. Mullins and Murie (2006) have noted that although public housing expenditure had fallen, social security expenditure had increased significantly from £3.4 billion in 1986 to £11.4 billion in 1997.

The 1995 White Paper *'Our Future Homes'* (DoE 1995), suggested increasing home ownership by 1,500,000 over the coming decade, provisions for housing association tenants to buy their homes, measures to reduce empty housing, the transformation of large council estates, amending the duty to accommodate the homeless and creating mixed communities in the heart of cities. The White Paper also made reference to the public rented sector as being the most cost effective methods of providing housing for people on low incomes. It appears that the 1995 White Paper prompted the Government to perform a U-turn in housing policy,

finally realising the continuing need for a public rented sector. Malpass and Murie (1999) calculated that through the process of privatisation and deregulation two million council houses had been transferred to owner occupied and many more to housing associations through the large voluntary stock transfers.

### **2.2.1.1 Right to Buy**

The 1980 Housing Act introduced a '*right to buy*' policy enabling public sector tenants to buy their own homes with local authorities a duty to sell to sitting tenants upon demand. As English (1982) points out, this was different to the situation before the Act, when the authorities were having only a discretionary power to sell. The '*right to buy*' scheme offered public sector tenants large discounts on the market value of the property which they occupied by up to seventy percent of the market value for tenants with twenty years residency (Stone 2003). Forrest and Murie (1988) argued that this legislation predominately benefited the wealthier working class who could access mortgages and who lived in quality dwellings within desirable locations. The new tenancy agreements for public sector tenants consolidated the rent rebate system into the Housing Benefit Scheme in 1982, which allocated subsidies on the basis of household income. New arrangements for subsidies for local authority housing facilitated a reduction in the exchequer's assistance subsidy. The Building Societies Act of 1986 also enabled building societies to compete with clearing banks, which assisted the '*right to buy*' scheme and led to major reforms in mortgage lending, which in turn increased competition and created a diverse range of mortgage products (Mullins & Murie 2006).

### **2.2.1.2 Compulsory Competitive Tendering**

Compulsory Competitive Tendering (CCT) concepts introduced in the 1980 under the Local Government Planning and Land Act, required various local authority functions and services to be put out to tender in the open market on a competitive basis. As part of this process the local authority department was given an opportunity to 'win' the tender, and if successful, the activity remained with the local authority, otherwise the contract went to the most competitive bidder. The scope of CCT was extended under the Local Government Act 1988 to include more 'blue collar' functions with the 1992 Local Government Act extending it to white collar functions, including housing management, which introduced systematic performance measurement (Malpass & Murie 1999).

By 1997, the combination of primary and secondary legislation extended most housing management functions. The Secretary of State could intervene in cases of non-compliance, where councils had attempted to restrict, distort, or prevent competition through anti-competitive measures (Vincent-Jones 1999). The gains stemming from CCT were perceived to arise from the involvement of, and exposure to, the need to compete on equal terms with alternative service providers. Measurement of service improvement did not follow any set criteria. Hence, local authorities found it “*difficult to ‘measure’ the quality of the services actually delivered and make most judgements on the basis of raising standards in the specifications... [local authorities] have different interpretations of what constitutes a performance measure*” (DoE 1997). For Government, the measure of success under Compulsory Competitive Tendering was seen in terms of the volume of services exposed to tender. The temporary and transitional arrangements introduced by the Labour Government, however, did specify the expectation of ‘*service improvement*’, where “*authorities should develop robust measures to validate their performance*” (DETR 1997), although no specific measures were identified.

A significant change brought about by CCT was to formalise the relationship between landlord and tenant, either through formal service contracts, or ad-hoc agreements with residents on the nature and level of services, “*potentially transforming the relationship between the tenant and landlord*” (Stewart 1996, p.176). This new relationship, however brought with it the new tension between the residents and RSLs particularly regarding expectations of the services (Stewart 1996).

CCT was not welcomed by all local authorities. In 1995, one year before CCT in housing would take effect, a survey of 25 northern local authorities concluded that “*it was significant that many of the fears raised by professionals related to the housing service becoming more concerned with money rather than people*” (Housing Act 1996, p.30). Seal (1999) found that the Government was engaged in a form of ‘*guerrilla war*’ with the powerful Metropolitan Authorities over the latter’s attempts to avoid or minimise white-collar CCT. Rao and Young (1995), in their study of the impact of Compulsory Competitive Tendering, found that local authorities had been reluctant to adopt the regime, both as a reaction to its compulsory nature and in the widespread belief that a Conservative Government would not be re-elected. The legislation required authorities to participate in the tendering process, although many authorities were, at best, loose in their interpretation of that directive. From the sixty-six

cases of alleged anti-competitive behaviour reported in 1995, twenty two cases were found not to accept the lowest bid. These allegations led to fifteen notices and seven directions being served on local authorities, requiring compliance with competitive practice (DETR 1997).

In terms of the tendering requirement, CCT did little to alter the attitudes of providers: the final survey of the market for CCT contracts in Local Government prior to abolition on 1 January reveals that despite 19 years of compulsory competition, in-house teams retained 70% of the blue collar business for council services - worth a total of £1.7 billion (Stewart 1993). In white-collar services, where CCT operated for seven years, the Direct Service Organisation success rate was 83% of contracts by value for legal services and 92% for housing management (Nove 1993).

Although services were not generally contracted out to other providers, there is little doubt that CCT had an impact on operational relationships. With the arrival of CCT a new form of housing department organisation arose within many authorities – with separation of the client and contractor functions. The Department of the Environment sets out the requirements for a strict delineation between client and contract divisions where the clients set service standards for contractors (whether in-house or not) to conform to them (DoE 1994). Walsh (1995a) points to a third element in the new organisational forms arising from competition and public services: the strategy and policy making corporate centre. Beyond this organisational change, it is not clear what effect CCT had on services, their providers and recipients, or the reasoning's for the small proportion of white-collar services remaining largely unexplored (Wilson 1999).

### **2.2.2 The Labour Government (1997 – 2010)**

A new government came to power in 1997 with the promise of '*things can only and must get better*' (Labour Party Manifesto 1997). In contrast to previous General Elections, housing policy was not particularly high on the political agenda. Hill (1997) claims, the previous Government left Britain's housing condition in a much improved state, as many more people owned their own home. As a majority of households were well housed, there was little pressure on the Government to increase investment in housing provision. The new Government continued with the previous Government's planned spending reduction in local

authority housing, but at the same time, they promised an increase in local authority housing investment over a six year period, incrementally releasing £5 billion of accumulated capital receipts from the sale of council houses (Mullins & Murie 2006).

Kemp (1999) suggests that whereas the Conservative Government of 1979 rushed to legislate for changes in housing policy, New Labour opted for a series of Comprehensive Spending Reviews. Prior to the spending review, there were also policy changes. The first of which was to '*restore a safety net*' for families and the homeless with local housing authorities to give reasonable priority to families and homeless in the allocation of housing. The second significant move was the change from CCT to a '*Best Value*' concept.

### **2.2.2.1 Best Value**

Best Value (BV) was introduced under the 1999 Local Government Act and came into effect in April 2000. BV imposed a duty upon local authorities to deliver and continually improve local services to clear standards covering both cost and quality by the most economic, effective and efficient means available. BV covered a broad range of activities and included all local authority functions and services such as housing services, social services functions, environmental health, and town planning. In implementing these duties Local Authorities were required to be accountable to local people, but were also to have responsibility to Central Government in its role as representative of the broader national interest and as a supplier of funds.

BV, based upon the framework of '*Twelve Principles of Best Value*' was piloted on a voluntary basis by 37 Local Authorities, 22 of which had housing responsibilities. The purpose of the pilots was to test elements of the BV framework and also to assess the extent to which actual improvements in service quality and efficiency flowed from the new approach (DETR 1997a).

In essence, the rationale behind the adoption of best value BV emphasised three points: the failure of CCT; the importance of partnership in service provision; and the adverse effect of competition as a prime objective.

While the CCT was unambiguous as to what was required - issue of tender, receipt of tender, selection of providers – the BV approach proved more difficult to define. The notion of BV prior to its implementation was incorporated within a single key consultation document: *Modernising Local Government - Improving local services through best value* (DETR 1998).

The BV approach was less prescribed than the previous CCT framework, with the intention that local authorities follow a responsive and locally determined method of service provision within a centrally defined framework. BV was not about what local authorities should do, but rather it was a framework that prescribed how they should decide what to do. Furthermore, according to Boyne (1998) BV differs from CCT in three particular respects: organisation performance, organisation process and the relationship between process and performance.

#### **2.2.2.2 Decent Home Standards**

In 2000, the Government produced the first comprehensive review of housing in twenty-three years, a Green Paper titled *'Quality and Choice: A decent home for all'* (DETR 2000). The paper identified three major housing challenges; firstly to improve the conditions of, and provide opportunity for the minority who face severe problems; secondly to reduce the difficulties encountered when selling and buying a home and thirdly to do so without undermining and impairing what was perceived to be a successful system. Mullins and Murie (2006) claimed that this Paper was more notable for continuity than any revolutionary changes it proposed. One of the main policies adopted from the Paper was in relation to the provision of decent homes; a new fitness standard that all social housing had to meet by 2010 and later extended to 2012. This policy was supported by changes to the Housing Benefit system and choice based lettings. The intention was to give households a greater incentive to optimise their standard of housing and avoid a *'take it or leave it'* approach.

##### **2.2.2.2.1 Definition of Decent Homes Standard**

A Government Spending Review endorsed the proposals set out in the Green Paper *'Quality & Choice'* in July 2000 and described the target for England and Wales as being to:

*'Ensure that all social housing meets set standards of decency by 2010, by reducing the number of households living in social housing that does not meet these standards by a third between*

2001 and 2004, with most of the improvement taking place in the most deprived local authority areas' (DETR 2000, p.53).

To be able to deliver Decent Homes (DH), social landlords were required to quantify the level of non-decent properties in their housing stock, invest in a strategy to meet this, and monitor their progress towards making all of the noncompliant properties decent by December 2012. According to McCarthy (2003), the Decent Homes Standard (DHS) addressed the issues associated with an ageing housing stock in the UK, and also, through the standard, the housing and health links. With properties that meet the minimum standard generally present no problems. Some properties are old but in good condition and other properties may be in poor condition but not old and either way these properties may not fail the standard. However, these properties will deteriorate unless essential maintenance is planned and implemented; therefore, there is a clear issue for the future management of the housing stock as an asset.

#### **2.2.2.2.2 Decent Homes Criteria**

ODPM (2000a) defines DH as one which is '*wind and weather tight*' and '*warm and has modern facilities*'. A general description of what constitutes decency was necessary to ensure consistency between social landlords in interpreting and applying the standard. According to the ODPM (2000a), a decent home is one which meets the following four criteria:

- i. It meets the current statutory minimum standard for housing. Dwellings falling below this standard are those defined as unfit under section 604 of the *Housing Act 1985* (as amended by the *1989 Local Government and Housing Act*).
- ii. It is in a reasonable state of repair - dwellings can fail to meet this criterion if either:
  - a. One or more of the key building components are old and, because of their condition, need replacing or major repair; or
  - b. Two or more of the other building components are old and, because of their condition, need replacing or major repair.
- iii. It has reasonably modern facilities and services. Dwellings, which fail to meet this criterion, are those that lack three or more of the following:
  - A reasonably modern kitchen (20 years old or less)
  - A kitchen with adequate space and layout
  - A reasonably modern bathroom (30 years old or less)
  - An appropriately located bathroom and WC
  - Adequate insulation against external noise (where external noise is a problem)
  - Adequate size and layout of common areas for blocks of flats
  - A home failing to meet two or less of the above is still classed as decent and therefore it is not necessary to modernise kitchens and bathrooms if a home passes the remaining criteria.

- iv. It provides a reasonable degree of thermal comfort - This criterion requires dwellings to have both effective insulation and efficient heating.

According to the ODPM (2000a) the application of the DHS carries some discretion, and social landlords should bear in mind the following:

- DH verses long term sustainability. Decisions on which homes to invest in must be made in the context of the long-term demand for the stock;
- Works need not be limited to the DHS;
- Failure to meet the DHS is a trigger for action; however, where tenants do not want the work or the property is to be demolished, work may not necessarily need to be carried out;
- Work should not be done against a tenant's wishes, and should be delayed until the property next becomes void.

It should be added that the term '*a reasonable degree of thermal comfort*' is very ambiguous and according to the National Energy Action (NEA, 2010) the recommended insulation standards are considered to be totally inadequate. Furthermore, there is:

- No provision for the improvement of properties that are not constructed with cavity walls or have no loft space.
- Decency Standard suggests that 50mm of loft insulation should be considered "*effective*".

This is despite the facts that some 20% of local authority properties have no external wall cavity to receive thermal insulation and that 35% of dwellings in social ownership have no loft space to insulate. Moreover, the current building regulations require the provision of external walls to comply with minimum 'U' values to reduce the heat loss in all properties and minimum levels of loft insulation presently set at a minimum of thickness of 300mm or equivalent, NEA (2003). The flow chart shown in Figure 2.1, shows a DH checklist to assist any housing organizations in implementing their strategy.

Tackling poor quality properties in low demand areas will generally resort to an issue of cost. This is especially the case when housing authorities are struggling to fund acceptable levels of repair and improvements to their dwellings in order to meet the Decent Homes Standard. According to HACAS Chapman Hendy (2004) case studies, social housing providers commented on the problems of funding, which had reached the end of its acceptable life expectancy. Questions were put as to whether investments should be expended at all, and if they were, could funding be secured given the limited market value of the property?

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Figure 2.1: Decent Homes Check List  
*Source: TAIT (2003)*

There is evidence to suggest that whilst some organisations are struggling to finance the DHS, many are of the opinion, that the standard is limited.

### **2.2.2.3 Large Scale Voluntary Transfers**

After 1988 Housing Act came into force the process began of Large Scale 'Voluntary' Transfer (LSVT) of council housing stock to housing associations. This process was necessary to improve the overall profile of the housing stock and the need for councils to separate their strategic housing function from their housing management functions.

Only three options were made available to local housing authorities:

1. Arms Length Management Organisations (ALMOs);
2. Private Finance Initiative (PFI);
3. Housing stock transfer – LSVT or Small Scale Voluntary Transfer (SSVT).

All three options involved the local authority separating its strategic housing functions from its housing management functions. A decision as to which option was to be pursued had to be taken in partnership with the council's tenants and the final decision signed off by the relevant government office for the region.

The ALMO is a not-for-profit company set up and owned by the council to manage and improve all or part of its housing stock. Central Government consent for an ALMO depends upon the production of evidence of in-depth consultations between the local authority with its tenants and majority support in favour of the adopted proposal. An ALMO board comprises one-third tenants, one-third council representatives and one-third independent representatives. The ALMO assumes responsibility for housing repairs and improvements, rent collection and dealing with rent arrears and the management of lettings. The council retains responsibility for the development of housing strategy, the administration of housing benefits and the formulation of policy on rents. Central government provides extra resources to councils towards the costs of achieving its DHS to councils that have set up ALMOs Housing Green Paper 2000 (DETR 2000).

However, under the PFI arrangement, it was also possible to raise the finance needed to support housing and neighbourhood regeneration activities through partnerships between public and private organisations. A local authority, for example, could enter into a contract with a private organisation and, during the specified contract period, that organisation would provide a service currently provided by the council. In turn, it might be possible for a council to secure private sector investment to improve or modernise run-down council housing in return for performance related payments for meeting agreed standards of service provision. The significant point here in terms of tenant involvement in housing matters, is the varying degree to which tenants would be able to influence the policies and actions of a private sector organisation investing in the maintenance or modernisation of council-owned housing.

The last significant regeneration initiative introduced by a Conservative Government, before leaving office in 1997, was the Single Regeneration Budget (SRB). The SRB initiative combined a number of central government programmes to encourage regeneration by simplifying provision of assistance in connection with regeneration activities carried out by local regeneration partnerships. SRB partnerships brought councils, tenants and other relevant stakeholders together to find ways to improve housing and local services in deprived

or disadvantaged neighbourhoods. The Conservatives placed greater emphasis on the benefits attaching to councils working with tenants and their representative associations, in order to obtain local ownership of decisions affecting housing or neighbourhood management practice.

LSVT is defined by ODPM (2000b) as a transfer involving more than 499 houses or flats. Transfers can be of an authority's whole stock or a part of its stock. LSVT involves the local authority in transferring the ownership of its stock with the agreement of its tenants. The key features of an LSVT are:

- Transferring tenants are offered benefits such as rent guarantees, stock investment programmes and rights as 'assured tenants';
- Transfer price is determined on the basis of 'tenanted market value';
- The new landlord must be a housing association if funding is to be secured;
- Transfers are funded entirely by the private sector.

SSVT are normally associated with a transfer involving 499 or fewer properties.

### **2.3 The main providers of Social Housing**

According to Reader (2004), social housing can be sub-divided into two main categories: traditional social housing provided by the local authority and those provided by housing associations. The local authority housing departments were often linked with Direct Labour Organisations (DLO) with the maintenance and repair being mainly carried out by the DLO. Under the Housing Act 1996, housing associations were classified as RSLs, rather than '*registered housing associations*' as defined under the Housing Association Act 1985. RSLs have always outsourced their maintenance and repair services.

Historically, local authorities have been major providers of social housing with the bulk of legislation being aimed at local authorities, particularly with regards to affordable housing and the improvement of housing conditions for low income families (Malpass 2000a). Table 2.1 summarises the total number of homes being managed by social housing providers:

Table 2.1: Number of Homes Owned and/or Managed by Each Organisation.

<b>Provider</b>	<b>Home Managed (approximate)</b>
Housing Associations	1, 900, 000
Local Authorities	1, 300, 000
ALMOs	800,000
Private 'for profit' sector	0 (possible since 2004)

Source: The Cave Review of Social Housing Regulation (2007).

### 2.3.1 Local Authority / ALMOS

Local authorities now play a reduced role as social landlords due to previous governments' efforts to de-municipalise housing. Local authorities are now seen as enablers as opposed to providers. They have evolved to take on a strategic role in addressing the housing need across all housing tenures. An array of housing and planning powers has been put in place in order to facilitate the delivery of this strategic role. Local authorities work with partners to guarantee the delivery of new affordable housing and to make appropriate and efficient use of existing housing stock. The following statement from a local government White Paper '*Strong and Prosperous Communities*' (DCLG 2006), best describes a local authorities, strategic housing role: "*The strategic role is at the heart of achieving social, economic and environmental objectives that shape a community and create a sense of place*".

The Housing Green Paper '*Homes for the Future*' (DCLG 2007a), identified five key strategic elements required by a local authority:

- To access and plan for the current/future needs of the local population across all tenures;
- To make the best use of existing housing stock;
- To plan and facilitate new supply;
- To plan and commission housing support services which link home and support services;
- To work in partnership to secure effective housing and neighbourhood management.

### 2.3.2 Housing Associations

Housing Associations in England and Wales are voluntary and independent non-profit organisations. In recent years, these have grown in importance in providing a wide range of housing, especially for low-income people and minority groups in housing need (Malpass 2000, p.16; Balchin and Rhoden 2002, p.228; Malpass and Murie 1999, p.149; Cope 1999,

p.26). In addition to rented housing they also provide opportunities for people on low incomes to become homeowners or part-owners. The Housing Associations Act 1985 describes a housing association as:

*'A society, body of trustees or company a) which is established for the purpose of, or amongst whose objects or powers are included those of, providing, constructing, improving or managing, or facilitating or encouraging the construction or improvement of, housing accommodation and, b) which do not trade for profit or whose constitution or rules prohibit the issue of capital with interest or dividend exceeding such rate as may be determined by the Treasury, whether with or without distinction between share and loan capital'* (The Housing Association Act 1985, S1; Cope 1999, p.26).

Housing Associations do not trade for profit and any surpluses arising from their activities are reinvested for social housing purposes (Maples and Murie 1999; Malpass 2000). Housing Associations can operate as either private limited companies or charities in which case they must have a charitable purpose, for example, providing for people in '*necessitous circumstances*'. Housing Associations operate under a regulatory framework laid down by Parliament and until recently were controlled by the Housing Corporation (HC). However, the HC ceased operation in 2008 and its duties were transferred to the Tenant Services Authority (TSA). The TSA are now responsible for the regulation of Housing Associations and the Homes and Communities Agency (HCA) are responsible for their investment. 'Housing Association' is the generic name for all social landlords not covered by local authorities (DCLG 2011). Due to an increase in social housing control, housing associations now have a wider role and responsibility beyond its core landlord function (Cave 2007).

Housing Associations in general have seen a change in their financial basis and the higher level of rents which had arisen in this sector are an important feature. '*Although modern non-profit housing associations emerged in the 1960s, 70s and 80s, their roles in that period tended to be rehabilitation of older, inner-city housing and provision of housing for special needs populations, roles that bureaucratic local councils could not play well or at all*' (Maples & Murie 1999, p.73-76).

Government policy evolved towards the expansion of the housing association movement so that it would acquire "*parts of the existing council housing stock... and become the main provider of new social housing.*" (Maples & Murie 1999, p.147). One major result of this expanded role has been the quantitative growth in the number and percentage of units owned and managed by RSLs.

Private financing and the Housing Corporation have pushed RSLs towards the adoption of a corporate style of organisation and management. According to Walker (2000 and 2001) these pressures have led to cultural changes within housing associations and the development of a commercial ethos, the adoption of a range of private sector management practices, customer focused strategies and asset and treasury management strategies in both new and traditional housing associations.

This approach seeks to maximise the internal efficiency of the organisation, however, like the profit-driven businesses, does so largely by externalising costs, imposing greater costs on workers, tenants and the public. Rent increases associated with private financing may cause lower income residents to leave resulting in a higher proportion non-working families on housing benefit thereby reducing social mix.

Housing Associations have moved rapidly to become a major provider of social housing and important consideration in the formation of housing policy. On the other hand, the roles of local authorities have moved from that of a provider of social housing to that of an 'enabler' in housing (Walker 2001).

These trends continued following the election Labour Government in 1997 and have also continued under the present coalition government. As a result of their increased importance, housing associations have taken on a wider role and responsibility extending beyond their core landlord function (Cave 2007). Furthermore, all social housing providers are now subject to audits, inspections, and performance measurement. Table 2.2 shows the total number of local stock transferred to RSLs during 1988 and 2005 was more than 900,000 dwellings.

Furthermore, both the Audit Commission (AC) and the Tenants Service Agency (TSA) make distinctions between the different types of social housing provider (Griffiths 2003; Thompson 1999). Regardless of the types of social housing provider, they are tied into a national rent restructuring system that was completed in 2012. Between them the older local authorities (now generally operating as housing trusts) and the newer housing association control almost 4 Million dwellings or 18 percent of the total housing stock (Hills 2007).

Table 2.2: UK Local Authority Stock Transfers 1988 – 2005



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Source: Mullins and Murie (2006)

## 2.4 The Role of Social Housing

Social housing organisations provide an essential function of which approximately 20 percent of households derive a considerable benefit and whose housing needs are unlikely to be adequately satisfied in the open market. Today the majority of social housing tenants are from lower income groups, contrasting with the position in 1960s and 1970s, where tenants represented a broader range of income groups. These figures would suggest that the need for social housing is as great as ever before. This situation is confirmed in Hills Report (2007, p.5) when he says *“what role should social housing play in 21<sup>st</sup> Century housing policy, is clear: there is no reason why social housing should not continue to play this vital role, and in considering policy change it benefits should not be put at risk.”*

## 2.5 The Tenants

The drive towards owner occupation has dramatically altered the nature of the social housing tenant. There is a strong correlation between a person’s economic status and household tenure, with the majority of today’s social tenants belonging to the lowest income groups, as illustrated in below in Figure 2.2.

The employment status of social tenants has changed over time, with a fall in the proportion of tenants being classified as ‘unemployed’, but with a significant increase in the number of tenants being classed as *‘other inactive’* or *‘permanently sick’* or *‘disabled’*. Social housing tenants are generally older, with 60 per cent aged 45 or over and 30 per cent aged 65 or over.

This is a stark contrast with the private rented sector, where 70 per cent of tenants are aged under 45, as shown in Figure 2.3.

There is a notable tenure difference between white and ethnic minority households. White households occupy 70 per cent of properties, whereas their counterparts, ethnic minority occupy 45 per cent of households. These figures suggest that ethnic minority families are less likely to own their own home than white occupants as illustrated in Figure 2.4.

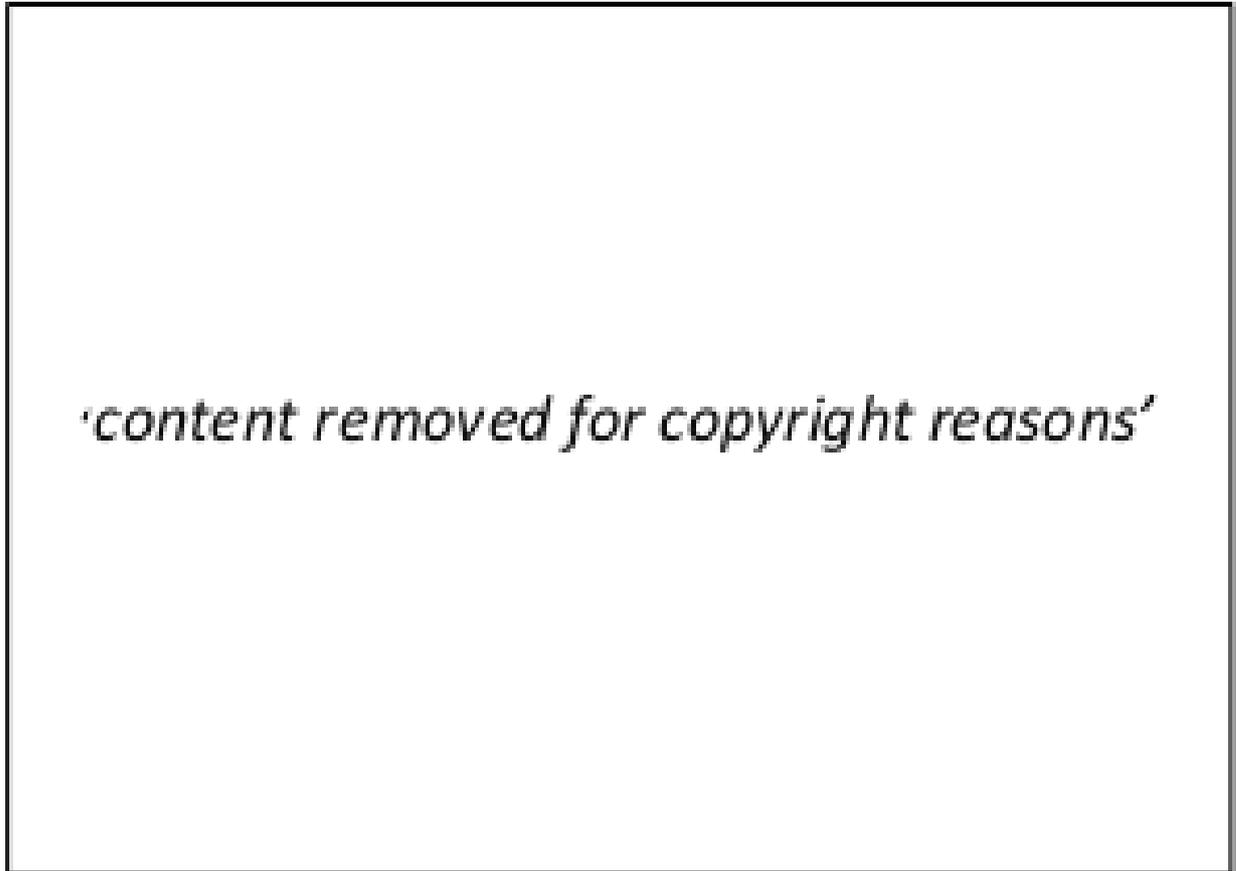


Figure 2.2: Social Employment Status 1981 and 2006.  
*Source: Hills (2008).*

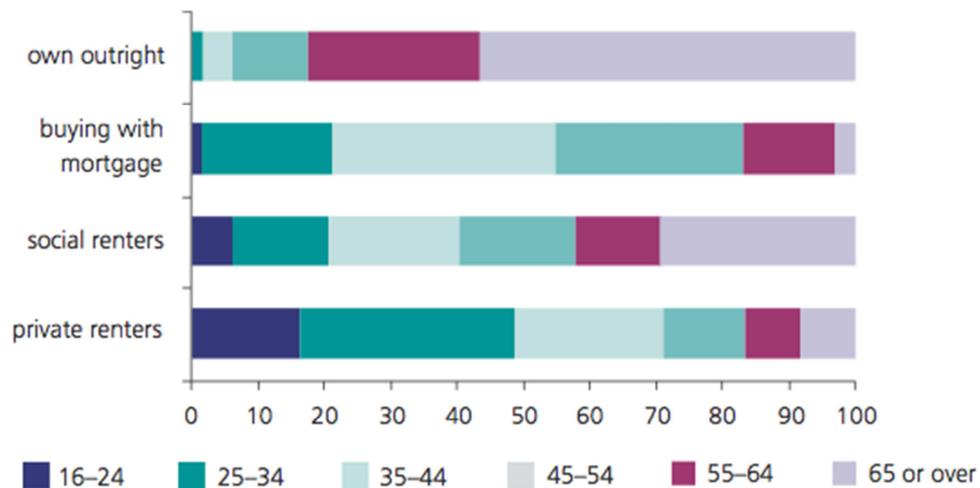


Figure 2.3: Distribution of Age within Tenure, 2008 - 2009.  
 Source: DCLG (2009a).

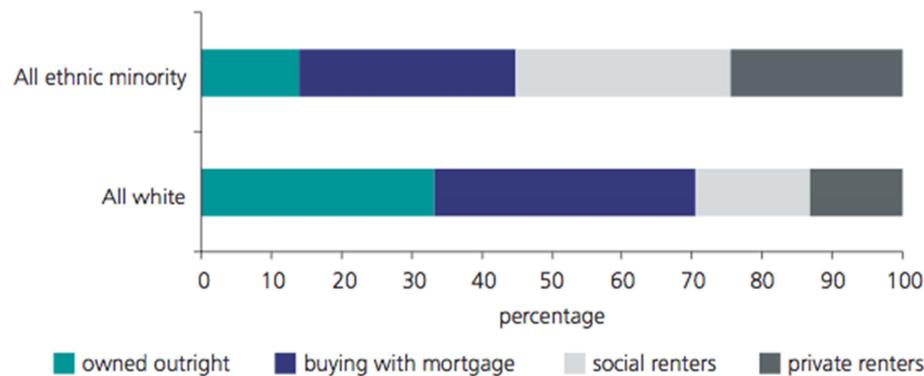


Figure 2.4: Tenure within Ethnic Group of Occupants, 2008 - 2009.  
 Source: DCLG (2009a).

## 2.6 Social Housing Regulatory Frameworks

The need to regulate social housing covers both consumer and economic issues. The government considers that the regulation should achieve the following outcomes (DCLG 2010a):

- A well-managed sector with housing of the appropriate quality;
- Appropriate choice and protection for tenants;
- The opportunity for a tenant to be involved in the management of their home and have the ability to hold their provider to account;
- Providers should offer a broad range of services, which have a positive effect on a community both socially and economically;
- Taxpayers should be protected - it is acceptable that they seek the efficient service that provides value for money;
- Private sector investment in the sector should increase and be correctly managed.

## 2.6.1 The Key Organisations in Social Housing Regulation

Although the regulation in social housing has revolutionised the whole social housing sector and further change is expected, as a consequence of, the Coalition Governments' Comprehensive Spending Review. The current regulatory system came into effect in 2010, where the previous government implemented the recommendations set out in the independent Cave Review. The principal suggestion was to establish a single regulatory system, delivered by a single regulator that is independent of government (Cave 2007, p.72): "A regulatory body should be established in statute, independent from Government, as the primary regulator of the ownership and management of social housing across the whole domain of social housing". Despite this independence, the Government still has defined matters for which it can issue directions to the regulator. Therefore, the current approach to regulation represents a hierarchical approach from government to service providers, as illustrated in Figure 2.5.

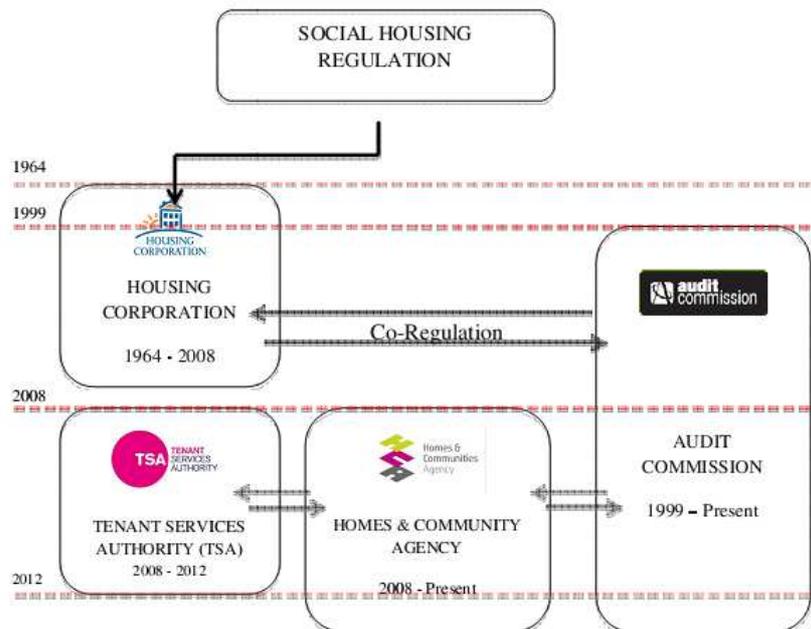


Figure 2.5: Hierarchical Nature of Regulation

Source: Researcher

## 2.6.2 Central Government

The Cave Review (2007) suggests that there are 2 key areas for which the government should have the power to issue directions to the regulator. The first of these relates to housing standards. The review argues that the Government must be able to establish the strategic

direction of the standard of housing. A recent example of this is the Decent Homes Standard. The second key area relates to rent levels. The review states that as rent levels can have a direct influence on the distribution of public expenditure, it is appropriate that the general outline of rent policy should be a matter for the government as opposed to the regulator. A recent example of this is the coalition governments attempt to raise affordable rents up to 80 per cent of the market value.

### **2.6.3 The Housing Corporation and Tenant Services Authority**

The Housing Act 1964 established the Housing Corporation (HC) and for almost half a century the HC provided regulation for social housing in England. However, under the Housing and Regeneration Act 2008, its regulatory responsibilities were transferred to the Tenant Services Authority (TSA). The TSA is the independent regulator of social housing, whose aim is to increase the standard of housing services through a well-governed sector that prioritises the need of the tenant. The TSA established in 2008 to regulate housing associations, but since 2010 the TSA has regulated other social housing providers, such as local authorities and ALMOs (Audit Commission and Tenant Services Authority 2009). Although independent, the Secretary of State can direct the TSA in relation to the quality of accommodation and rents.

In October 2010 Grant Shapps MP, Minister for Housing and Local Government announced the abolition of the TSA. A government White Paper, '*A Review of Social Housing Regulation*' (DCLG 2010b) outlined the following reasons for change:

- The Localism Bill: intends to refocus the role of central government by increasing the influence and accountability to organisation at a local level;
- The Comprehensive Spending Review: intends to reduce spending across government in order to respond to Britain's financial deficit;
- Reduction of the quangos: the coalition government's objective to reduce the number of quangos.

### **2.6.4 Audit Commission (AC)**

The Local Government Finance Act 1982 established the Audit Commission (AC) and it has since carried out work across local government, housing, health, community safety, and fire and rescue services. The AC is an independent watchdog, whose primary function is to drive the economy, efficiency, and effectiveness of public services to deliver better outcomes for

the public. The AC works in partnerships to assess public services and make recommendations for promoting a better quality of life for communities (Audit Commission and Tenant Services Authority 2009). The AC's strategic objectives include (Audit Commission 2006):

- To increase the standards of financial management and reporting;
- To ensure public services deliver value for money;
- To promote continuous improvement in public services;
- To increase the standards of governance and accountability.

As part of the Coalition Government's plan to bring greater transparency to government, Eric Pickles MP, Secretary for Communities and Local Government, announced plans to disband the AC. Ministers argue that the AC is too concerned with reporting upwards to the government and focuses less on ensuring accountability to the public. Eric Pickles stated (DCLG 2010c), "*The corporate centre of the Audit Commission has lost its way. Rather than being a watchdog that champions taxpayer interests, it has become a creature of the Whitehall state.*"

The move to abolish the AC has come under considerable scrutiny from the Labour Party, who claimed that without the service taxpayers would have little information about how much value for money their local services provide.

### **2.6.5 Homes and Communities Agency (HCA)**

Prior to its abolition, the HC was responsible for both regulation of, and investment in, social housing in England. However, under the Housing and Regeneration Act 2008, its investment responsibilities were transferred to the Homes and Communities Agency (HCA). The HCA is the national housing and regeneration organisation for England and a non-departmental public body. The HCA has a statutory duty to improve the supply of quality affordable housing in England. Their focus is on providing new homes through the Affordable Housing Programme and improving the condition of existing stock through the Decent Homes Programme. During the 2011-2015 spending review period the HCA was awarded a £6.8 billion spending budget for housing related programmes. The HCA also has a responsibility to contribute to economic growth. The 2010 White Paper, '*Local Growth: realising every place's potential*' outlined their role in ensuring that their investment delivers more than affordable homes by creating local employment and training opportunity for communities.

In September 2010, the HCA was included in the list of quangos under review for closure (Bury 2010). However, the Coalition Government confirmed that not only would the HCA be retained, it would also adopt the TSA's economic and consumer regulatory functions (DCLG 2010d). The model of investment and regulation co-located within one organisation was used previously by the HC. The Coalition Government believes that this will be advantageous in terms of generating efficiency savings and exploiting synergies across investment and regulation. However, the Cave Review (2007) identified a number of disadvantages with co-location of investment and regulation. The primary disadvantage is that policy pass-porting is something, which should be tightly controlled and not encouraged.

## **2.7 Approaches to Performance Management**

Evaluating the performance of social housing providers is a complex process due to the non-profit nature of the organisations. Unlike the private rented sector, RSLs are not attempting to obtain profits by meeting the demands of the market, but instead meeting the needs of people, who cannot compete in the market. This section will therefore examine the theoretical approach to performance measurement and the approach adopted by the TSA.

### **2.7.1 An Overview of Performance Measurement in Social Housing**

The meaning of 'performance' in the social sector is defined in terms of achieving the objectives of the social organisation (Gaster 1995). It is a matter of trade-offs between service providers and the demands of members of society. The AC (1986) states that performance in Local Government has 2 critical features: service efficiency and service effectiveness, but also need to adhere to equity, justice, and democracy. The notion of service efficiency and effectiveness relate to an understanding of public service delivery, whereby an organisation uses resources to produce services in order to achieve certain objectives, as illustrated in Figure 2.6. Kemp (1999) states that the service efficiency is the rate at which resources (inputs) are converted into service (outputs), while service effectiveness is the extent to which the services provided actually achieve the intended objectives (outcomes).

Performance on the other hand was taken to mean 'saving public expenditure' in the social domain (Leach & Percy-Smith 2001; Stewart & Walsh 1994). One definition of

'performance' is the 'economic acquisition of resources' by an organisation in achieving the purpose of the organisation (Rouse 1997). Nutley and Osborne (1994, p.118) suggested that *defining successful performance in the social sector is required to achieve the three Es in economic terms, and accountability in respect of social tasks.*

Kemp (1999) claims that this approach can be used to monitor the performance of housing management, as performance indicators can be developed. To apply this concept, service efficiency should be viewed as internal goals, while service effectiveness equates internal to external goals. In order to measure performance, the correct indicators of the outcome must be developed from the external goals of the housing organisation (Koopman *et al.* 2008).

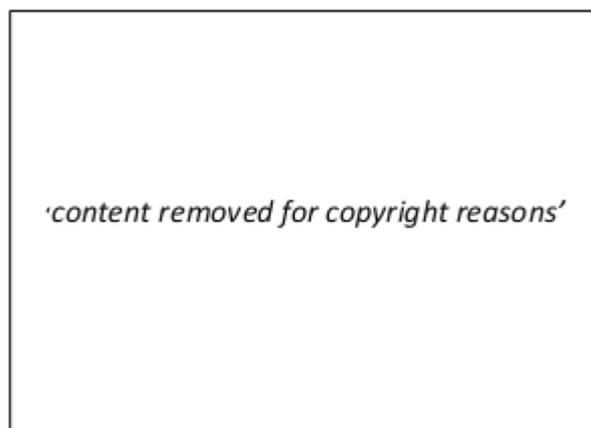


Figure 2.6: The Performance Process  
Source: Kemp (1995)

Performance management is concerned with the process for achieving the objectives of organisations in the social sector, through *'formulating'*, *'implementing'*, *'monitoring'*, and *'controlling'* organisational strategies intended to achieve better effectiveness by managing change (Thompson 1999; Rhodes 1997). 'Performance management' is not only a process, but also a way of trying to ensure the quality of the services being provided.

According to Figure 2.7, the virtuous performance management cycle has four stages of organisational activity. This is represented as *'plan-do-review-revise'*, within a framework where the various dimensions of organisational 'culture' are catalytic factors in the process of achieving change.

In performance management its important to have good technical skills and a supportive culture, if objectives are to be achieved effectively. It is said that the management of social

organisations are inherently ‘bureaucratic’, ‘incrementalist’, and ‘particularist’. A supportive culture, therefore, is essential to mitigate these characteristics.

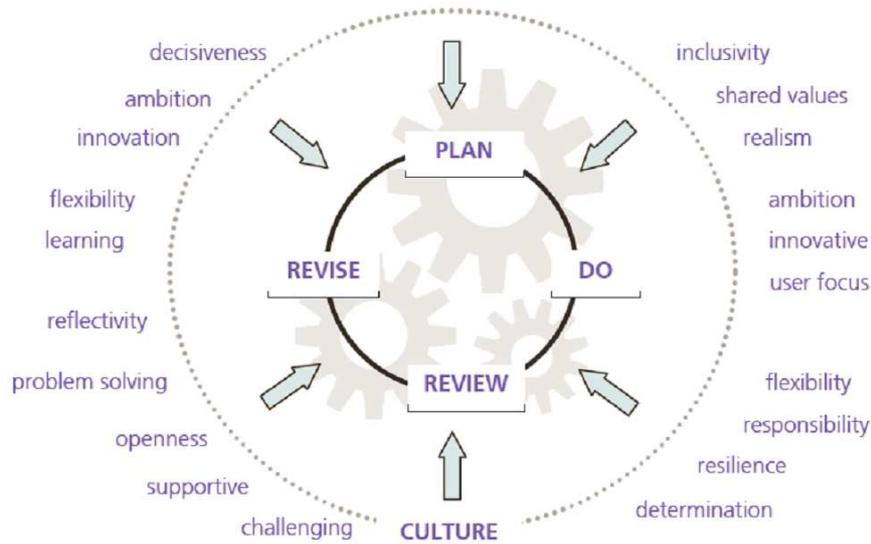


Figure 2.7: Performance Management Cycle  
 Source: Audit Commission (2006)

Measuring the performance of social housing providers will in essence be outcome driven (Mullins & Murie 2006). However, there remains a common consensus that not all outcomes can be measured (Paton 2003). Measuring the performance of RSL organisations requires both quantitative and qualitative techniques. For example, the quantitative score of a performance indicator reveals little without a qualitative explanation. Where the outcome cannot be measured, that outcome should be highlighted and described in a qualitative manner (Koopman *et al.* 2008). Kaplan & Norton (2001) suggest a new approach to the design of performance measurement systems, namely referred to as the ‘*Balanced Scorecard*’. It combines financial indicators (cost per task) and non-financial ones (customer satisfaction). Moreover, citizen participation and performance measurement are aligned together. It means that a feasible solution for a comprehensive performance measurement system is to involve citizens and their views in the evaluation process (Epstein 1992).

Measuring the performance of housing providers is the responsibility of the organisation itself. The approach adopted by the sector to regulate is the concept of co-regulation. Here the TSA sets outcome-focused standards that the housing providers must meet through robust self-regulation. In order to satisfy the TSA’s standards the providers must ensure continuous improvement. In order to ensure that performance measurement does not become an end in

itself a performance improvement framework should be developed, Figure 2.8. All seven stages are essential when creating a successful framework.

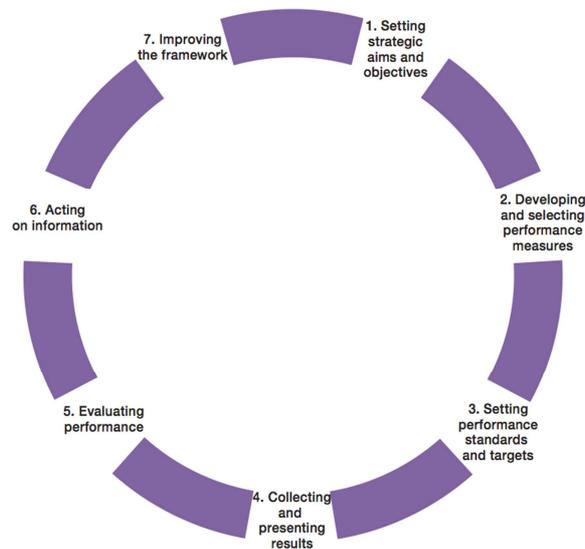


Figure 2.8: The Performance Improvement Framework  
*Source: DCLG (2007)*

## 2.7.2 Tenant Service Authority Approach to Regulation

The regulatory duties of social housing providers have evolved over recent decades due to numerous factors, including changes in government, influential reports and alternative models of thinking. During the 1980s the main purpose of the regulation was to secure value for money. This developed under the Labour Government to ensure that tenants received and appropriate service with resources deployed in an efficient way. The Cave Review's (2007) key recommendation was to establish a standalone regulator, independent from government, the TSA. The scope of the TSA's regulation now covers both consumer and economic issues. In order, to achieve these responsibilities the TSA created a new regulatory framework, which aims to be modern and effective, ensuring a fair deal for tenants and protect taxpayers. This framework will be explored in greater detail in this section.

### 2.7.2.1 Co-Regulation

TSA's current approach to regulation is built around the concept of co-regulation. The co-regulation sets clear outcome focused standards for housing providers and enforces robust self-regulation by the boards and councillors who govern the delivery of housing services.

This must incorporate effective tenant involvement and scrutiny (TSA 2010). Both the Coalition Government and Professor Martin Cave support the co-regulatory approach as the preferred method of regulation. The key elements of co-regulation include (Cave 2007; DCLG 2010c):

- The duty of appropriate service delivery is the responsibility of the provider, rather than the regulatory system;
- Providers are accountable to their tenants, not the regulator. Therefore, providers must ensure tenants have the relevant information to manage their homes and hold providers to account;
- Providers must produce a robust self - assessment of their own performance;
- The regulator should set clear outcome-focused standards, to be complemented by local offers agreed between the providers and tenants.

### **2.7.2.2 Standards**

The primary regulatory tool in the TSA system of regulation is standards. All social housing providers must ensure that they are meeting the obligations set out in the TSA's six standards, which have been designed to improve the services provided to the people living in social housing. The standards are defined in terms of required outcomes and expectations. The standards allow providers to dictate how they conduct and deliver services, which is a more flexible approach and is desirable to providers (TSA 2010). The TSA's approach to providing a quality service is not through national targets, but services that are discussed locally, between providers and tenants. The standards demand that providers are transparent and report on performance to tenants, and hold themselves to account. Where providers do not meet the standards, the TSA expects prompt self-improvement and where this is insufficient the TSA can enforce powers to ensure the tenant gets the service they deserve. To ensure that social housing providers are meeting the six standards the TSA monitors their performance (TSA 2010). The six standards are:

1. Tenant involvement and empowerment;
2. Home;
3. Tenancy;
4. Neighbourhood and community;
5. Value for money;
6. Governance and financial viability.

### **2.7.2.3 Risk Based Regulation**

Under the HC a common representation of housing associations was that the regulatory regime was too detailed and onerous. The National Housing Federation stated (Cave 2007, p.12), *“the overprotective nature of the present regulation allows weak governance to survive by undermining the primacy of Boards.”*

The TSA’s new regulatory framework attempts to minimise interference, resulting in a targeted, proportionate, and risk-based response. The Cave Review (2007) recommended that the regulator should only intervene where there is evidence of failure. A risk based approach enables all tenants to receive a good quality service. The TSA prioritises their focus on improving the standards of services for those tenants not receiving a good deal from their providers (TSA 2010). By concentrating on poor performers the TSA aims to focus their efforts where they are most likely to promote better outcomes for the tenants.

## **2.8 Measuring the Performance**

Performance measurement across the social housing domain has been subject to significant change. This includes the HC’s Regulatory Code, the role of the AC and recently the regulatory framework set out by the TSA. Murrie & Mullins (2006) contend that the establishment of the AC’s housing inspectorate was a significant symbol in an increasingly regulated state. This section will examine how performance is measured within the social housing sector, focusing on the activities of the AC and TSA. The main issues explored are previous approaches and the TSA’s approach to performance measurement.

### **2.8.1 Previous Approaches to Measuring Performance**

The Cave Review (2007) and the formation of a stand-alone regulator resulted in a significant shift in the methods used to measure the performance of social housing providers. The following section will outline the previous regulators approach to measurement, in order add context to the TSA’s methodology.

### 2.8.1.1 Housing Corporation

The HC operated a risk-based approach to regulation. By using a range of information, the HC identified risks or failures to comply with regulatory requirements. For large housing associations, it published Housing Corporation Assessments, which set out the extent of compliance with the regulatory framework using a ‘traffic light’ system. This illustrated overall assessment of the association’s compliance with the Regulatory Code and development performance such as:

-  A green symbol indicates no material concerns about performance; the association is either complying with the Regulatory Code or taking sufficient steps to comply with the Code within a reasonable timescale.
-  An amber symbol indicates some material concerns about performance; resulting in Corporation action above the minimum.
-  A red symbol indicates serious concerns about performance.

The Housing Corporation Assessment focused on the following areas:

**VIABLE** - Measuring compliance with the Regulatory Code part 1. Does the RSL meet the expectations set out in the Regulatory Code in terms of financial viability?

**PROPERLY GOVERNED** - Measuring compliance with the Regulatory Code part 2. Does the governing body, supported by appropriate governance and executive arrangements, maintains satisfactory control of the organisation?

**PROPERLY MANAGED** - Measuring compliance with the Regulatory Code part 3. Has the RSL generally met the standard expected given the context in which it works and the available resources?

**DEVELOPMENT** - Development with Housing Corporation funding. Is the RSL performance satisfactory? Does it deliver housing that meets the standards but has not met all targets over the past year? Is there a shortfall relatively small and was it caused by circumstances outside its control?

Where there was non-compliance the HC could put the housing association under supervision or intervene to ensure compliance.

### 2.8.1.2 The Six Standards

For over a decade the AC has assisted social housing providers in improving their service through audit, inspection and research. The AC has worked in partnership with both the HC and TSA in order to drive efficiency within the sector. In conjunction with the HC and TSA the AC has carried out over 1,400 social housing inspections (Audit Commission 2011). The primary method of measuring the performance of social housing providers is through inspection. Previously the AC routinely inspected all parts of an organisation in terms of:

- Void Management;
- Rent Collection;
- Repairs overall;
- Tenant satisfaction;
- Operating Costs;
- Stock transfer and energy efficiency

These inspections were based on Key Lines Of Enquiry (KLOE), which were introduced in 2004. According to AC (2006), the PI's are measured against the KLOE and these consist of six main variables:

- Access, customer care & user focus;
- Diversity;
- Strategic approach to housing;
- Making the best use of existing housing;
- Enabling the provision of more housing to meet the needs;
- Value for money.

KLOE documents were designed to provide a framework for inspectors to assess the effectiveness and efficiency of housing services and to inform their judgments. In essence, AC used KLOEs as a basis for analysing performance in terms of how good is the service and set annual targets to allow continuous service improvements. In evaluating the performance each RSL is awarded a label and stars for service inspections e.g. a best performing RSL is awarded the highest score of 4 and is rated as '*excellent*' 3 stars; score three is rated as '*promising*' performance with two stars; score 2 is classed as '*uncertain*' performance and is

awarded with 1 star; and the worst performing is awarded 1 score with zero stars – see Table 2.3.

Table 2.3: Assessment of Current Service

Score	Descriptors	AC labels and stars for service inspections
4	A service that delivers well above minimum requirements for users is highly cost-effective and fully contributes to the environment of wider outcomes for the community.	Excellent ★ ★ ★
3	A service that consistently delivers above minimum requirements users is cost-effective and makes contribution to wider outcomes for the community.	Good ★ ★
2	A service delivers only minimum requirements users is cost-effective, nor contribution significantly to wider outcomes for the community.	Fair ★
1	A service that does not deliver minimum requirements users is not cost-effective and makes little or no contribution to wider outcomes for the community.	Poor (Zero Stars)

Source: Audit Commission (2006)

### 2.8.1.3 Tenant Services Authority Approach to Measuring Performance

The co-regulatory nature of the TSA’s framework has ensured that social housing providers provide honest and robust self-assessment that is evidence based. Providers are also encouraged to utilise external validation and independent audit and peer review where appropriate. Providers must report performance against the six standards annually to their tenants to strengthen their accountability (TSA 2010).

RSLs are encouraged to complete a self assessment before an inspection as it allows the inspectors to focus and to guide the types of inspection activities they would carry out on site. This approach is extremely useful as it enables the RSL to reflect and review their practices by using evidence based service delivery. Where the evidence of a service is either weak or strong, the inspection team is able to vary the time that it needed to spend looking at that element of the service.

#### 2.8.1.3.1 Benchmarking

Both the Cave Review (2007) and the TSA regulatory framework acknowledged benchmarking as a key feature of provider self assessment against the TSA national

standards. Benchmarking allows organisations to have access to information about how their services compare with those of similar providers. Benchmarking data can be broken down by service and activity, which is more useful and comparable than auditing when attempting to identify potential efficiencies (HouseMark 2011). Providers are able to compare data through HouseMark, a membership-based organisation, which assists providers in improving their performance and achieving value for money. Comparisons can be made through CORE (Continuous Recording System) a benchmarking service that is available online and allows members to compare their costs and performance with any group of customers that they select (HouseMark 2011).

### 2.8.1.3.2 Performance Indicators

The development of appropriate performance indicators is essential when creating a performance measurement framework. However, measuring the performance of social housing providers is difficult as organisations achievements are difficult to quantify and monitor. The best method of measuring performance is through both quantitative and qualitative techniques. However, it is common for the majority of performance indicators to be based on quantitative data as it is easier to collect. This suggests that shortcuts are taken when measuring performance, as the most appropriate method of data capture may not have been applied.

Social housing providers are expected to provide information each year on performance indicators in key areas of service delivery. The 2010 performance indicators are tabulated in Table 2.4.

Table 2.4: Key Performance Indicators 2010

Key Performance	Indicators
Tenant Satisfaction indicator	<ul style="list-style-type: none"> <li>• Satisfaction with landlord services</li> <li>• Satisfaction that views are taken into account</li> <li>• Satisfaction with repairs and maintenance</li> <li>• Satisfaction with the quality of newly built homes (optional)</li> </ul>
Asset condition and void indicators	<ul style="list-style-type: none"> <li>• Social housing stock failing the Decent Home Standard</li> <li>• Average SAP rating of self contained general needs dwellings</li> <li>• Social rental dwellings vacant 31<sup>st</sup> March</li> </ul>
Housing Management indicators	<ul style="list-style-type: none"> <li>• Re-let times for all social rental stock</li> <li>• Rent arrears (gross) of current social housing tenants</li> </ul>
Shared Ownership Indicators	<ul style="list-style-type: none"> <li>• Shared owners' satisfaction with services provided</li> <li>• Shared owners' satisfaction with sales process (optional)</li> </ul>

Source : TSA (2010)

### **2.8.1.3.3 Ensuring Compliance**

The TSA base compliance using the following information: annual reports, performance outcomes promised to tenants, existing information sources, analysis of complaints, external validation, negative assurance, inspections and requests for further information (TSA 2010). Much of the data collected is not comparable across all providers and some data sets suffer time lags. However, when the data is combined with other information and used intelligently it can support the improvement of services. The following section will explore annual reporting and inspecting in greater detail, in order to provide an insight into the key methods of measuring performance.

### **2.8.1.3.4 Inspection**

The Housing and Regeneration Act 2008 enabled the TSA to inspect housing providers in respect to their performance. A major shift in the regulatory framework is the move towards a reactive model of inspection that focuses on compliance rather than comparisons. The inspection will now be targeted and completed at short notice where the TSA has grounds to believe a provider is not maintaining the standards. This method of inspection has been criticised after it was revealed that not a single housing inspection has been requested for almost a year. Critics believe that the absence of inspections may result in tenants receiving diminished services, as James Tickell, director of Campbell Tickell consultants commented (Cooper 2011, p.53): *“It is going to be much easier for local authorities and housing associations to get away with mediocrity.”*

The Coalition Government is committed to seeking local solutions and efficient approaches to regulation resulting in a change to the arrangements for inspection. From July 2011 under Section 193 of the Housing and Regeneration Act 2008, the AC will retain the right to first refuse on inspections commissioned by the TSA. However, if the AC declines the TSA may arrange other organisations to carry out the inspection. This change to inspection procurement means that social housing providers will no longer utilise KLOEs during inspections (TSA 2011). Both the Cave Review (2007) and the Localism Bill 2010 (DCLG 2010a) appear to have been an influential factor in this change. The regulator has been advised to seek solutions locally, between providers and their tenants, rather than through national targets.

Inspections under the new regulatory framework will be bespoke, as research has concluded that comprehensive inspections i.e. KLOEs are of little value. The new methodology will require the TSA to establish a bespoke brief requiring the inspector to investigate specific concerns about a provider's compliance with the standards. The brief will be discussed with the provider prior to the commissioning of the inspection in order to provide greater transparency. Once the inspection is complete the Act requires that the appointed inspector to produce a report on areas of concern.

The Localism Bill 2010, limits the circumstances when the regulator may use its monitoring powers in respect to consumer matters (DCLG 2010a). The TSA will then only be able to exercise its powers to inspect when (TSA 2011, p.9): "*There is reasonable grounds to suspect there has been – or that there is a risk of - a breach of a standard(s) resulting in serious detriment to tenants*". This suggests that there may soon be a need to remodel the regulatory framework to take account of any future changes proposed in the progressing Localism Bill.

## **2.9 Challenges of Performance Measurement**

The existing performance management framework lacks the strength of an efficient and effective organisation required to support continuous improvement (Currie & Currie 2005). The existing system is overly reliant on KLOEs and PI, which are now becoming outdated due to the economic challenges imposed upon the RSLs to move towards commercialism. The concept of performance management is not new, its use as a business tool is long established, and is not a new concept in the social housing sector. The Audit Commission (1992) highlighted the issues faced in the social housing sector over fifteen years ago and according to Currie & Currie (2005, p.11) the main differences between fully private and fully public service organisational models lies in the:

- *Goals (Profit vs. Not for profit);*
- *Accountability (Shareholders vs. 'the public');*
- *Risk taking (Low vs. Higher).*

Furthermore Currie and Currie (2005, p.15) suggests that *most performance management models are as applicable to the social rented sector as they are in the private industries*

*where they were first developed. Renewed focus on performance management in the public sector is the result of government agendas and policies that are collectively known as the “New Public Management approach”. These include some of the following initiatives: Best Value, Modernising Government Fund, Single Regulatory Framework*

### **2.9.1 Performance Management Framework**

Despite of the well resourced literature available on this topic (Henderson-Stewart 1988; Rogers 1990; Hatry 2007; Hatry *et al.* 1994; Williams *et al.* 1994; Neely *et al.* 1995; Rouse 1997; Sanderson 2001; Grizzle 2002; Moullin 2003; Yang & Holzer 2006; Knapp 2006; Micheli & Kennerley 2007) and numerous other researchers continue to develop new focus groups. The literature, however has no clear definition as to what a comprehensive performance management system is, or should contain. The lack of any concise definitions makes it difficult to determine exactly what is, and what is not performance management (Stewart & Walsh 1994). However, performance management is much about adopting a set of values and embedding a particular organisational culture as it is about the use of a system, model, process or framework. Fully realised, performance management is a holistic process, bringing together many elements, including learning and development (DCLG 2007a). Mackie (2008) indicates that performance management integrates the management of organisational performance with the management of individual performance. Currie & Currie (2005) confirm that performance management is rather complex and can be easily misunderstood and often includes measurement of activities and management of staff. This implies that the performance management system must be very comprehensive allowing integration of staff roles and responsibilities and overall corporate objectives of the organisation. In order for a performance management framework to be effective is essential that it evolves over time.

### **2.9.2 Making Performance Management Work**

Various researchers (Kemp 1999; Tam *et al.* 2000; Currie & Currie 2005; Jones & Cooper 2007; Lam 2008; Sharp & Jones 2006) in their work on developing effective social housing systems identified the following key critical success factors that need to be considered for designing effective maintenance and performance management systems:

- Strategic and service planning;

- Performance indicators and target setting;
- Customer feedback;
- Performance reporting;
- Accreditation and quality schemes and tools;
- Benchmarking and peer review;
- Service procurement/contract management.

## **2.10 Performance Evaluation of Housing Maintenance.**

A housing maintenance management system must have a means of evaluating the effectiveness of its policies and strategies. Thus, in formulating maintenance policies and strategies, there is a need for performance indicators to be provided. The international quality assessment standard ISO 9001 (clause 4.10) requires maintenance performance assessment (Amaratunga *et al.* 2000).

Atkinson *et al.* (1997) stated that performance measurement serves three basic functions, which are to co-ordinate, to monitor and to diagnose. One means of evaluation is to compare the actual state of the buildings in the housing stock with the state desired by management. In this regard the condition survey data is essential in monitoring the effectiveness of maintenance policies and strategies. If the high expenditure on maintenance is not keeping a building in good condition, then management must find out the reasons why and take remedial action (Spedding 1990b).

Performance indicators are measures by which buildings can be assessed in terms of maintenance demands. Holmes (1990) has argued that for performance indicators to be effective, standards and levels of maintenance must be equal across the housing stock. This argument seems reasonable since buildings subjected to different maintenance standards and levels of maintenance cannot be judged on the same criteria. However, performance indicators may be used to assess the building in terms of maintenance demand

Various authors, including De Groote (1995), Pintelon & Puyvelde (1997), Arts *et al.* (1998), Tsang (1998, 1999) and Kutucuoglu *et al.* (2001) have published the commonly used performance indicators. Campbell *et al.* (1995) classified these indicators into three broad categories specifically designed for the manufacturing industry:

1. Measures of equipment performance; for example, availability and reliability;

2. Measures of cost performance; for example, operation and maintenance labour and materials costs;
3. Measures of process performance; for example, a ratio of planned to unplanned work and schedule compliance.

These measures were developed specifically for the manufacturing industry.

Traditionally, the most common performance indicators used in housing maintenance are cost per dwelling unit, cost per unit of floor area and cost per occupant. This, according to Pintelon & Puyvelde (1997), means that maintenance performance reporting is limited to minimum budget reporting. Such cost measures have been found to be inappropriate for determining the contribution of maintenance to the business success of an organisation (Tsang 1998). Another common technique is to adopt best practice benchmarking, which is a continuous process of measuring an organisation's products, services and practices against those organisations recognised as industry leaders (Camp 1989; Cooke 1996; Massheder & Finch 1998).

A more relevant performance indicator for housing maintenance is the level of user satisfaction derived by the occupants. Ngo (1990) expressed the view that as a building is an economic good or service rendered to its occupants, the market pricing mechanism can be used to measure the quality of a building as an economic commodity in terms of the level of user satisfaction. She added that the degree of user satisfaction is one of the indicators of the level to which a building has been maintained. This means that there is a direct link between user satisfaction and housing maintenance performance. Several other researchers, including Weidemann & Anderson (1982), Amole (1989) and Walters (1999) have supported this view. Weidemann & Anderson's (1982) study of the 1200 residents of a public housing scheme in the US found building maintenance performance as the third most important indicator of user satisfaction.

## **2.11 The challenges in Social Housing**

### **2.11.1 Stability of the UK Housing Market**

Despite a continual growth in population there has been a net reduction of over 0.6 million housing units available within the social rented housing sector over the past two decades. Hall & Gibb (2010), claim that such a reduction has been a contributory factor in the upsurge

in house prices and the volatility of the UK housing market. The Joseph Rowntree Foundation initiated a Housing Market Taskforce with a view to promoting policies that would reduce volatility within the housing market. The primary problem identified was how to deliver additional affordable dwellings at a time when public finances are constrained. The key areas that the task force considered to warrant further investigation include the improved use of public sector land, alternate sources of borrowing, rents and benefits reform, improving efficiency in the housing association sector and investigating other grant sources.

### **2.11.2 Waiting Lists**

There are currently 1.75 million households on social housing waiting lists, a 71 per cent increase since 1997, as illustrated in Table 2.5. The Government is presently attempting to find solutions to this problem through changes to tenure, the allocation of homes, building more affordable homes and bringing empty homes back into use (DCLG 2010b). However, Richard Kemp, vice-chairman of the Local Government Association, has observed that there is no long-term solution to this problem (BBC News 2011). The shortage of homes within the social rented sector may lead to the local authorities placing more households into private rented accommodation at a greater cost to the taxpayer. Richard Kemp (BBC News 2011) stated: *“No matter how imaginative we are, there isn’t the cash in the system to meet the needs... unless there is more money we can’t build houses.”*

### **2.11.3 Mobility**

According to Hills (2007) once tenants are within social housing accommodation the limits on their mobility appears to be tightening. Tenants in the private rented sector have more freedom/flexibility to move and take advantage of a job opportunity outside their area where as relocation for employment reasons, is seldom a priority factor in social housing allocation. Currently only 5 per cent of tenants within the social housing sector move each year, indicating current arrangements for mobility are inadequate (DCLG 2010b).

In the past housing mobility schemes enabled social tenants to relocate from their current area to other parts of the country under several initiatives, including the LAWN mobility scheme, the HOMES mobility scheme and the Seaside and Country Homes scheme. These schemes were originally introduced for economic reasons to encourage the mobility of labour and

skills between regions in response to changing demands. However, in 2006 due to poor performance, as illustrated in Table 2.6, the government terminated this type of schemes. Currently there are no national mobility schemes in operations, but, there are numerous independent exchange support services available (Wilson 2011).

Table 2.5: Number of Social Rented Houses.

Year	Number of Households on Waiting List
1997	1,021,664
1998	1,020,229
1999	1,036,751
2000	1,038,720
2001	1,039,265
2002	1,093,342
2003	1,270,675
2004	1,437,735
2005	1,547,280
2006	1,634,301
2007	1,674,421
2008	1,769,939
2009	1,763,140
2010	1,751,982

Source: DCLG (2011).

Table 2.6: Total Numbers of Moves Nationally Under Each Mobility Scheme.

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Source: Hills (2007)

#### 2.11.4 Overcrowding

The two statutory standards: the room standard and the space standard were introduced to provide adequate space within dwellings and to separate members of the opposite sexes above certain ages. Living in overcrowded accommodation can damage health and may disrupt a child's development. Due to an increasing demand for social housing and limited mobility tenants have a long wait for suitable property to become available and there are fewer new lets available for larger families. Current calculations suggest that approximately a quarter of a million households in the social rented sector are overcrowded. Concurrently, there are approximately half a million households in the sector who under occupy by two or more bedrooms (DCLG 2010b). It is suggested that improved management of the current social rented housing stock could significantly reduce the extent of overcrowding.

#### 2.11.5 Demography

The population of the UK is projected to continue to increase together with an increase the number of households as illustrated in Table 2.7 and Table 2.8. *'The Future of House Building'* (RICS 2010), suggests that most significance growth is to be expected in single person households, as illustrated in Figure 2.9. By 2033, the number of single people occupying dwellings is projected to increase by 45 per cent and the average household size will decrease by 7 per cent compared with 2011. The changing composition of household type can be expected to increase the strain on the housing system and raise questions regarding the type of dwelling provided in the future.

Table 2.7: National Population Projects (thousands)

Country	2008	2013	2018	2023	2028	2033
UK	61,393	63,498	65,645	67,816	69,832	71,623
England	51,460	53,332	55,252	57,209	59,051	60,715
Wales	2,990	3,056	3,137	3,219	3,290	3,347
Scotland	5,169	5,271	5,360	5,442	5,505	5,544
Northern Ireland	1,775	1,839	1,896	1,946	1,986	2,016

Source: Office for National Statistics (2011).

Table 2.8: National Household Projects (thousands)

	2008	2013	2018	2023	2028	2033
Numbers	25,359	26,674	28,098	29,474	30,773	31,696
Average Size	2.33	2.29	2.25	2.22	2.19	2.16

Source: Office for National Statistics (2011).

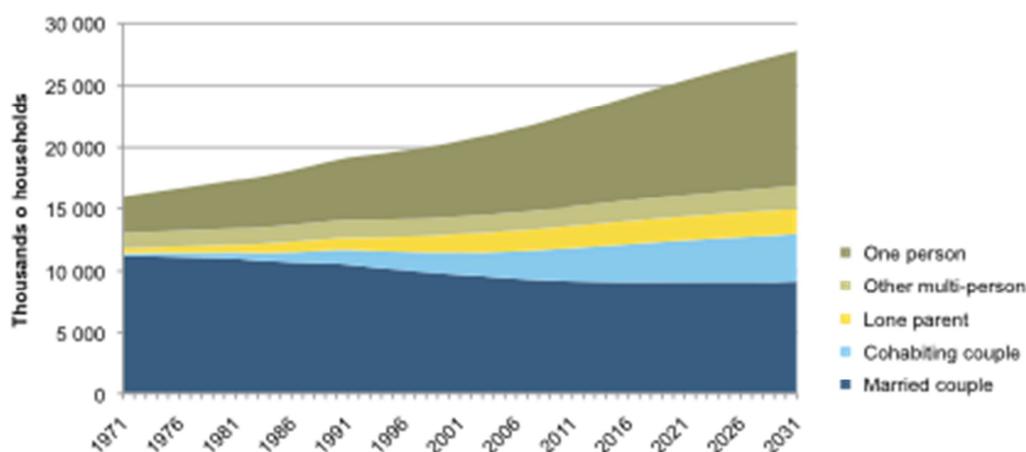


Figure 2.9: National Household Estimates and Projections (thousands).

Source: Office for National Statistics (2011).

### 2.11.6 Affordability

Housing affordability is a complex matter, which is influenced by numerous components, for example, demographics, earnings, interest rates and the availability of land (Doran 2013a). In 2007 Stephen Nickell, chair of the NHPAU commented (DGLC 2007b, p.11) “...*improving affordability prospects is not simply about building the right number of new homes, just as important is to ensure that we are building the right types of homes, in the right place, at the right time.*” Successive Governments have promoted the idea of a property owning democracy and have enabled social sector tenants to purchase the property through the Right to Buy scheme. However, there has been a notable decline in housing affordability over the last decade, with house prices increasing faster than earnings and the average age of first-time buyers rising. The Barker Report (2004) highlights the scale of unmet demand for social housing and recommended the construction of between 40,000 and 50,000 new social rented homes each year. The current level of new social rented dwelling completions is around 33,000 per annum and although this is a significant increase from 2004 levels, there remains a significant gap between the Baker Report targets and those being actually achieved.

Econometric models suggest that should social housing completions be maintained at the levels suggested in the Barker Report, this may reduce the probability of the house price to income ratio increasing in the future. However, construction on this scale is unlikely to lead to house prices becoming more affordable today (Hills 2007).

### **2.11.7 Supply of Lettings to New Social Tenants**

The level of new social housing building does not dictate the rate at which new households can enter the sector, as illustrated in Figure 2.10. Between 1977 and 2001, the construction of new social dwellings has fallen more than 100,000 units per year. Despite this fall, lettings for new social tenants have averaged 250,000 per year. This indicates that the turnover of existing dwellings, as tenants die or relocate, creates the most potential for people entering the social rented sector (Hills 2007). However, the number of lettings to new social tenants has reduced since 2000, due to the tightening of mobility between sectors and the social tenant population generally becoming younger.

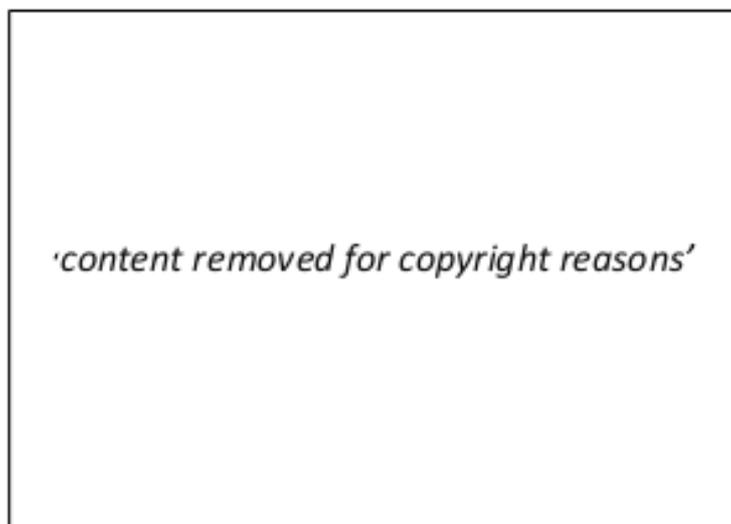


Figure 2.10: Number of Households Newly Becoming Social Sector Tenants in last year, and new social sector units.  
*Source: Hills (2007).*

### **2.11.8 Climate Change**

Lord Stern's (2006, p.1) suggested: "*The scientific evidence is now overwhelming: climate change is a serious global threat, and it demands an urgent response.*" In response to Lord

Stern's suggestion, the government has set legislative targets to reduce the UK's carbon emissions by 80 per cent, against 1990 levels, by 2050. The previous Labour government sets out ambitious plans for all new homes to be zero carbon from 2016 (DCLG 2009b). Collectively existing homes emit more than a quarter of the UK's carbon emissions. Therefore, it is essential that the government establishes similar plans for existing homes in order to achieve the reduction targets.

Social housing is the most energy efficient tenure, achieving average Standard Assessment Procedure (SAP) ratings 10 points higher than other tenures. However, in terms of Energy Performance Certificates (EPCs), over two-thirds of social housing falls within Bands D and E, suggesting there is vast scope for improvement (Energy Saving Trust 2009). The Decent Homes programme was the driving force for advancements to existing homes and resulted in improvements in the social rented sector. However, critics have argued that the programme did not go far enough and was a missed opportunity from an energy efficiency perspective. The Sustainable Development Commission (2006) recommends that government standards for social housing should include a wider range of resource efficiency objectives based on the proposed Code for Sustainable Buildings.

### **2.11.9 Current Reforms**

The 2010 Government Consultation Paper, *Local Decisions: a fairer future for social housing* initiated the Coalition Governments social housing reforms. The paper is critical of the previous governments' centrally controlled system and suggests a fundamental shift of power away from Whitehall, to local authorities and housing associations. The aim of the reform is to give Local Authorities and Housing Associations more flexibility and to drive down the waiting lists. Government ministers suggest that current allocation rules are unjust and despite huge investment in social housing over the past 13 years, waiting list numbers have doubled. Grant Shapps MP, Minister for Housing and Local Government commented (Conservative Home 2010): *"This out of date approach has seen waiting lists rocket and is unfair to people who genuinely need homes. They trap existing tenants in poverty, often in homes that aren't suitable for them. So the current system is ripe for reform..."*. The key reforms aim to overcome a number of the key challenges facing the social housing sector, such as changes to tenancies, allocations, mobility, affordability, tenant power and finance.

In 2010, the Coalition Government carried out a Comprehensive Spending Review to respond to Britain's deficit reduction plan as an urgent priority to secure the long-term economic stability of Britain. The cuts to social housing were severe. In 2010, the Chancellor announced a £4.4 billion investment in capital spending on housing over the next four years. This suggests that money for new social housing has been cut by a 60 per cent, down from £8.8 billion over the previous three year period (Shelter 2010). Many commentators argue that cuts at this scale and the proposed reforms will have profound implications for our communities. The National Housing Federation warns that, the average rent for a three bedroom social home could triple (Guardian Staff 2010). New tenancy reforms will require tenants who better themselves to move out of social housing or pay increased rents. This reform may lead to ghettos of deprivation, which is a stark contrast to the previous government policy, which encouraged mixed income communities.

## **2.12 Summary**

This chapter has outlined the revolutionary reforms in social housing that has been brought by a series of wave in legislation which changed the ways in which social housing is managed with emphasis placed upon efficiency, effectiveness and economics. The aim was to achieve efficiency through privatisation, reshaping of social housing and the introduction of performance-based management into traditional administration. This has led to major changes over past decades in which social housing was to be managed and funded through CCT and Best Values framework providing a value for money service delivery to tenants. Ultimately, this has resulted in the demise of local authority housing through voluntary stock transfer and a rapid increase of housing associations role in the provision of social housing. The regulatory bodies such as HC, AC, TSA have introduced several benchmarks and measures to ensure that all social housing providers conform to the continuous improvement delivery of the core services. However, due to economic climate, the present Government is imposing rapid changes in the manner in which social housing is managed. In compliance with the legislation, the social housing providers are now required to adopt private sector approaches in delivering housing services that are sensitive to their customers. In delivering the housing services RSLs are faced with challenges centred around their ability to transform from a public sector organisation to a private sector organisation. The question is whether the RSL have adequate capacity and skill set to deliver these changes.

# **CHAPTER 3**

## **A REVIEW OF MAINTENANCE MANAGEMENT IN SOCIAL HOUSING**

### **3.0 Introduction**

This chapter examines the core body of knowledge relating to maintenance management and its importance (in terms of the nature and scope) in the social housing sector. The chapter approaches, maintenance management by firstly providing an overview of maintenance management - its concepts and definition. Secondly, an overview of strategic and operational management is covered in general terms to establish a link to the various stages of building deterioration and maintenance. A key feature in this chapter entails appraisal of maintenance management system tools used in developing maintenance strategies within social housing.

### **3.1 Housing in National Context**

Housing is universally acknowledged as the second most essential human need after food and is a major economic asset in every nation (Foster 2000). According to Foster (2000), good quality, housing provides the foundations for stable communities and social inclusion. So & Leung (2004) have established a positive correlation between the quality of life and the comfort, convenience and visual appeal of houses. Van Wyk & Van Wyk (2001) suggest that the problems of housing, urban development and economic development are closely interrelated. Furthermore, housing has a huge potential to contribute towards providing people with 'the opportunity to live human lives' fully and contribute positively towards all aspects of development – psychological, social, economic, cultural and institutional, in the individual, community and societal contexts. Also at the organisational level, Shohet & Lavy (2004) are of the view that property (including houses) is an asset that, if properly managed, can add strategic value to the organisation. Against this background, the need to optimise housing resources and processes through improved management (including maintenance) cannot be over emphasised (Van Wyk & Van Wyk 2001).

To be able to develop effective maintenance policies and strategies it is important to have a clear understanding and appreciation of the concept, practice, and significance of housing

maintenance. The following provides an insight into the technological, managerial, and human aspects of housing maintenance.

### **3.2 The Significance of Property Maintenance in Social Housing**

Social housing maintenance management in the UK has become a key performance measure used by politicians, tenant groups, and RSLs in arguing for fairness and justice in the delivery of efficient public services. The Construction Industry accounts for over 5% of the UK's Gross Domestic Product (GDP); in fiscal terms, over £30 billion per year, making it one of the largest public sector service and revenue expenditure in the UK economy. Housing public service supports and enhances the quality lifestyle and livelihood of two thirds of the UK households; and which maintains the considerable asset value of the country's property stock, worth about £2,000 billion (i.e. 1.5% of GDP) at current prices ODPM (2003), equivalent to over half the nation's total wealth. However, in April 2013 social housing maintenance represented 1.7% of UKs' GDP (HCA 2012). Yet, because it is a 'diffuse operation', taking place incrementally through time, in many locations and by many different organisations, the scale and importance of property maintenance work is frequently undervalued in comparison with higher-profile and more visible new construction (Teo and Harikrishna 2005).

Property maintenance management is also a highly complex sphere of operation, involving the interaction between the technical, social, legal, political, and fiscal determinants, which govern the use of property (Lam, 2008a). Lam (2008a) also argues that it is increasingly true that property maintenance management is as much about providing a level of service to property users than about the property themselves. In this respect the modern maintenance manager will have to rely as much on knowledge of the managerial and social sciences as on the traditional technical knowledge base of property construction and deterioration. According to Wordsworth (2001) given the size and complexity of property maintenance management as an industry, it is perhaps surprising that its public profile as a profession and career remains comparatively low. This perception may change as a result of the new orthodoxies of health and safety, conservation and environmental protection, which may serve to focus and heighten the positive role good maintenance management may play in these areas.

Wordsworth (2001) also recognises that the condition and quality of property are fundamental components of the quality of life. The vast majority of social residents spends circa 95% of their time in or next to a property of one kind or another, so in this sense the built environment has become our *'natural and social'* environment. The condition and quality of property reflect public pride or indifference, the level of prosperity in the area, social or anti-social values and behaviour and all the many influences both past and present which combine to give a community its unique character. Wordsworth (2001) further explains that there can be little doubt that dilapidated and unhealthy property in a decaying environment depress the quality of life and contribute in some measure to anti-social behaviour and crime. Unfortunately, these social consequences are difficult to quantify on a balance sheet and as a result are rarely given proper consideration.

It is common for maintenance and business decisions to be based on political expediency, and over a period of time represents a series of *ad-hoc* and unrelated compromises between the immediate physical needs of the property and the availability of finance. There is a lack of precise knowledge of the benefits which accrue from different levels of maintenance expenditure. Little attempt has been made by RSLs to forecast the overall long-term effects of doing or forbearing to do work in this field. The reason may be that from the standpoint of the individual firm the amount spent on maintenance appears small in comparison with other operating costs (Teo *et al.* 2005; Al-Khatam 2003). But when viewed on a national scale it is quite clear that maintenance as an activity is key driver of public services management and local community importance.

### **3.2.1 Housing Maintenance Management**

According to DETR (2001) the principal aim of local authority housing management is to ensure that tenants enjoy a good quality of life via the provision of a range of services which meet their aspirations, and which represent value for money, all delivered in a manner which is consistent with the New Financial Framework and contributes to the pursuit of BV. Services must therefore be justifiable in terms of the fact that they enable the authority to:

- Meet its statutory obligations, including those involving the health, safety and wellbeing of its tenants;
- Support or comply with Government policy;
- Function as a provider of social housing;
- Ensure value for money;

- Mitigate the risk of disproportionate costs occurring in any part of the service, including the maintenance services.

Any service that is ultimately included in the cost matrix must score positively in respect of at least one of these criteria. However, the resources needed to deliver these services will vary considerably according to the circumstances of the local authority, a fact that must be reflected in any estimation of the need to spend. Housing management – like maintenance – can be planned or unplanned. However, there are some important differences that must be taken into account when formulating any management strategy Wordsworth (2001):

- All business management activities could in theory be part of a planned programme, however this would be very costly. It is therefore better value for money to deal with some activities on a responsive basis;
- Responsive housing management is needed to ensure prompt action to prevent situations deteriorating or incurring further expenditure.

That said, it is recognised that well-planned management will often result in a far more efficient use of resources (and hence expenditure) on responsive management *and* maintenance (e.g. a planned approach to void control can help reduce re-let times and reduce the likelihood of squatting or vandalism). Even with purely responsive tasks, basic prevention, timely intervention and clear procedures can save resources in the long term. Housing management is a wide-ranging subject, the limits of which are not easy to define. The research into the costs of local authority housing management carried out on behalf of the DETR (1999) concluded that *‘the development of a universally agreed, comprehensive, detailed and unambiguous decision support system in housing management is extremely difficult and unlikely to be wholly achievable’*. The following basic options for defining the scope of housing management are considered in turn, each building upon the previous:

### **3.3 Definitions of Building Maintenance**

Building maintenance can be defined as *“work undertaken in order to keep, restore, or improve every part of a building, its services, and surrounds, to a currently accepted standard and to sustain the utility and value of the building”* (Seeley 1997, p.2)

British Standard BS3811:84 defines maintenance as *“the combination of all technical and associated administrative actions intended to retain an item in, or restore it to, a state in which it can perform its required function”*

According to Wordsworth (2001) the definition of what constitutes building maintenance may seem at first sight self-evident, though on investigation, it can be seen that there are several areas requiring closer attention; for example, the boundaries between maintenance and improvement, or the question of whether maintenance applies to an object or to a function.

According to Thomas (2008), the Chartered Institute of Housing defines social housing maintenance as '*a combination of any actions carried out to retain a property in, or restore it to, an acceptable economic and habitable condition*'. The actions referred to in the above definition are associated with initiation, organisation and implementation. There are two processes envisaged: '*retaining*', that is to say, works carried out in anticipation of failure, and '*restoring*', that is to say, work carried out after failure. The former is usually referred to as '*preventive maintenance*' and the latter as '*corrective maintenance*' (Horner *et al.* 1997; Milne 1985; Wordsworth 2001). There is also the concept of an '*acceptable decent standard*' (DETR 2000). This may be construed as acceptable to the landlord paying for the work, to the person receiving the benefit (tenant/resident) or to some outside body with responsibility for enforcing minimum standards. It can also be construed more widely as acceptability to the public at large or to specific sections of the public. Clearly, there are no absolute maintenance standards which are equally acceptable to every social resident, or which would remain acceptable to the same group of tenants over a period of time (Shabha 2003).

Wordsworth (2001) suggests that the standards accepted at the time of undertaking the work may vary depending upon the initial design standards. In many cases the standard deemed acceptable is higher than that originally provided and the work would include an element of improvement. Wordsworth further argues that this interpretation is inconsistent with the phrase '*to retain or restore*', in that this would suggest the initial standard as the proper basis. However, buildings are often subjected to modifications over their life span to meet the ever changing user requirements and hence it becomes almost unrealistic to imagine in terms of *keeping or restoring* the initial standards.

In recognising the desirability of including a reasonable element of improvement, the CIOB (1990, p.7) offers the following definition: '*Work undertaken in order to keep, restore or improve every facility, i.e. every part of a building, its services and surrounds, to an agreed*

*standard, determined by the balance between need and available resources*'. This concept introduces an *'agreed standard'* which, from the general tenor of the definition, is assumed to be higher than the initial standard. In reality, however, there may be instances where building usage is lower and conversely lower standards may be acceptable. Within the definition there is reference also made to *'the balance between need and available resources'*, which is an important factor to take into account when fixing an acceptable standard. The effects on both the value in use and the value on sale or letting should be considered. There are difficulties in relating the value on sale to the standard of maintenance, in that the market value of property is determined by many factors other than a physical condition (Allan 1993; Wordsworth 2001; CIH 2002).

The resources component is extremely important and suggests that a sum of money is allocated for maintenance purposes that cannot be exceeded, even though to achieve an acceptable standard would involve greater expenditure. Hence the standard is determined by the allocated funds rather than as a result of assessing the benefits obtained from maintaining the building to a particular state. A more functional definition has been proposed by Allan (1993, p.7), *'maintenance is synonymous with controlling the condition of a building so that its pattern lies within specified regions'*. The word *'control'* suggests a positive activity which is planned so as to achieve a defined end result (Aris 2006). The term *'specified regions'* seems to have a similar meaning to *'an agreed standard'* and would be determined in a similar way. An interesting aspect of this definition is that it envisages a range of acceptability, with upper and lower limits between which the condition of the building must be maintained. Furthermore, the ranges of standards are defined as much by the use of the building as its physical state. The concept of a well-maintained building as an entity in its own right is then meaningless: a building is only well-maintained in terms of its current use and occupation (Allan 1993). If this changes over time, or through a change in ownership, the parameters of the acceptable level of maintenance will change in tandem.

However, there may be instances where a building is too well-maintained and remains in a better physical state than required. It could be construed as a waste if, following excessive expenditure, the buildings are under utilised. With this in mind many organisations, adopting a planned maintenance strategy, are beginning to suspect that their buildings are *"over-maintained"* to the detriment of funds for the core business activity. The key issue relates to delivering an acceptable level of maintenance, which should be targeted towards the

expectations, use patterns and resources of the controlling organisation (Chanter & Swallow 2007, p.19; HATC 2010). Maintenance should be regarded as a service provision directed towards the user rather than the attainment of a particular physical state of being in the building. Thus representing a balance rather than an absolute ideal (Wordsworth 2001).

ODPM (2003) states that the '*function*' of a local authority dwelling (the '*building*') is to help ensure that all sections of society have '*the opportunity of a decent home*' and to assist in delivering improvements in quality across all types of housing. This is a commitment set down by the Government in Quality and Choice: A decent home for all – The way forward for housing (DETR 2000). The role of social housing maintenance and management is to support this function and therefore it's important to appreciate the International Standards for Organisation standards (ISO) definition and its clear implication for the drawing of a distinction between building maintenance and management. The definition of maintenance can be wide and invariably cover all directly related management tasks.

According to ODPM (2003) there are many tasks that exist:

- As a precursor to any necessary technical activity (e.g. stock condition surveys, routine inspections, and dealing with tenants' requests for repairs);
- As a consequence of a necessary technical activity (e.g. inspecting completed works, authorising payment, and obtaining tenants' feedback on works that are carried out to their homes);
- To support the implementation of any necessary technical activity (e.g. keeping and updating building records or preparing the technical aspects of tenants' handbooks).

From the various definitions, the main objectives of building maintenance are (as summarised by Alner & Fellows, 1990, p.92) to:

- *Ensure that buildings and their associated services are in a safe condition;*
- *Ensure that buildings are fit for use;*
- *Ensure that the condition of the building meets all statutory requirements;*
- *The value of the building stock is maintained, and*
- *Maintain or improve the quality of the building.*

In general terms all the above definitions refer to technical and operational aspects of the maintenance function. This research, however, is associated with developing housing maintenance strategy and the places emphasis on RSL adopting a holistic approach when developing maintenance policy.

### **3.4 Legal Responsibility**

The owner or the occupier may be liable for any accident resulting from neglecting the safe keeping of the structure and or fittings. Generally, the legal duty of care is regulated by the following:

- Health and Safety at Work Act - a component should be maintained in an efficient state, in efficient working order and in good repair;
- Office, Shops and Railway Premises Act 1963 – minimum standards / provisions required to be met by all employers regarding their employees and the working environment;
- Occupiers Liability Act 1984;
- Landlord and Tenant Act 1985;
- The Environmental Protection Act 1985;
- The Housing Act 1985.

Achieving the stated objectives of the maintenance management process involves an interrelation between both the strategic phase and the operation phases. These will now be discussed. It is, however, worth mentioning at this stage that there is a dearth of literature on the operational aspects of maintenance management, whilst little has been researched on the strategic aspects of maintenance management.

### **3.5 Strategic Management in the Public Sector**

The processes of strategy development, in public sector organisations, were researched by Collier *et al.* (2001). The main findings suggest that public sector managers place more emphasis, than those from all other organisations on the enforced choice dimension of strategy development. More particularly they found that there was a lower emphasis placed in the public sector on the importance of the contribution to strategy development of senior individuals. Their survey (Collier *et al.* 2001) found that there were substantial differences between the public sector and other types of organisation in the process of strategy development, and confirmed that the public sector was not homogeneous in terms of the factors that determine strategy.

Although the research does not provide specific data or conclusions about strategy development in social housing sector organisations, the implications are that managers should recognise the reality of strategy development: *“Not only in the public sector, but in many private sector organisations, there have been traditions of equating strategy development and*

*strategic planning. However, it needs to be recognised that formal planning mechanisms are not necessarily the only way - perhaps not the most effective way - in which strategies develop” (Collier et al. 2001, p.30). Their analysis suggests that managers seek to undertake strategic management in different ways according to their different organisational objectives and their different contexts.*

Cital (2011) adopted a cyclical strategic planning process approach to strategic management and provides a linkage to the entire corporate business thereby ensuring continuous improvements (see Figure 3.1). Cital (2011), like many other researchers suggested that strategy is not simply a board function and the organisation should consider planning its horizons within the business environment and the constraints that it is subjected to.



Figure 3.1: Strategic Management Cycle  
*Source: adapted from Cital (2011)*

This effectively means understanding how the business operates (the strengths, weaknesses, opportunities and threats); understanding customer expectations and how best to deliver customer focused products or services; developing a series of objectives and action plans that is reflective of the organisation internal makeup and culture. These objectives are linked to the resources of the organisation from which a series of *key performance indicators* (KPI's) can be developed for monitoring output for improving performance. Cital (2011), takes a view that strategy must not only be practicable but also must be achievable. Peters (2007) concurs with this view that a

strategy must be viable and responsive to the business environment in which it functions. Peters placed emphasis on putting the people into the centre of an empowerment process of the right people having the right skill set to do the intended job.

### **3.5.1 Strategic Maintenance in Social Housing**

In social housing, the strategic objective of maintenance strategy is to ensure that the housing assets are retained at decent homes standard by the most economical means. Murthy *et al.* (2002) suggests that effective maintenance management requires a multi-disciplinary approach where maintenance is viewed strategically from the overall business perspective. The approach to strategic maintenance of assets consists of two key elements:

- (1) Maintenance management is a vital core business activity crucial for business survival and success, and as such it must be managed strategically;
- (2) Effective maintenance management needs to be based on quantitative business models that integrate maintenance with other decisions such as production (Murthy *et al.* 2002).

DERM (2001); Nieboer (2005) and Fryer *et al.* (2007) agree that a strategic planning and service plans provide the foundation on which to build a comprehensive performance management framework. Strategic is overarching in scope, not pre-occupied with day to day details, forward looking and planning for the future whilst keeping abreast of the present.

Strategic planning is considered extremely important and allows organisations to review their present position and identify where they want to be in the future and develop detailed plans on how they intend to get there. This is often achieved by developing the organisation's mission (vision) statements, goals, policies, structures and funding strategy. An Effective strategic plan allows the asset managers have a clear set of aims / objectives and direction of current operational activity. According to Aaker (1984) a strategic plan must be underpinned by sound strategic management where senior managers act strategically by taking responsibility for setting the direction the organisation faces in the future and by ensuring the organisation is equipped with the most appropriate structures, communication systems and delivery procedures to move from strategic planning to practical implementation.

Tsang (2002) also agrees that maintenance management is not simply looking after the structural fabric and the bricks and mortar, there is something beyond this in the real business world includes strategic dimensions of maintenance management of the assets. Tsang identifies four strategic dimensions which are listed below:

- Service delivery;
- Organisation of the maintenance function and the manner in which the tasks are carried out;
- Maintenance methodology – selection of maintenance policies;
- Design of infrastructure to support maintenance.

The strategy phase of maintenance management is illustrated in Figure 3.2. The strategic phase involves evaluating, as far as possible, the impacts of various maintenance strategies on the social housing provider as a whole. This includes evaluating the impacts of various maintenance delivery strategies and for certain facilities; this may also be addressed during the procurement phases.

Based upon the balance of costs and service levels, an optimised maintenance strategy will be developed which involves assessment of the life cycle costs of alternative options and the return on investment to enable maintenance to be configured for the optimised solution. This approach makes use of advanced analytical tools to model asset performance and simulates alternatives and will include projected maintenance costs for the next 5–10 years.

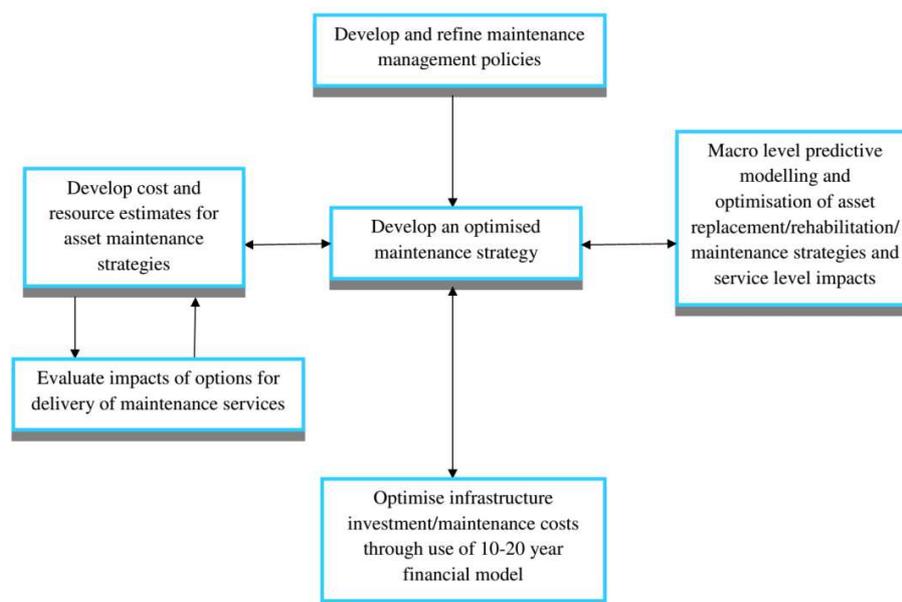


Figure 3.2: The Strategic Phase of Maintenance Management  
 Source: DERM (2001)

This optimisation approach will vary from one social housing provider to another, depending upon the availability of information and size of the social housing provider, such as the tenant type, their expectations of service delivery as well as the housing asset portfolio. For many organisations the initial approach may simply use a basic spreadsheet model(s) which rely on coarse data (tenant profile, tenant participation initiatives, surrounding neighbourhood, asset profile and decent home standards details) and projections. Initially the model outcomes will require a critical review by management and over time the model would be refined on the basis of real verifiable data. Through the passage of time, the asset management and supporting processes will become more established within a competitive environment, it is likely that optimisation of asset maintenance and renewal costs against service standards will become a critical asset management activity.

For a maintenance management system to be effective, it must be guided by sound policies and strategies. These policies will determine the maintenance standards to be adopted and the strategies will determine the modus operandi for the implementation of the maintenance plans as well as prioritisation criteria in works execution. The next step in the process is the monitoring and review of performance using appropriate performance indicators, as determined by policy and strategy. Finally, the performance must be reported by the asset / maintenance department to the board room. Figure 3.3 illustrates a typical maintenance management framework and the maintenance management process.

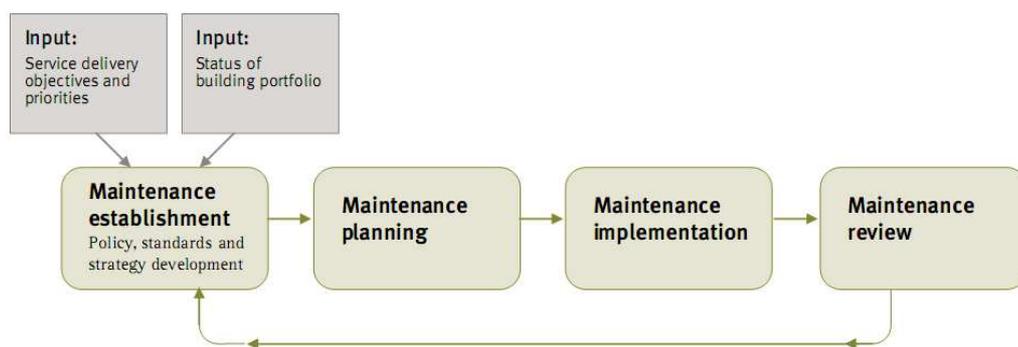


Figure 3.3: An Overview of the Maintenance Management Process  
 Source: DERM (2010)

According to the RICS (2012) asset management is the activity that ensures that the land and building asset base of an organisation is optimally structured in the best corporate interest of

the organisation concerned. For a social landlord, the overall aim is ensuring that the housing stock is able to meet the needs of the locality whilst ensuring best use of resources available.

The overall strategy (see Figure 3.4) is to ensure that the RSLs housing stock is sustainable in the long terms and Thomas (2008) suggests the following points need considerations when developing the strategy:

- Stock holding decisions made in relation to disposal of and to a lesser extent acquisition of stock and assets;
- Stock investment- how and where should finite resources be allocated to best meet wider strategic aims;
- Stock usage – how to maximise the utility of the asset base;
- Tenant participation – customer focused service delivery;
- Value for money – economical, efficient and effective provision of services;
- Housing management and support services.

According to Wordsworth (2001) the maintenance strategy will depend on:

- Direction set in the strategic phase;
- Level of importance of the asset (directly related to consequence of failure);
- Probability of failure of the asset;
- Availability of asset for maintenance;
- Recommended maintenance requirements; and
- Optimal environmental industry best practices.

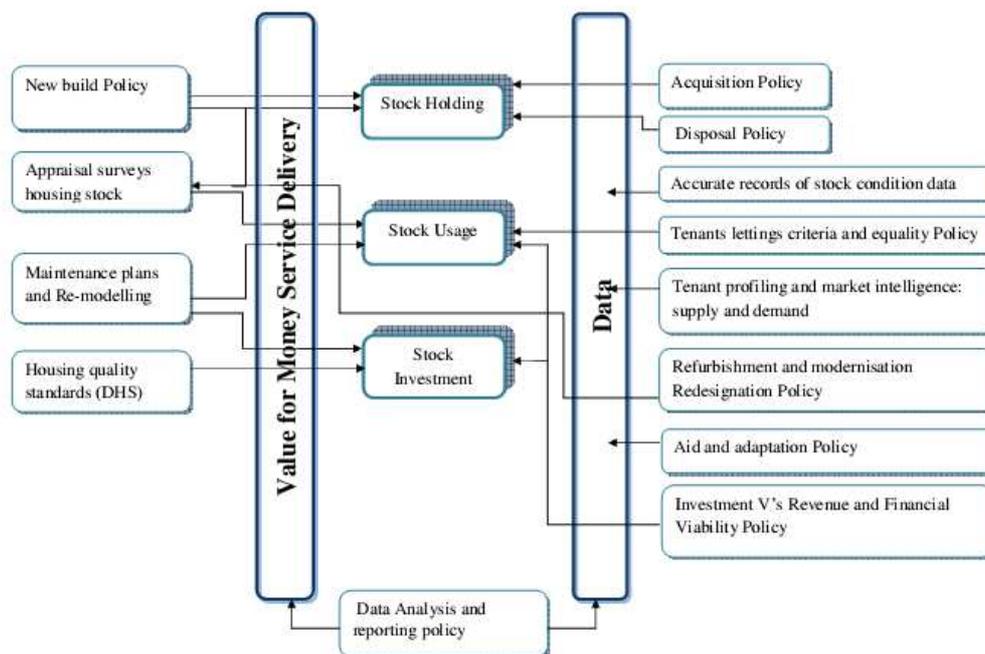


Figure 3.4: Housing Strategy  
Source: Researcher

This section has discussed the significance of the definitions of strategic maintenance management. In order to develop effective maintenance policies and strategies, it is important to understand and gain an appreciation of how maintenance strategies are implemented at the operational level. The following provides an overview into operational aspects of housing maintenance.

### 3.6 Operational Maintenance Policy

The operational stage of the maintenance system requires the development of management policy to implement the strategies developed during the strategy phase to ensure the housing stock is maintained to the required standard. One of the key tasks will be to simplify the scale and complexity of the repairs by developing a classification / prioritisation of the repairs. This will enable the operators of the operational policy to divert resources to the required repairs and is illustrated in Figure 3.5.

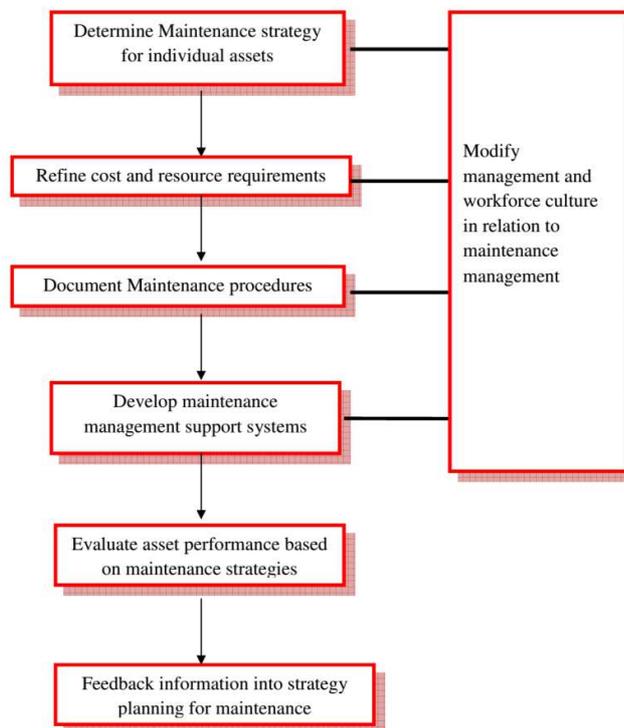


Figure 3.5: The Operational Phase of Maintenance Management  
 Source: adopted from DERM (2001)

The initial development of operational management policy will be an iterative process, requiring the balancing of resources and available budgets as determined in the strategic

phase. A number of tools exist to assist social providers develop appropriate operational maintenance policy for their assets. One of these tools is reliability-centred maintenance, a subject dealt with by a number of researchers (Pun *et al.* 2002; Coetzee 1999; Murthy *et al.* 2002). Essentially the process evaluates:

- The functions of an asset;
- Ways in which it could fail to provide the function;
- The causes of each functional failure;
- The effects and consequences of each failure;
- Options to predict or prevent failure; and
- Options for managing a failure.

Hassanian *et al.* (2003) confirmed that due to lack of coherent maintenance and asset management systems in the public sector, there is an urgent need to clearly set out the various stages that asset managers should follow when developing and evaluating housing stock portfolio performance.

### **3.6.1 Types of Maintenance**

The social housing directorates and asset manager have to develop strategies that assist them in deciding whether the identified activities are assigned as periodic maintenance at fixed intervals or carry out regular inspections or simply respond to user requests after failure has occurred (El-Haram & Horner 2002a).

The general definitions for the various forms of maintenance classifications are given in BS 3811 and are illustrated in Figure 3.6. According to BS 3811 (1984) operational maintenance includes developing:

- Planned maintenance;
- Scheduled maintenance;
- Condition based/predictive maintenance; and
- Unplanned maintenance.

There two broad classifications, namely Planned Maintenance and Unplanned Maintenance. Although this is not within the remit of this research to deal with any detail, but it would be imprudent not to consider problems generated within the complete maintenance framework.

### 3.6.1.1 Unplanned Maintenance.

Unplanned maintenance is also called *day-to-day maintenance* on *ad-hoc* basis (Vijverberg 2000; El-Haram & Horner 2002a), corrective maintenance (Tsang 1998 and Horner *et al.* 1997) breakdown maintenance (Organ *et al.* 1997, Tsang 1999) and reactive maintenance (Pitt 1987; Duffuaa *et al.* 1998; Duffuaa *et al.* 2000). Unplanned maintenance is the simplest type of maintenance, where a component / element in a building are used until it fails. The provider simply responds to the complaints of the users after failure has occurred (David & Arthur 1989; El-Haram & Horner 2002a) or failure has been detected during a regular inspection of the building (Antunes & Corvacho 2002).



Figure 3.6: Classification of Building Maintenance  
Source: BS 3811 (1984)

Because unplanned maintenance is associated with the correction of unexpected failures, according to Colen & Brito (2002), it has and almost is always an urgent character, which may lead to unavoidable extra costs (compared to planned maintenance). In reality, however, no maintenance strategy is totally unplanned. Even an unexpected breakdown of an item would require some form of planning of how to execute the necessary repairs to the required standard / cost. The term unplanned maintenance is thus misleading, as it does not correctly describe the phenomenon it purports to depict.

### 3.6.1.2 Planned Maintenance

Planned maintenance is also known as forward maintenance and is based upon the assumption that the service life of an element or component can be predicted with some degree of certainty and will involve forecasting of maintenance needs (Pitt 1987, 1997). The reality, however, is that maintenance cannot be totally planned because the failure prediction for a building component is not an exact science and therefore, planned maintenance is based on statistical evidence - information from suppliers or through experience. It is however not an exact science many variables such as weather and workmanship have an effect. Any plan requires regular updating, but an unforeseen breakdown or failure can occur requiring an unplanned maintenance response, Mirghani (2001).

Planned maintenance was introduced to overcome the disadvantages of unplanned costs associated with unplanned maintenance and to reduce the cost of inspection, repair and unplanned equipment down time (Mann *et al.* 1995). Planned maintenance may sometimes be referred to as '*forward maintenance*' and is based on the assumption that elements or components have a life span which can be predicted. This information allows to 'plan' to be drawn up forecasting maintenance needs with associated costs.

Planned maintenance can be broadly grouped into three types: time-based maintenance, condition-based maintenance (Duffuaa *et al.* 1998) and improvement maintenance (Colen & Brito 2002).

In time-based maintenance, maintenance tasks are performed on an item in accordance with a predetermined plan at regular fixed intervals, regardless of its actual condition (Saranga 2002; Tsang 2002). Such a strategy is based on the adoption of renewal cycles for certain items and frequently applies to external and internal painting (Horner *et al.* 1997).

Condition-Based Maintenance (CBM) is defined as "*Maintenance carried out in response to a significant deterioration in a unit as indicated by a change in a monitored parameter of the unit's condition or performance*" (Kelly & Harris 1978; Nezhad *et al.* 2007). Under the CBM concept, a change in condition and or performance is the primary reason for carrying out maintenance on an item. Thus, the optimal time to execute maintenance work is determined from a condition survey, which shows the actual state of each constituent item in

a building. In this approach, maintenance tasks are determined and planned by monitoring the building's elements such as walls, floors and roof, plumbing and electrical installations and other equipment to identify which element or piece of equipment requires maintenance before a major failure occurs (Horner *et al.* 1997).

Refurbishment means different things to different people, depending on their perspectives (Mansfield 2002). Thus, to a homeowner refurbishment could encompass everything from changing a light bulb to repairing the roof, while to a building contractor it is the gutting and reconstruction of an interior. In the investor's perspective, it is any improvement that leads to an increase in rental values while from a purely economic view, it is any investment designed to forestall the capital depreciation of a property. It is not surprising therefore that attempts by many authors (Bone 1987; CIOB 1987; Industrial Market Research 1987; Seeley 1985, 1997; Quah 1988; Wunderlich 1991; Aikivuori 1996; Egbu *et al.* 1998; Hardcastle *et al.* 1990; Vijverberg 2000) and many others, to provide an inclusive and concise definition acceptable to all have not succeeded.

Mansfield (2002) suggested that the most comprehensive definition so far is given by RICS (1998), which defines refurbishment as: *“The extensive repair, renewal and modification of a building to meet economic and or functional criteria equivalent to those required of a new building for the same purpose. This may involve the installation of current standards of building services, access, natural lighting, equipment and finishes, using historic fabric as the carcass of what is, effectively, a new building”*.

Against the background of this terminological confusion, Colen and Brito's (2002) view is that the general focus of all the different terms and perspectives is the replacement of existing element / components for others with better characteristics in certain service conditions. Thus, the overall purpose of the refurbishment is to extend the beneficial use of an existing building by providing a cost-effective alternative to redevelopment.

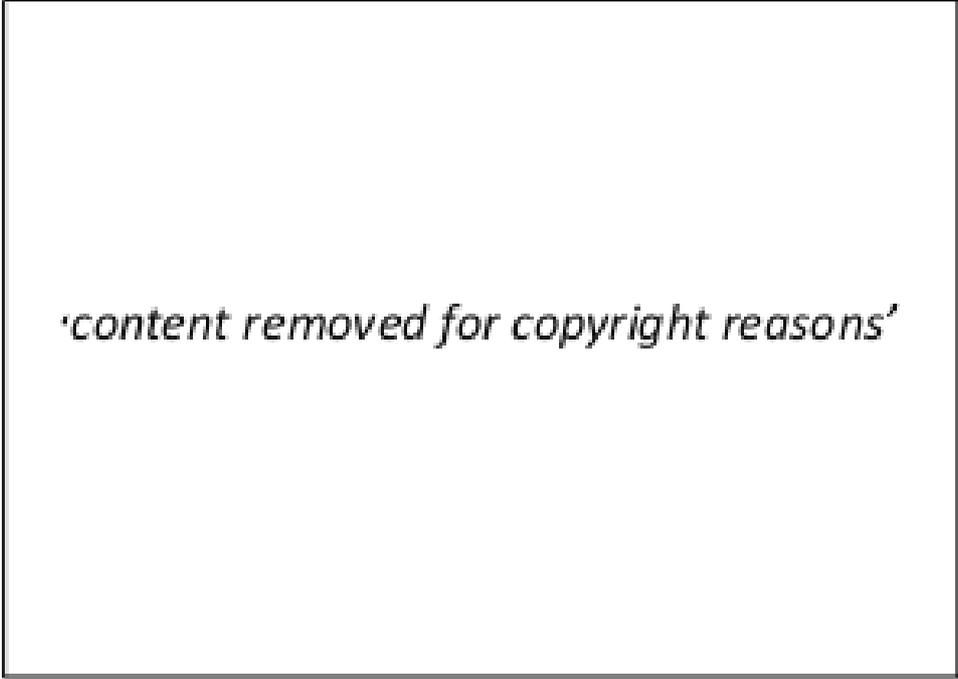
Each of the above three categories will contain two types of maintenance work i.e. Corrective or Preventative maintenance.

Corrective maintenance, also known as failure-based, unplanned maintenance or reactive maintenance (Pitt 1987; Duffuaa *et al.* 1998; Duffuaa *et al.* 2000) is the most basic strategy

involving merely repair or replacement of a building element once that element has failed. Since the strategy is an unplanned response to failure there are inherent disadvantages. Firstly, there can be secondary damage to other parts of the building as a consequence of the failure, which can in some cases be more costly to address than repair or replacement of the particular failed item. Secondly, failure can occur at a time, which is inconvenient for the owner and the user of the building.

Preventative maintenance, also encompassing time-based, planned or cyclic maintenance or proactive maintenance (Pitt 1987; Duffuaa *et al.* 1998; Duffuaa *et al.* 2000), can address some of these disadvantages. Being planned, the objective is to predict failure and thus avoid the emergency situation caused by sudden failure. The strategy which is carried out according to a predetermined plan has a number of advantages: maintenance tasks can be undertaken at more convenient times, maintenance should be more cost-effective and the risks to health and safety should be reduced since unexpected failure should be less likely. Furthermore, deterioration of the condition of the building should be minimised, maintenance operations are conducted in the most logical, and efficient sequence and the strategy provides a tool for financial management (Chanter & Swallow 2007). However, because planned maintenance anticipates rather than responding to failure, building elements may be replaced prematurely. In this respect, the strategy can be considered wasteful.

In order for the planned preventative maintenance programme to be successfully managed and implemented it will rely on the social housing provider developing a system of reporting and maintaining accurate data records for the issues as to What? How? When? Figure 3.7 illustrates a typical planned maintenance system.



*'content removed for copyright reasons'*

Figure 3.7: An Overview of Planned Maintenance Management System  
*Source: BS 3811 (1984)*

The successful maintenance operation has to take into account all 3 of the different types of maintenance as this will prevent repairs being undertaken just prior to any refurbishment of the dwelling house.

### **3.6.1.3 Deterioration Phenomena and the Concept of Maintenance**

There are many facets of building maintenance problems which have been researched over the past 4 decades (PSA 1976; Seeley 1985; BRE 1998; Carrillion 2001) to understand the nature, causes, effects and the remedies of building defects. Although this is an extremely interesting topic and will, often form part of the wider issues evolving around building pathology, it is outside the scope of this research in terms of examining the relationships between design detailing and workmanship. However, it suffices to say that there are a number of variables that interact together on a random basis and influence the incidence of defect occurrence. This is summarised in Figure 3.8.

It is clear from Figure 3.8 that there is a huge range of variables that have an impact on maintenance at any point in time and the inherent randomness in itself creates logistical challenges during the life of the building. The repair process is further exacerbated by the

manner in which defects are identified, reported, classified into a priority order and then the decision whether to repair or replace, given constraints on available budgets and the impact that it may have on minimum standards of fitness. Ultimately, the aim of any social housing provider is to preserve the functional utility of the assets to a level that satisfies the needs of the tenants (customers) and also the legal obligations of the social housing provider.

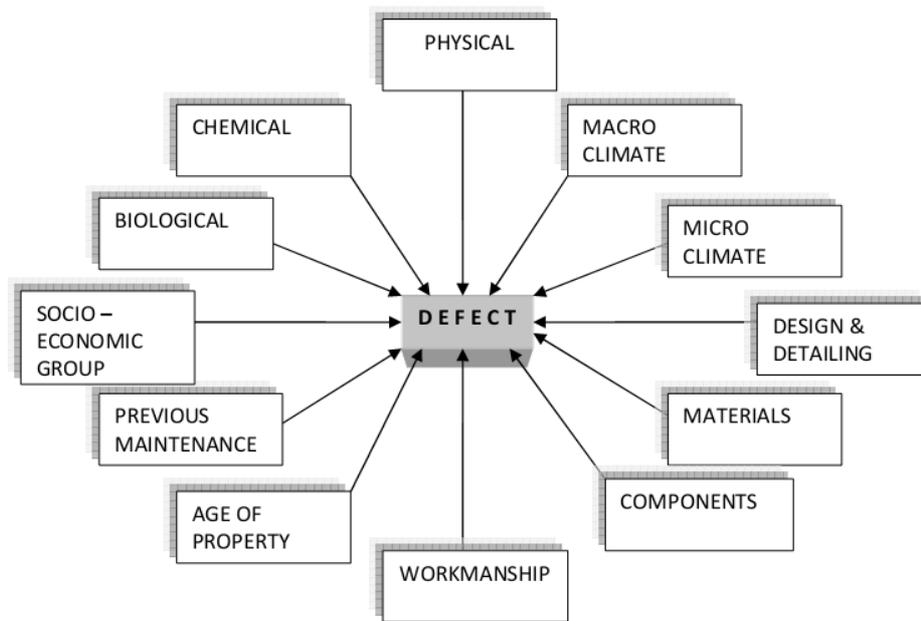


Figure 3.8: Agencies Influencing the Incidence of Building Defects  
 Source: BRE Digest 176

Some defects are simply cosmetically unacceptable whilst others seriously impair the function of an element of the building and the building as a unit, possibly even endangering “*life and limb*”. The procedures for identifying defects and classifying them into priority order for repair are the keys to the managers’ problem. The subjective nature of decision making as to when a defect has entered into a ‘limit state’ of unacceptability is a major contributor to maintenance management problems.

### 3.7 Critical Factors Affecting Maintenance

#### 3.7.1 The Influence of Age

Over the years, researchers have generally recognised the significance of building age as a factor in maintenance generation. Olubodun (1996) reported that in the 1950s, Reiners established a positive correlation between maintenance cost and building age. Maintenance

costs increase with age to a point when it becomes more economical to replace a building than continue to maintain it (Coskunoglu & Moore 1990).

Syagga (1987) has gone a step further by suggesting that it is possible to predict the future ageing cycle but cautioned against this generalisation. He has stated that the suggested cost / age trend may not continue to hold throughout the entire building life span. He is of the opinion that the maintenance costs of a large stock of new buildings tend to rise as the buildings age and may eventually attain a somewhat stable cost profile during the middle of its economic life. Holmes (1987) has also cast some doubts on the generalisation of the age / cost trends, arguing that since maintenance strategies are normally based on the needs of particular estates or housing areas, broad age / cost trends can only be used for predicting increases in the overall maintenance budget.

Holmes (1987) argued further that to establish a global trend requires an extremely large sample of maintenance costs from a large number of maintenance organisations. He, therefore, questioned the usefulness of such a trend for any particular organisation. From these arguments, it appears that the age factor is only important when considering the total housing stock in a housing authority, but its influence on costs in specific housing estates is not significant.

Working on the hypothesis that “*the age of the building is the primary determinant of maintenance requirements*”, Alner and Fellows (1990) concluded in their study of school buildings that there was a highly significant positive correlation between age and maintenance cost, especially for traditional buildings, indicating that as age increases so does the cost of repairs.

Although the maintenance requirements of a building are naturally bound to increase with time (age) if left unattended to, it can be argued that time on its own does not cause decay, but only exacerbates the effect of the forces causing decay, as illustrated in Figure 3.8. Hence, focusing upon age as a causative factor in maintenance is not an appropriate way to understanding the actual characteristics of the interacting influences of maintenance.

In their studies of defect-causing factors in public housing in Manchester, Olubodun and Mole (1999) and Olubodun (2000) undertook a detailed analysis of the effect of age on

different building components / elements. They found that the five most serious effects of age were minor damage to roofs, wall tile failure, flashing problems, electrical faults and concrete spalling. They also found that the five least serious effects were graffiti-related damage, breaking of panes, condensation, backflow problems in plumbing and wall cracks. Olubodun (2000) indicated that the greatest effect of age was on wall tiles. They suggested that these findings would provide a sound basis for time-based preventive maintenance programmes for building components (Olubodun & Mole 1999). Olubodun (2000) also concluded that the wall tiles (the variable which shows the greatest effect of age) could be used to monitor the effect of age when other variables are not applicable to a particular building.

There is no doubt that the physical state of housing is dependent upon the original standards of construction and building deterioration with time. The age of a dwelling reflects both the construction technology and standards at the time of construction and gives broad information on depreciation due to ageing (Ozdemir 2002). As the housing stock ages, equipment and fittings become obsolete and tenants naturally demand the upgrading of these facilities. This could create a gap between available maintenance funds and maintenance needs. In Hong Kong's public housing, for instance, the gap has widened dramatically as tenants are demanding better living conditions in the ageing housing stocks (Yip 2001).

### **3.7.2 Changing Standards and Regulations**

Maintenance is not simply a mixture of day-to-day repairs and the replacement of like with like when individual components or elements wear out. Periodically, it might become necessary to carry out refurbishment or improvement works in order to maintain a building to a standard appropriate to its intended use, or to bring it into line with current standards of fitness that is to say decent home standards as mentioned in Chapter 2 and to an extent the health and safety regulations (Seeley 1987; Al-Zubaidi 1997; El-Haram & Horner 2002a).

Changing standards, tastes and regulations do not cause building decay, but the resulting obsolescence may create a demand for maintenance work to be carried out more frequently than actually required. For example, repainting may be done for the sole purpose of changing the colour scheme to meet the current taste. Son & Yuen (1993) viewed these effects as a reflection of the advent of new technologies, rising social expectations and aspirations, and

new legal developments. With the advent of new technologies, changes and modifications to existing buildings are required to meet new demands. This inevitably increases the demand for the improvement / or retrofitting aspect of maintenance.

The natural increase in aspirations which accompanies economic prosperity expands the demand for higher quality buildings. This demand is met through the provision of new buildings and the upgrading of existing ones to higher standards. With respect to statutory regulations, new legal requirements (particularly in the law of occupiers' liability and the tort of negligence) continue to impose an increasingly heavy burden on building owners and users to maintain and keep their premises safe.

While it is natural to expect that the effect of changing standards will bear more on older buildings, no study has yet shown a correlation between effects of age and changing standards in maintenance generation. Olubodun (2000) research based in Manchester on building component defects in social housing showed that changing standards only had a significant effect on concrete balconies and heating installations. El-Haram & Horner (2002a) on their part have ranked two aspects of changing standards; high expectation of tenants and new health and safety regulations, very highly in their study of twenty-four factors affecting housing maintenance costs.

### **3.7.3 Environmental Factors**

The environmental factor in building maintenance can be viewed from two perspectives. The first perspective is the effect of environmental agents, which act upon the building and cause it to decay. Among these are climatic conditions such as rainfall, wind, humidity (Seeley 1987; Idris 1998), soil and groundwater conditions as well as temperature (Idris 1998). Chemical agents like chlorides and sulphates present in the soil as well as industrial wastes and effluents affect building foundations. Al-Shaikh *et al.* (1992) have reported that most of the deterioration in buildings in Riyadh, Saudi Arabia, arises from soil issues and rising water levels. Soil salinity in the presence of high groundwater levels affects concrete in foundations and other parts of a building. According to Lee (1995), the effects of rainfall, wind, humidity and temperature vary in severity according to the location and orientation of the building and are greatest on the external elements of the building. Geological phenomena such as earthquakes, faults, subsidence and landslides also affect a building (Brumaru 2002).

This group of environmental agents, unlike the former, usually cause instantaneous collapse of buildings rather than progressive deterioration. The incidences of these geological phenomena have not been recorded as significant in frequency and severity in the West Midlands. Atmospheric pollution is common agent of building decay, especially in industrialised areas such as Wolverhampton (Bilston, Wednesfield, Willenhall), Dudley (Milking Bank, Upper Gornal), Sandwell (Smethwick, Rowley Regis, West Bromwich, Great Bridge, Tipton), Birmingham (Longbridge, Northfield, Bordesley Green, Small Heath, Balsall Heath, Wilson Green, Handsworth and Witton), Walsall (Bentley, Pleck, Bloxwich) and Coventry (Stoke, Foleshill, Bell Green) has been identified and recorded.

The second perspective is the effect of building maintenance activities on the environment. For instance, from the point of view of environmental protection, it may not be acceptable to demolish buildings. Thus, in some cases, maintenance and conservation may be preferred to widespread demolition and reconstruction because of the high cost involved in protecting the environment from pollution. Aside from the effects of building materials and activities on the environment, there is also the problem of the “sick building syndrome” within buildings which may result from inadequate maintenance (Son & Yuen 1993). More stringent environmental and public health legislation may generate a greater need for maintenance and increase the volume of maintenance works.

#### **3.7.4 Maintenance History**

Maintenance history is one of the factors that determine the condition and maintenance needs of a housing stock at any given point in time. When maintenance is ignored (delayed or not executed at all) the effect is to aggravate the rate of building deterioration from year to year (Al-Sultan 1996; Olubodun 1996; Brumaru 2002). In their analysis of defects in residential buildings in the East Midlands, Page and Murray (1996) identified “lack of proper maintenance” as the second most common (after inadequate design) of the nine major factors responsible for structural defects.

Their study established the fact that failure by owners and / or users to rectify a defect at the appropriate time and in an appropriate manner could indirectly generate more building deterioration. This is because, according to Olubodun (1996), the forces, which cause building decay, are exacerbated by time. Thus, quoting Amarilla *et al.* (2002, p.1953),

“...the historic lack of maintenance generates, in old buildings, an intensive need of funds to undertake repair actions”. The allocation of financial resources for maintenance may have serious effects on the maintenance status and needs of a housing stock (Son & Yuen 1993). A housing stock with a good history of adequate maintenance funding, prompt reporting of and attention to building failure / decay and very little backlog of deferred maintenance will, at any given point in time, have less maintenance needs than a stock whose records in these areas are poor.

### **3.7.5 Vandalism**

Vandalism is another generator of maintenance need in housing stocks. It is wilful damage to a building or structure. The causes of vandalism have their roots in the social fabric of the community (Son & Yuen 1993) and it is motivated by an intention to cause damage. Contrary to popular belief, vandalism is not a product of senseless and random acts, but is often a calculated intention to express dissatisfaction to authority or society at large.

Olubodun (1996) cited BRE reports that suggested that some of the factors that engender the feeling of dissatisfaction, culminating in acts of vandalism, are boredom and indiscipline among youths, and the unsettled conditions of occupancy which they, by instinct, blame on society at large. Son & Yuen's (1993) view is that the lack of security, wrong choice of materials, poor space layout, poor lighting arrangement and fail to promote awareness of social responsibility are other factors that can increase the incidence of vandalism in housing stocks.

Studies have generally identified vandalism as a social problem that cuts across all economic, social and ethnic classes as well as locations. However, the reports cited in Olubodun (1996) showed that vandalism is more rampant in '*flatted estates*' than in cottage estates, and in larger rather than small estates. The reports also observed that certain aspects of vandalism relate to location and tend to be concentrated in particular places or on particular types of property and invariably determine the social rating of the areas where they are rampant. Also, Seeley (1987), Son & Yuen (1993) and Lee (1995) have suggested some form of association between building design and the state of maintenance on the one hand and vandalism on the other. However, Kempen & Musterd (1991) have questioned the basis of such associations and cautioned that they should not be stretched too far.

While most authors consider vandalism as expressive, Olubodun (1996) is of the opinion that it could also be passive as observed in wilful neglect of affordable maintenance responsibility for a property. This is an interesting new twist to the phenomenon of vandalism as it classifies indifferent building owners / users as vandals. On this basis, vandalism can also be classified into internal and external. Internal acts of vandalism are those resulting from the acts of omission or commission of owners / users while external acts result from third parties (Olubodun 1996).

Vandalism mostly affects the aesthetic appearance of a component or building and reduces its lifespan. Ultimately, this generates maintenance requirements and costs, which could be very significant. In their study of factors affecting housing maintenance costs El-Haram and Horner (2002a) ranked external (third party) vandalism and internal (tenant) vandalism eighth and twelfth respectively among twenty-four significant factors. Against this background, it is not surprising that the annual cost of vandalism in England and Wales has been estimated to be £30 million (Seeley 1987).

### **3.8 Housing Maintenance in the Social Housing Sector**

Social Housing providers are established to perform a whole range of functions. ODPM (2003) states one of the principal objectives of social housing provider is housing maintenance; to keep the stock of publicly-owned social housing in good repair, ensuring lettable homes that satisfy tenant aspirations and preserve (though not enhance) their asset value. In order that these functions are carried out efficiently and effectively, various forms and levels of management have evolved. For example, the estate management function in an organisation involves the financial management of buildings and land as well as the administration, improvement, retrofitting, adaptation and expansion of built assets (Son & Yuen 1993). According to Amaratunga *et al.* (2002), two of the main functions of estate management are property management and property maintenance. Property management is a function responsible for ensuring that the value of a property is retained to the maximum advantage of the owner. It thus provides an economical service designed to produce the maximum net return from a property over its remaining economic life. This, according to Pollock (1990), requires the retention in a property of happy, satisfied tenants as happy tenants make for better rent reviews. High quality maintenance is also crucial in ensuring the fulfilment of statutory repairing obligations and the protection of the health, safety and well-

being of the residents and from preventing dwellings from falling into disrepair. It also had a part to play in achieving the ODPMs public service agreement target of ensuring that all social housing is brought up to a DHS by 2012.

Maintenance strategies should always aim to strike the optimum balance between planned and unplanned activities, with a strong emphasis being placed on the former. This is because an unplanned ‘one-off’ item of work will invariably cost more than if the same item is undertaken as part of a larger, structured package. An Audit Commission recommendation of a good-practice benchmark of 60–70% of works costs to be spent on planned maintenance is often cited (Leather *et al.* 1999). Therefore, to be consistent, this research project has drawn a distinction between planned and unplanned activities. This means that the definition of maintenance set out above needs to be refined under the terms of the *Local Government and Housing Act 1989* (LGHA), and to assist in guiding local authorities towards what they *should* be aiming for in terms of a balance between planned and unplanned maintenance.

A RSL or social housing provider as a maintenance and housing management organisation is seen by residents and tenants as a service provider of property and housing services, whose business is to keep the property safe, to a decent standard and remain functional with the minimum of disruption and disturbance, Mossel & Jansen (2010). In this context maintenance management is then as much about delivering satisfactory customer services to residents / tenants and organisations, as it is about the ‘hardware’ of the actual fabric of buildings and services often social residents, will judge a maintenance service on how it has directly affected them rather than on the quality of the repair carried out (Wordsworth 2001). Peters (2003) calls these service delivery episodes as the ‘moments of truth’, and these are often the times that residents will always remember or associate the service provider with. Therefore, the degree of perceived client satisfaction with the overall service provided (rather than just the cost-efficiency of the repair and servicing work done) is a key indicator of service quality. This aspect of *liaison with the occupiers and users* is discussed in greater detail below.

At the point of delivery, the operatives and tradespersons carry out maintenance and servicing works, rather than the managers. The operatives may be employed directly by the maintenance management organisation (in the case of Direct Labour Organisations) or, more commonly, by contractors sourced under the various procurement routes. Their levels of

skills and experience, their motivation and incentives, and therefore their effectiveness in carrying out maintenance works, has received less discussion than is merited in view of the critical importance of their competence or otherwise in relation to the tasks they have to accomplish (Wordsworth 2001). The best managed and organised maintenance operation can founder on poor or inappropriate work by the operatives. Despite this there have been only a few serious attempts to determine exactly what skills and training are necessary to effectively execute works of maintenance and servicing in occupied buildings or to establish a framework for qualification in this area. It is generally accepted that any person engaged in maintenance work should have a trade background and possess a skill trade such as a bricklayer, carpenter, plasterer, painter and decorator etc and more importantly the plumber (registered with gas safety) and electrician (registered with the regulatory body - National Inspection Council for Electrical Installation Contracting (NICEIC)). Other than this, the workforce will need to be equipped with the 'softer people skills' of communicating and dealing with customers (tenants) and dealing with complaints and reporting details (Wordsworth 2001).

In any competitive situation, the estates / DLO maintenance department / and or appointed contractors aims are to sustain a balanced workforce comprising the right amalgam of the trades which are capable of responding to enforce variable repair demands on daily and weekly basis. Maintenance managers will have little or no chance of achieving such an aim if commercial survival is geared solely to response maintenance contracts.

A difficult workforce resourcing problem thus emerges and an employment manager needs to be established. According to Wordsworth (2001) two possible policies are:

1. Establish the labour force for a forthcoming year by ensuring sufficient work to sustain the workforce, weathering temporary troughs and adjusting for excessive peak periods by working overtime or subcontracting;
2. Adjust the workforce to match workload throughout the year by hiring and firing, usually on a last in first out basis.

Achieving the first of these aims would be an optimal solution, however unenviable the maintenance manager has the task of juggling many imponderable variables.

The second policy is not a particularly attractive one for employees, although the itinerant nature of the building industry workforce is, in general, custom and practice. Previously, there was a chronic shortage of skilled tradesmen and it was in the maintenance manager's interest to ensure reasonable job security, pay and related bonus schemes in order to attract and retain a caring, skilled workforce capable of delivering the level of service demanded. This requirement is currently relieved by the recession in the building industry.

To attempt to anticipate the size of a maintenance workforce, capable of responding to variable repair demands enforced by fluctuating job arrival and variations in the time necessary to complete individual jobs will require two distinct distributions. One distribution provides the arrival of jobs per day / week depending upon the target level of accuracy and the other represents the number of hours per job. These distributions require combining to yield the service level requirement in terms of job (man) hours, arriving with say a day to day basis. The properties of interest in the distribution of hours of work, arriving per day are the mean, the variance and possibly the shape of the distribution.

The overall goals of a maintenance management organisation, discussed in detail above, usually entail striking a balance between the needs and available resources, which may or may not involve a divergence of goals between the owners and users of the building (for example, in rented residential property). Thus, it will rarely be the case that a maintenance management organisation has the resources to immediately fulfil every requirement and desire of the users Mossel & Jansen (2010). Yet Olubodun (1996) and Kangwa & Olubodun (2003) seriously argue that tenants' comfort and wellbeing are one of the key goals of any maintenance management organisation, within the limited resources. It follows that the '*people*' skills of informing, listening and explaining are important attributes a maintenance manager must cultivate within the organisation in order to be able to meet these users' needs as far as possible, and to promote a positive image of the maintenance manager as an essential service provider. In the current business climate the concept of customer service is paramount and it is, therefore, important that the maintenance manager has regard to how the maintenance service interfaces with the occupiers and users of a building.

### **3.8.1 Tenants Feedback**

Under Section 54 of the Local Government Act and Housing (Scotland) Act 2001, Registered Social Landlords (RSLs) and Local Authority (LA) Landlords have duties to consult both individual tenants and registered tenants' organisations on a range of issues, including:

- Changes in policy relating to housing management, repairs or maintenance;
- The standard of service in relation to housing management, repairs or maintenance;
- Tenant participation strategies;
- Any proposed stock transfer, which would result in a change of landlord.

Landlords can include all or just a selection of services in an assessment of customer satisfaction. Customer feedback should be treated as equally important as a performance indicators / statistical data about internal organisational processes. The data can sometimes paint a contradictory picture to internal data and therefore demands detailed analysis as the explanations could be numerous. Routine customer feedback should be reported in the organisations regular performance reports and not stored until an annual report is produced, as a more immediate response may be required.

### **3.8.2 Developing an Improvement Action Plan**

An Improvement Action Plan to deal with the results of the service review is crucial to resolving all but the simplest of problems and performance failings. An Action Plan is not itself an outcome that provides all the answers; rather it is a statement of process to be followed to deliver the identified outcomes in terms of improved performance within target timescales. Communities Scotland (2003, p.5) - 'Guidance on Post-inspection Improvement Plans' states: *Improvement plans should provide a clear overview of improvement proposals, rather than a detailed operational plan. The details of implementation in the months and years following an inspection are a matter for the inspected organisation.'*

Communities Scotland (2003, p.5) further states that an Improvement Action Plan should contain the following:

- a) *The outcomes the organisation is aiming to achieve;*
- b) *The actions the organisation intends to implement to achieve the desired outcomes, and the associated target timescales. Proposed actions might include:*
  - *Revising policies;*
  - *Reviewing methods of service delivery;*

- *Undertaking further consultation with service users;*
  - *Improving information for service users;*
  - *Introducing new working procedures or training for staff members.*
- c) *The priority attached to the improvement actions (e.g. if the organisation needs to prioritise actions in order to respond to all of the inspection report findings).*

The Accounts Commission (2003) *'The New Audit of Best Value Consultation Paper'* echoes HCA's sentiment: Improvements and innovations in procurement practice. The potential benefits of integrating caretaking facilities services into the repair service has also been noted by the Refurbishment, Repairs and Maintenance Working Group of the Housing Forum, the body set up to promote the activities of the Construction Best Practice Programme within the housing sector in the wake of Sir John Egan's report *Rethinking Construction* (Egan 1998). The Housing Forum (2001) report on *20 Good Ideas For Rethinking Refurbishment, Repairs and Maintenance* began by suggesting that up to 30% of the expenditure on this type of work could be saved by adopting the principles of 'Rethinking Construction' and went on to present a list of ideas as to how this might be achieved in practice.

Whilst repairs and maintenance contracts tend to be the ones most likely to be included in these new arrangements, as originally promoted by Sir John Egan's report "*Rethinking Construction*", this approach could be adopted in most areas of a social landlords' activity.

### **3.8.3 Housing Maintenance Service Level Agreements**

A service provided internally or externally should be governed by a Service Level Agreement (SLA). This has similarities with a contract and defines the relationship between two parties: the provider and the recipient. A SLA has significance for both parties. According to Wordsworth (2001, p.46), if used properly it should:

- *Identify and define the customer's needs through questionnaires;*
- *Provide a framework of understanding – contract;*
- *Simplify complex issues;*
- *Reduce areas of conflict;*
- *Encourage dialogue in the event of disputes;*
- *Eliminate unrealistic expectations;*

Specifically a Housing Maintenance SLA should embrace a wide range of issues. Cooper & Jones (2008a and 2008b) suggest that amongst these are usually the following:

- Services to be delivered;

- Performance expected, monitoring requirements and performance reporting arrangements;
- Problem management;
- Legal compliance and resolution of disputes;
- Customer duties and responsibilities;
- Length and agreement and date for evaluation and review.

### **3.9 Housing Maintenance Policies**

Property maintenance involves the organisation of resources to address the problems of maintenance on a property and to maximise benefits from the investment in the property. Property maintenance can be further classified into building maintenance technology and building maintenance management. The former is concerned with the study of the occurrence of building defects and the remedies for such defects. It applies the principles of physical sciences to the process of determining the effects of the properties of building materials, the loading distribution on the building structure and other related factors (Son & Yuen 1993).

On the other hand, building maintenance management applies the seven principles of management-forecasting, planning, organising, communicating, motivating, coordinating and controlling-to harness and utilise the resources required to deal with the aspects of building maintenance as a whole. It recognises that, in addition to locating and rectifying defects, an effective programme to minimise maintenance costs must start with the design of the building itself and must eventually justify, itself not only in terms of minimising costs but also in maximising the benefits of the investment (Son & Yuen 1993). The latter requirements call for a proper performance evaluation of maintenance management systems (Arts *et al.* 1998).

The maintenance management process described above is illustrated in Figure 3.9 which shows a typical maintenance management framework which can guide and aid maintenance organisations to achieve consistency in the planning, implementation and reporting of building maintenance (Queensland Government 1999).

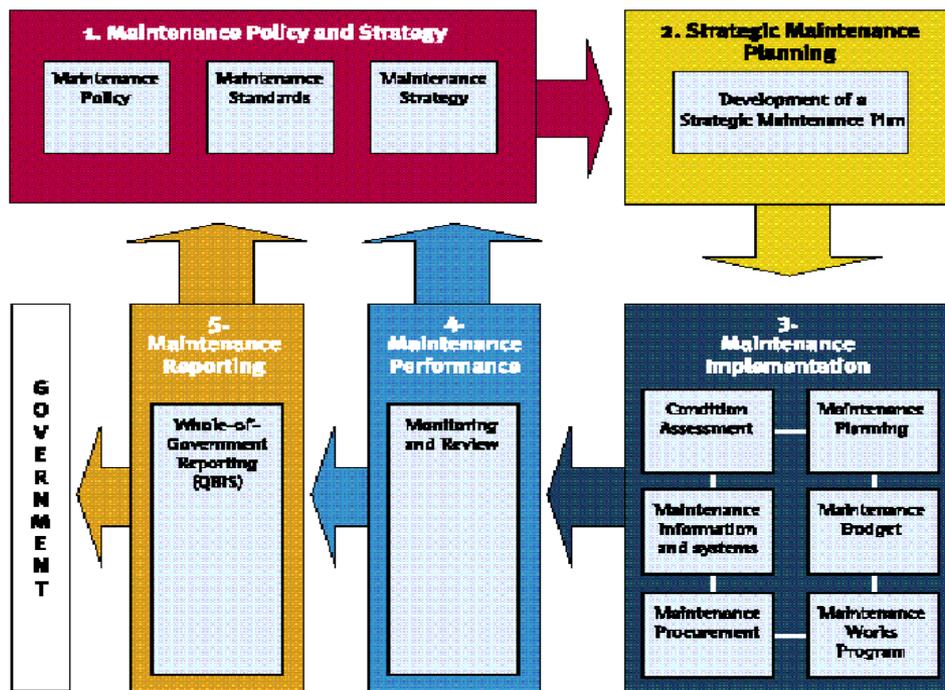


Figure 3.9: An Overview of Maintenance Management Process  
 Source: Queensland Government (1999)

For a maintenance management system to be effective it must be guided by sound policies and strategies. The policies will determine the maintenance standards to be adopted and the organisational maintenance plan is drawn up within the context of the set standards. The strategies will determine the modus operandi for the implementation of the maintenance plans as well as prioritisation criteria in works execution. The next step in the process is the monitoring and review of performance using appropriate performance indicators (as determined by policy and strategy). Finally, the performance must be reported by the maintenance department to its parent organisation; be it government, an institution or an investor, who may initiate a policy review if necessary.

Maintenance policy and strategy provides the organisational framework and guidelines within which work is carried out. Maintenance objectives are set in the context of maintenance policies (Aler & Fellows 1990) and provide the basis for prioritisation of maintenance work. Objectives also provide the basis for the performance evaluation of any organisation. A maintenance organisation with no set policies and objectives lacks the rationale for prioritising its work and the benchmark for evaluating its performance. Such an organisation will stumble and not develop.

### 3.10 Summary

This chapter has reviewed the literature related to key issues in strategic management and housing maintenance.

Although some of the key factors contributing to decay and deterioration of social housing have been highlighted to provide the reader with an overview, it should not be treated as a comprehensive list. It has excluded factors such as the effects of age, condition, orientation, locality, type of construction of key elements and vandalism which have been established in the literature related to building pathology. Also, this study did not consider the factors that determine housing maintenance need and cost. The works of Olubodun (1996 and 2000) and El-Haram & Horner (2002a) filled this gap by providing comprehensive lists of factors and giving indications of their relative influences.

In view of the insufficient maintenance budget across the world, prioritisation of maintenance needs has become a key issue in housing maintenance. Notable developments in maintenance priority setting include the multi-attribute method by Spedding *et al.* (1994) and its further refinement by Shen *et al.* (1998) using the analytic hierarchy process (AHP) developed by Saaty (1990). One common flaw in these and other priority setting methods is that only maintenance managers and operatives make the decisions. This practice is obviously unsatisfactory as it excludes tenants (users) who are the ultimate beneficiaries of maintenance operations. This study, therefore, introduced the tenant perspective into a maintenance priority setting.

This chapter also reviewed the formulation of an effective business and competitive strategy in the social housing sector. The review noted that asset managers, as decision makers, have to anticipate and appreciate their business and operating environment (internal and external) better to formulate a competitive strategy for the development and asset management of their existing stock. The significance of maintenance management strategies and its associated challenges that lie ahead for RSLs operating in an extremely resource constrained environment; RSLs have to manage intelligently with their limited resources in order to deliver value for money property and maintenance services.

# **CHAPTER 4**

## **DECISION SUPPORT SYSTEMS IN SOCIAL HOUSING**

### **4.0 Introduction**

This chapter reviews a variety of management decision theories and their associated key elements which are incorporated in Decision Support System (DSS) within the local authority housing maintenance strategy. This will enable housing maintenance managers to develop a clear understanding of the key components when designing a DSS and to highlight any potential relationships to strategic decision-making theories and DSS. This chapter provides the main link to the rationale for this thesis. The proceeding chapter looks at the research methodology used in this study of how maintenance management information, or knowledge is elicited from experienced housing managers as decision makers which will be used to develop a business support system for managing the social housing maintenance business process to improve service delivery.

### **4.1 Human Decision Making**

In order to understand how DSS may enhance human decision making in the evaluation of local authority housing maintenance strategies, it is first necessary to understand the human decision making process and define the concept of a decision. A decision process is concerned with the whole range of activities involved in making a decision. There are some common threads that can be found in nearly any decision-making process, regardless of the decision's context, type and maker. There is general agreement in the management literature that a decision is a choice (Simon 1960, 1976, 1987; Nutt 1984 and 1998; Pomerol 1997; Pomerol 2001; Pomerol & Adam 2003a; Pomerol & Adam 2003b; Power 2008; Rippen 2005). Invariably it is regarded as a choice of strategy for action, or a choice leading to a certain desired objective. A decision also was defined as an episode, beginning when the housing maintenance organisation first became aware of a motivating concern or difficulty, and ending with a successful, or an unsuccessful and implementation attempt. After a failure, a recycle would be viewed as a new decision, if new alternatives were uncovered (Nutt 1998). These definitions suggest that decision making relates to an activity culminating in the selection of one of multiple alternative courses of action. This activity includes the work

of being aware of the problem or the opportunity, the available alternative to resolve this problem or using the opportunity, efforts to understand the implications of the alternatives and the act of selecting one of the alternatives, Holsapple (1995).

## 4.2 Types of Decision

It is difficult to incorporate the entire strategic management process under one framework or model, researchers who study the human decision-making process discuss them in terms of a number of phases. Simon (1960) viewed the decision-making process, in general terms to incorporate four phases: Intelligence; Design; Choice; Review. Whilst, Anthony (1965) focussed on decision making in organisations and categorised decisions into four types and these are as follows:

- **Strategic Planning Decisions:** decisions related to choosing highest level policies and objectives, and associated resource allocation. The RSLs need to fully understand their business environment (internal and external) which they are operating in, together with the regulatory framework, and profiles of their customers and assets;
- **Management Control Decisions:** decisions made for the purpose of assuring effectiveness in the acquisition and use of resources. As part of services delivery asset managers operating social housing as required to fully weigh up the resources that they have at their disposal to ensure that these are being deployed to the maximum potential. This will include developing life cycle costing models and being able to predict a favourable outcome based on informed choices (limitations of materials, life span and sustainability);
- **Operational Control Decisions:** decisions made for the purpose of assuring effectiveness in the performance of operations. Given that maintenance departments have constrained resources, asset managers, need to be dynamic to ensure that they get the best possible usage from the limited resources. This will entail developing a capability matrix which illustrates the skill and capability of individual working within the maintenance department, and matching these against each task being planned and where they are gaps - additional training or support could be identified;

- **Operational Performance Decisions:** day-to-day decisions made while performing operations. Asset managers will need to set targets for each task and monitor any inconsistencies for further improvements.

Some other researchers have categorised decisions into three general types (Keen & Scott-Morton 1978; Mallach 1991; Tan & Sheps 1998). This categorisation of decision types have been useful in identifying which DSS model most effectively supports individuals with specific problems. The first type of decision is the structured decision. This type of decision has a well-defined decision making procedure. All three decision phases discussed earlier (intelligence, design, and choice) can be specified. DSS easily supports structured decisions. However, the decision maker may not need DSS support because each phase of the decision is well understood, resulting in little, if any, decision uncertainty. The second type is an unstructured decision where all three-decision phases are unknown or unstructured. The decision may be new, infrequent, or have many variables in the decision phases which cause a high level of decision uncertainty. DSS can still support the decision-maker, but only with a low level of support. The third type of decision is semi-structured. This type of decision has both structured and unstructured phases. DSS were designed to assist decision-makers with semi-structured or unstructured decisions. However, all decisions, whether they are structured, semi-structured or unstructured, require human judgement to make the decision Tan & Sheps (1998).

#### **4.2.1 Strategic Decision-Making Process**

A strategic decision was defined as one that has considerable importance due to the magnitude of the resources required or the expected impact (Mintzberg & Raisinghani, 1976). These are important organisation decisions and can be characteristically described as unique and risky, with the information needed to solve them often unavailable. Mintzberg explored the way in which managers make strategic decisions. After examining the strategic decision making process in twenty-five organisations, Mintzberg concluded that the strategic decision making process consisted of three phases.

Phase 1 - the identification phase is made up of two processes. Firstly, managers have to recognise that something is occurring which will create a problem or opportunity. They refer to this phenomenon as recognition of changes in the environment of an organisation.

Secondly, managers have to be sure information that pertains to the issue of change is being collected so the events can be better understood.

Phase 2 - the development phase also contains two processes. In the development stage managers have to search, both internally and externally, for alternate solutions to the events occurring. Managers have to design potential solutions or modify existing solutions to fit the new circumstances.

Phase 3 - the selection phase of strategic decision-making in which three processes (Killing 2013) take place and these entail:

1. Managers screening the alternatives generated in the development phase. This process is required because only a few alternatives can be examined in detail;
2. Managers going through an evaluation-choice process in which the remaining alternative solutions are analysed and judged;
3. Making a final decision as to which of the particular strategic alternatives to pursue.

Other researchers described strategic decisions as committing substantial resources, setting precedents, creating waves of lesser decisions (Mintzberg & Raisinghani 1976) as ill-structured, non-routine and complex (Schwenk 1988), and as substantial, unusual and all-pervading (Hickson 1986). Although researchers have not reached consensus as to what constitutes a strategic decision, managers had no trouble in identifying them.

Power & Meyaraan (1994) identified four basic components of less structured decision problem include:

- i. Objectives and criteria - not all are known at the outset and the trade-offs or relative utilities of objectives are largely unknown;
- ii. Variables affecting outcomes - knowledge of all important controllable and uncontrollable variables is incomplete;
- iii. Casual relationships - relations are not being well understood in advance or may vary according to different plausible assumptions;
- iv. Alternatives: alternatives are generally unknown and / or have not been specified.

#### **4.3 Strategic Decision-Making Theory**

The decision making models, as employed in DSS, can be characterised as an individual or organisational models. Individual models employed include those based on rational principle (Simon 1956, 1959), as embodied by normative theories of choice displayed in micro-economic theory, game theory, decision analysis and multi-attribute utility theory; satisfying

models, representing bounded rationality through the use of heuristics to arrive at a solution that is acceptable, though not necessarily optimal, (Simon 1960, 1987) descriptive models based on limitations of human decision makers, as illustrated by behavioural decision theory (Fischhoff *et al.* 1977; Bensahel 1979; Wright 1985; Keinan 1987) and psychology based models that utilise cognitive style characteristics of the decision makers to prescribe support system characteristics, Zmud (1986). The researcher recognises the presence of different models of decision making, but these will not form part of the in-depth commentary and it suffices to mention them in passing:

- Normative Decision Theory;
- Descriptive Decision Theory;
- Prescriptive Decision Theory;
- Bayesian Decision Theory;
- Judgmental Bias Theory;
- Conflict Model Decision Theory.

Due to overlaps between models and clarity, numerous researchers (Duncun 1973; Tversky & Kahneman 1981; Lancaster & Lancaster 1982; Loomes & Sugden 1982; Winterfeldt & Edward 1986; Simon 1987; Tymstra 1989; Shortliffe 1991; Scariono 1995; Jennings & Wattam 1998) argued that all organisations need to improve their decision-making. This need is more necessary in the case of strategic decisions. They mention the reasons for this need may be due to:

1. Organisations face a scarcity of resources and the need to make the most effective use of those that are available to them;
2. Increasingly, both private and public sector organisations face competition, either from the rising pace of competition or through government, exposing more organisations and their decisions to market disciplines;
3. Issues such as consumer safety, pollution and employment practices, frequently raise public concern over the degree of social responsibility demonstrated by organisations in their decision-making. Both public and private sector organisations often find themselves open to examination by wider society, not only for the results of decisions they have made, but also for how those decisions were arrived at.

#### **4.4 Decision Support Systems (DSS)**

##### **4.4.1 Definitions of DSS**

It is important to examine the definitions of DSS in order to understand their characteristics and applications. A variety of DSS definitions exist and no one definition is universally accepted within a discipline. The following definitions are the most commonly found in the Management Information Systems (MIS) and Information Systems (IS) literature.

The early definition of DSS was formalised in the early 1970s. Scott-Morton (1971) described the impact of a computer-based system on decision processes and effectiveness. Gorry & Scott-Morton (1971) brought together much of the preceding work on computer-aided decision making in developing a framework for MIS. They referred to systems developed for traditional data handling tasks in the MIS context as '*structured decision systems*' and systems intended to aid non-routine decision-making activities as DSS. Their framework represented the growing recognition that different types of organisational activities required different types of computer support. DSS was meant to be an adjunct to decision-makers, to extend their capabilities, but not to replace their judgement (Gorry & Scott-Morton 1971). Keen & Scott-Morton (1978, p.15) defined DSS as "*use of suitable computer technology to support and improve the effectiveness of managerial decision-making in semi-structured tasks*". While Alter (1980) produced a broad functional interpretation of the DSS concept and included in his taxonomy, which was computer-based system, a specific design to aid the decision process with support rather than automate decision making and thereby ensuring the system was responsive to changing needs of the decision-maker.

#### **4.4.2 Types and Components of Decision Support Systems**

Decision support systems differ in their scope, the decisions they support, the individuals who use them and the information and functions they provide. A variety of DSSs' exist and these range from a simple personal computer spreadsheet to a bespoke system with hundreds of users accessing a multi-gigabyte database running on mainframe computers costing tens of millions of dollars or pounds Mallach (1994).

Alter (1980) divided decision support systems into a hierarchy of seven levels including:

1. Suggestion Systems;
2. Optimisation Systems;
3. Representational Models;
4. Accounting Models Systems;
5. Analysis Information Systems;
6. Data analysis Systems; and
7. File Drawer Systems.

This hierarchy is based on the capabilities of DSS. Alter (1980) recognises that not all DSS can be categorised into one level and that there may be grey areas between adjacent levels.

Whereas Sprague & Carlson's (1982) framework of DSS consists of three management subsystems:

- Database Management Software (DBMS);
- Model Based Management Software (MBMS); and
- Dialogue Generation Management Software (DGMS).

Bonczek *et al.* (1980) says that DSS structure could consist of a language subsystem, a problem process sub-system and a knowledge subsystem. Mean while, Turban & Aronson (1998) suggests that a DSS is composed of the following components.

1. Data management includes the database(s) which contains relevant data for the situation and is managed by software called a database management system (DBMS);
2. Model Management is a software package that includes financial, statistical, management science or other quantitative models that provides the system's analytical capabilities, and an appropriate software management;
3. Knowledge management subsystem is a subsystem through which the user can support any of other subsystems or act as an independent component. It provides intelligence to augment the decision maker's own;
4. User interface subsystem where user communicates with and commands DSS through this subsystem.

A database is a repository of mainly numerical, fix the length and transaction types, generated from the basic operations of the business and the external environment. Through DBMS and their query facilities, data can be retrieved, processed and reported to aid decision-making.

Models are quantitative and can be viewed as algorithms, procedures, subroutines, programs, and so on (Chung & Lang 1995). The primary focus of both DBMS and MBMS is a transaction oriented operational system. Recent advances in management approaches, globalisation and changes in organisational structures impose particular requirements on DSS.

Researchers in the field of artificial intelligence have been trying to fill the gap by incorporating the qualitative dimension of decision making into DSS. So many DSS researchers started to think that DSS should act as a more knowledgeable or intelligent aid in the human decision-making process e.g. (Blanning 1987; Dalal & Yadav 1992). Therefore, a knowledge base has been proposed as an additional component of DSS.

A Knowledge Base (KB) consists of facts, concepts, theories, heuristics and other qualitative and symbolic knowledge organised and analysed to make them useful in problem solving. Through handcrafted rules or other symbolic manipulations, the KB is able to support qualitative aspects of human decision making.

#### **4.5 Application of DSS in Social Housing Asset Management**

As a result of a variety of factors, mainly related to service quality management, customer satisfaction, society, financial economics, politics and governance, environmental and sustainability, organisational change and technology, most social housing landlords have to manage their housing stock in a more commercial way. Due to the range of stakeholders (individuals, central and local government, and the local community) decision making in the public sector is more complex compared to the private sector. The government is often seen as driving shortism approach, in reality they are attempting to increase the standard of service provided by local authorities and thereby increasing access to the services. The private sector is historically driven by profit for shareholders and survival of the fittest by getting more and more engaged in the delivery of quality services. In their meta-analysis review of the affordable housing sector management in the last three decades, Gruis & Neiboer (2004) noted a massive paradigm shift in business strategies (simple to complex), and that most asset managers are now employing a variety of simple to complex techniques and models to manage business and supply chain risks. In addition, they also noticed that these managers had developed intelligent skills in managing market developments / trends and hence were able to formulate robust business plans that improved their organisational effectiveness leading to high levels of customer satisfaction. More significantly Gruis & Neibore (2004) noticed that of the most important was their ability to expedite value and time related business decisions that yielded good returns on the resources investment. The above policy changes have increased the need for sound financial planning, risk management and market orientation in social housing management. Hence Gruis *et al.* (2010) and Priemus *et al.* (1999) noticed that as a result of intelligent business thinking these housing managers have to anticipate or predict corporate real estate market developments. They have to put in place robust investment and asset management plans for each asset, which are aligned to the core business objectives, human capital skills available and social values.

This kind of effective asset management is generally referred to as “strategic housing management”. Strategic planning has its origins in the private sector, but has also been introduced in the effective and efficient management of limited public resources by following systematic, rational and transparent planning processes that add value to these organisations (Bryson 1995; Larkin 2000; William Sutton Trust 2000). The key drivers being diminished financial support from the government, continued customer demands for quality services (accountability and co-regulation) and the need to operate these social businesses commercially viable as possible. Although widely used in corporate real estate, Gruis & Niebor (2004) consider that the application of DSS in social housing asset management is a novel approach, which has until recently been mainly restricted to commercial business and strategic practitioners, lacks a sound theoretical basis. Cooper & Jones (2008a, 2008b) identified risk factors faced by social landlords and different management approaches used by social housing asset managers to maintain their stock was affected by a number of multivariate performance factors: physical, social, environmental and economic. They proposed a multi-criterion decision model which maintenance managers should use to for managing their existing housing stock to address sustainability issues by using the following headings as the main Key Performance Indicators (KPIs);

**Physical** – Health and Safety and statutory requirements;

**Social** – Tenant wellbeing, community engagement, community security and housing running costs;

**Environment** – water consumption, CO2 emissions, material use and sourcing, pollution and waste energy;

**Legal** – legislation and regulations govern the role and responsibilities of RSLs and tenants;

**Economics** – asset value, future exposure and risk, climate change and whole life costing.

The above research approach is supported by similar research on maintenance management carried out by Olubodun (2001), Kangwa & Olubodun (2003a, 2003b and 2003c), El-Haram & Horner (2003), and Deng & Quigley (2008). This research expanded on the above KPIs by pointing out that with limited resources in the public sector, maintenance managers should also consider the tenants lifestyles and behaviours as part the property management planning to get the best benefits for their organisation.

Johnson (2006) in his literature survey on decision modelling applications for affordable housing maintenance, evaluated how both prescriptive and descriptive models can be used to develop future decision support systems that manage to apportion capital resources to get the best return on tax payers' capital. On the other hand Faiz & Edirisigghe (2009) evaluated predictive models for capital asset maintenance information management. In their research, they concluded that an asset-centric model that uses fuzzy logic as DSS is vital for the success of asset intensive organisations, as the effective management of assets is a major determinant of organisational success. In the same research, they also evaluated the use of other decision modelling techniques such as artificial neural networks, multiple regression, algorithms, and game theory. Rippen (2005) also identified that there are a number of DSS applications that can be used in housing management from simple information reporting tools, to sophisticated models such as Bayesian statistics or genetic algorithms. His conclusion was that all DSS applications share three common components for them to be applied effectively, and these are;

- An information storehouse of knowledge;
- A process by which this knowledge may be systematically interrogated to provide answers to questions. This component that predominately distinguishes between different decision support systems;
- A user interface providing users with a perceptive, accessible tool for gaining the information they require. He also classified decision making into either manual or automated decision.

Chapters 2 and 3 highlighted the challenges and opportunities in which today's asset managers are faced in the social housing sector with regards to resources management and the need to develop sustainable and commercial business strategies. These can be broadly classified as:

## **External factors**

### **Politics**

The Government targets are very dynamic and are forever changing to reflect their political stance as CCT, LSVT, BVF, rights to buy schemes and more recently the Localism Act which will move power back into the individuals, communities and local council. The 5 key measures are community rights, neighbourhood planning, housing, general power of competence and empowering cities and other local areas.

Therefore the question arises is how do the RSLs become corporate social landlords and how can they influence rent increases that can be off set against increased in the quality of housing provision. Can RSLs reduce waiting lists, increase quality standards and increase rents to match the private sector?

**Legal constraints:**

These in general terms relate to: Waiting lists; Overcrowding; Health and safety; fitness for human habitation.

**Physical Asset:**

Ageing portfolio - location, accommodation, condition; Decent home standard versus cost of repairs; Response time for repairs; Quality of Repairs, Sustainability

**Stakeholders:**

Tenants profiling; Anti-social behaviour; Customer expectations; Affordability; Empowerment; Mobility; Ownership

**Financial:**

Rent arrears; Cost of repairs verses keeping satisfied

The above challenges provided an insight into some aspects of strategic decision making in maintenance management of social housing. In the past, however, asset managers were engaged with making technical decisions. These have gradually changed from technical to holistic view the National Health Service (NHS) is a prime example where traditionally the performance was measured against spending and budgetary commitments, but over the past decade's emphasis has shifted towards performance being measured against business service delivery and customer satisfaction. Social housing is no different. Senior asset managers working in the social housing sector must adopt similar changes and embrace a service delivery strategy. The researcher recognises that there is a huge knowledge gap in this area. The lack of knowledge helps explain some of the reasons as to why RSLs are not effectively managing their assets and their core business functions that this research seeks to address.

A gap in the required knowledge has been linked successfully to business performance (Carrillo *et al.* 2003) therefore making a case for its adoption in organisational strategy. This research attempts to capture the knowledge of the experts, leverage intellectual capabilities

and deploy these to the business service delivery activities. This will ultimately help in the overall performance and enables RSLs to function optimally.

As a result, senior asset managers are being forced to rethink the decision making process and requires exploring options for new business management approaches and practices to improve business service delivery activities (Robinson *et al.* 2005).

In order to capture the decision making thought process of asset managers it is important to understand the strategic asset management factors for developing a strategic asset management model. To enable this it is essential to develop tools that will help RSLs and asset managers in developing and implementing suitable asset management strategies. The challenges identified in Chapter 2 and 3, make the strategic approach decision making related to service delivery within the social housing sector often a complex process. Encompassing a variety of conditions, perhaps strategic housing maintenance decision making related to RSLs is best served by a conglomeration of theoretical constructs.

The following sections explore a range of specific business models that aid social housing providers to adopt a business approach to delivering social housing services its customers.

#### **4.6 Business Model Formats**

In order to identify the format of the proposed model that is best suited for developing the proposed research's decision support system / model, the following different business management models have been reviewed by the researcher to identify which one of them could be applied:

- Service quality model (SERVQUAL) was developed in the mid-1980s by Zeithaml; Parasuraman & Berry. SERVQUAL is designed to measure the scale of quality in the service sectors;
- Scenario planning, which was originally used in the military and recently used by large corporations to analyse future scenarios;
- Data mining;
- Game theory;

- Political, Economic, Social, and Technological (PEST) analysis describes a framework of macro-environmental factors used in the environmental scanning component of strategic management. Socio-cultural, Technological, Economic, Ecological, and Regulatory (STEER) factor analysis;
- Total quality management (TQM);
- Multi -variant analysis model;
- Neural networks;
- Fuzzy logic;
- Six sigma;
- SMARTERS;
- Balanced Scorecards (BSC) was first introduced in 1990s' by Bob Kaplan and David Norton in 1992 as a strategic tool for improving business performance in organisations.

These models were evaluated in developing a holistic model that is based using current domain knowledge gaps in the development of an effective model in the sector. They also enabled a final version of a decision support model to be consolidated, aligning outcomes and enablers to the organisation's existing strategic themes in social housing asset management: Decent Homes, Decent Places, Fair Access and Valuing Resources. Table 4.1 provides a summary of this review.

The BSC seemed to offer the 'best fit' synergies in terms of its use and unique application of this research as a useful tool for developing a strategic asset management system as suggested by Rohm & Malinoski (2010) and Medley (2013a) that:

- It aims to add corporate performance value through measurement of current standards and a process of continuous business improvement;
- It helps to align key performance measures with strategy at all levels of an organisation;
- It provides management with a comprehensive picture of business operations;
- The methodology facilitates communication and understanding of business goals and strategies at all levels of an organisation;
- It encourages maximum pro-active decisions - team members are focused on helping one another succeed;

Table 4.1: Review of Strategic Business Models with respect to Strategic Maintenance Management Planning of Social Housing Assets

Model	Overview of Model	Relevance to this Research
<b>SERVQUAL</b>	<p>This model is a multi-item scale developed to assess customer perceptions of service quality in service and retail businesses. The model focuses on five aspects of service quality.</p> <ul style="list-style-type: none"> <li>• Tangibles - physical facilities, equipment, staff appearance.</li> <li>• Reliability - ability to perform service dependably and accurately.</li> <li>• Responsiveness - willingness to help and respond to customer need</li> <li>• Assurance - ability of staff to inspire confidence and trust.</li> <li>• Empathy - the extent to which caring individualised service is given.</li> </ul>	<p>This model is very general and focuses solely on the customer expectations and it is more relevant to product managers engaged in manufacturing and retail industries where it is applied widely. However, the application of this model is very limited as the model does not take in account the social housing issues such as the socio-economic dimension of the customer(s) and the RSL, the physical assets, the political sensitivity, the local community and wider social issues including outsourcing of services and the changes in legislation. Hence this model will not be suitable for adoption for this research. It has also been successfully been applied to the property management sector by Siu <i>et al.</i> (2001) when they were assessing service quality of building maintenance providers related to mechanical and engineering services in Australia.</p>
<b>SCENARIO PLANNING</b>	<p>This model is based on developing simulation games and involves aspects of systems thinking. The model usually evolves around real life case study scenarios and allows the inclusion of factors that are difficult to formalise and examines the causal relationship between factors. In order for this model to work effectively it requires clear understanding of all factors (their varying iterations and their relationship) within a complex setting.</p>	<p>This model appeals to organisations or business that has tactical scenarios and will appeal to larger organisations operating in marketing and commerce. The model is very general in its application and examines the future possibilities as opposed to real time. Hence, given the nature of this research and sensitivity of social housing issues with this model will not be suitable.</p>
<b>DATA MINING</b>	<p>This model involves the computational process of discovering patterns in large data sets involving methods at the intersection of artificial intelligence, machine learning, statistics, and database systems. The overall goal of the data mining process is to extract information from a data set and transform it into an understandable structure for further use. Aside from the raw analysis step, it involves database and data management aspects, data pre-processing, model and inference considerations, interestingness metrics, complexity considerations, post-processing of discovered structures, visualization, and online updating.</p>	<p>This model is frequently misused to mean any form of large-scale data or information processing (collection, extraction, warehousing, analysis, and statistics) but is also generalized to any kind of computer decision support system, including artificial intelligence, machine learning, and business intelligence. The model assists in discovering or "detecting something new" and involves the use of programming language and practical learning tools and techniques such as Java. This model is far too complex and relies on data and patterns which are not appropriate to this research.</p>
<b>GAME THEORY</b>	<p>This model is a study of strategic decision making and is generally associated with the study of mathematical models of conflict and cooperation between intelligent rational decision-makers. Game theory is mainly used in economics, political science, and psychology, as well as logic and biology. For the model to be fully operational and accurate, it requires all constraints to be clearly defined together with probabilities as an aid to making strategic decisions.</p>	<p>This model relies on well-defined mathematical objects with a set of hypothesis to arrive at the decision. The model is not sensitive to the challenges discussed in Chapter 2 and therefore without hardcore data it would be extremely difficult to deploy this model in social housing.</p>
<b>PEST</b>	<p>This model is based on describing a framework of different macro-environmental factors such as Political, Economic, Social and Technological. More recently other factors have been added such as Socio-cultural, Ecological, and Regulatory to the model.</p>	<p>This model forms part of the external analysis when conducting a strategic analysis or market research, and gives an overview of the different macro-environmental factors that an organisation may take into consideration. It is a useful strategic tool for understanding market growth or decline, business position, potential and direction for operations. This model is also has limited application and usefulness in</p>

<b>TOTAL QUALITY MANAGEMENT TQM</b>	<p>This is a framework for achievement of business organisation through managing various components required to maintain consistency of quality. The components comprise:</p> <ul style="list-style-type: none"> <li>• Leadership and innovation.</li> <li>• Strategy, Policy and planning process.</li> <li>• Information, data and Analysis.</li> <li>• People.</li> <li>• Customer and market focus.</li> <li>• Quality of Process, Product and Service.</li> <li>• Organisational Performance (business result).</li> </ul> <p>This model requires a clear definition of standards to be attained and maintained and means of monitoring and feedback loops to enable this framework to work effectively.</p>	<p>social housing.</p> <p>This is a general model and tends to be more appropriate for the manufacturing / production industries. This model is not widely used in the customer service delivery industries and does not entirely assist organisations in developing the business improvement strategies such as social housing where there are a huge range of factors some of these are externally driven (political, corporate, legislation, regulations, auditors) and some internal (organisation, culture, lack of funds and sources) and some are inherent (assets – age, location, condition) and some are customer (tenant type and their financial standing). Hence TQM does not entirely suit the social housing sector.</p>
<b>MULTI-VARIANT ANALYSIS MODEL</b>	<p>This model is based on the statistical principle of multivariate statistics and examines the results effects / impact of decision by varying the combination of the factors analysis. The model may include:</p> <ul style="list-style-type: none"> <li>• Design for capability</li> <li>• Inverse design, where any variable can be treated as an independent variable</li> <li>• Analysis of Alternatives - selection of concepts to fulfil a customer need</li> <li>• Analysis of concepts with respect to changing scenarios</li> <li>• Identification of critical design drivers and correlations across hierarchical levels.</li> </ul>	<p>This model appeals to a whole host of practical problems both in an academic setting and also in real-life case scenarios.</p> <p>Whilst there are some significant areas of relevance of this framework with housing maintenance management, however the drawback with this model is that it is not sufficiently intelligent to respond to instant strategic real-time decisions. The model heavily relies on data and a huge range of factors and therefore the model can become complex and difficult to use by asset managers due to the statistical nature of the model.</p>
<b>FUZZY LOGIC</b>	<p>This model attempts to develop logic reasoning from uncertain data. Fuzzy logic systems are designed to solve complex problems by reasoning about knowledge and attempts to model the thinking process or the decision making process of an expert.</p>	<p>This model is very popular and has been integrated within expert systems or artificial intelligence systems and has aided the decision-making ability of a human expert. It appeals widely in the programming of vehicle and transport electronics, household appliances, video games, language filters, robotics, and various kinds of electronic equipment used for pattern recognition, surveying and monitoring. However the major drawback relates to the fact that this model relies heavily on data, factors and variables identify trends but it is less sensitive to real-time and difficult to be operated by asset managers and RSL without detailed knowledge of programming and statistics.</p>
<b>NEURAL NETWORKS</b>	<p>This model is also known as an ‘Artificial Neural Network (ANN) and it is an information processing paradigm that is inspired by the way biological nervous systems, such as the brain, process information. The key element of this paradigm is the novel structure of the information processing system. It is composed of a large number of highly interconnected processing elements working in unison to solve specific problems. An ANN is configured for a specific application, such as pattern recognition or data classification, through a learning process. Learning in biological systems involves adjustments to the synaptic connections that exist between the neurones.</p>	<p>This is very complex and is generally associated with the theoretical analysis and computational modelling of biological neural systems. Since neural systems are intimately related to cognitive processes and behaviour, the field is closely related to cognitive and behavioural modelling and ultimately developing computer programmes.</p> <p>This model is very complex in nature and would be difficult to operate in social housing due to changes in legislation and the services being delivered in the social housing sector – where the decision is based on strategy as opposed to systems approach which artificial neural networks tends to excel in.</p>

<b>SIX SIGMA</b>	<p>This model is a set of tools and strategies for improving the quality of process outputs by identifying and removing the causes of defects (errors) and minimizing variability in manufacturing and business processes. This framework encourages managers to:</p> <ul style="list-style-type: none"> <li>• Define the problem,</li> <li>• Measure key aspects of the current process and collect relevant data.</li> <li>• Analyse.</li> <li>• Improve or optimise the current process through data analysis</li> <li>• Control systems</li> </ul> <p>When manager is trained becomes an ‘expert’ in the organisation and new hierarchy is created.</p>	<p>This framework has been hugely successfully applied in manufacturing, production, and quality control industries. However the applications of this framework are limited in the application to this research due to the never nature of service being provided.</p>
<b>SMART</b>	<p>This framework uses Key Performance Indicators (KPIs) to identify Specific, Measurable, Attainable, Relevant, Timely, Evaluate and Re-evaluate, Satisfactory strategic visions. Any organisation / manager can use this as a check list and relies on firstly developing KPI and benchmark across the sector to ensure the organisation remains competitive.</p>	<p>Although this framework is relatively easy and can be applied in every organisation with directors, managers, middle managers and employees, however, the failings of this model relates to the fact that most of the components are not quantifiable and therefore not measurable and framework needs to be flexed with level, scope and purpose. Hence this framework is not intelligent to allow formation of strategic asset planning in social housing.</p>
<b>BALANCED SCORECARD</b>	<p>This model is a strategic performance management tool supported by design methods and automation tools that can be used by managers to keep track of the execution of policy and activities by the staff within their control and to monitor the consequences arising from these actions. BSC comprise of four main aspect of the business:</p> <ul style="list-style-type: none"> <li>• Financial perspective</li> <li>• Customer perspective</li> <li>• Internal business improvement perspective</li> <li>• Learning growth perspective</li> </ul>	<p>This model is intended to have relevance to all organisation types, individual managers, or head of departments where strategic framework is formed using performance targets as key drivers of the organisations continuous improvement. This model is highly relevant to this research.</p>

- The results transform strategy into action and desired behaviours;
- The concept provides strategic feedback and learning;
- It's easy to use and it is very flexible and real time based;
- It has been used in many business organisations, including the public sector agencies and local authorities and community based organisations;
- Its unique competitive advantage in terms of:
  - Reduced Time-frames;
  - Improved Decisions and Better Solutions;
  - Improved Processes.

The BSC model will be detailed in the sections below.

## **4.7 The Balanced Score Card Model**

According to Medley (2013b) the economic pressures through the changing nature of work, increasing competition, continuous business improvement, changing organisational roles and changing external demands, organisations efficiency, effectiveness, and performance have received an increasing attention over the past 25 years. The BSC model was formulated in the 1990s, Kaplan & Norton (1996) to evaluate all aspects of managerial performance. The BSC approach takes the traditional '*bottom line*' financial perspective way of managing with '*lagging measures*' and combined this with three other factors to provide a '*balance*' of the organisation current standing against its vision and strategy. Organisations are able to determine their strategic objectives and categorise them into one of four perspectives: financial, customer, internal business, and learning and growth see Figure 4.1.

### **4.7.1 The four main perspectives**

#### **4.7.1.1 Financial perspective factors**

The Finance is the most common factor used for measuring performance in most businesses, especially for private and profitable organisations where success is measured by the sales and profits being generated. Though this factor may not weigh the same in public and non-profitable organisations (Niven 2006), it enables an organisation to have a better short term goal while other factors provide both short term and long term benefits into the organisation (Garzon 2011).



Figure 4.1: An Overview of the Balanced Scorecard  
*Source: Kaplan & Norton (1992)*

In the BSC, financial objectives are translated into measures. These measures summarise the economical situation and indicate whether an organisation's strategy, implementation, and execution are contributing to financial improvement (Kaplan & Norton 1996). Although profitability and long-term financial growth are not the main purposes of non-profit organisation, Niven (2006) states that *"no organisation, regardless of its status, can successfully operate and meet customer requirements without financial resources"*. In other words, financial performance indicators have to be examined in tandem with non-financial factors to assess the overall performance of organisations. Affordable housing delivery is the main purpose of any RSL. Revenue must be sufficient to conduct activities that assist RSLs to achieve their mission by addressing community affordable housing needs.

The financial perspective assists in identifying financial-related success factors, such as revenue from the rents, setting fair rents, return on investment, refurbishment and redevelopment opportunities, etc. The question arises from the financial perspective which relates to the ability of the RSL to deliver customer services and with a weak financial background or factors create instability could adversely affect the services being provided by the RSLs. Furthermore, financial instability may also affect the bank's confidence in providing funds for housing construction, loans, credit worthiness, and other such programs

Wilcox (2013). Diversity of public and private funding sources is an important issue for the survival of both profit and non-profit organisation (Suchman *et al.* 1990). The challenge with this factor especially in social housing with the main goal to provide affordable housing for society while providing the best services in the sector with these limited resources, is to ensure all operating cost of the business are adequately provided for both short and long term. Since RSLs solely relies on income from customer rents, they adopt an agile approach for survival, creating an organisation that is financially healthy. RSLs need to work harder with all their different customer(s) - private rented, leaseholders affordable, first time buyers, share owners and sheltered, to reduce rent arrears; and to deliver a range of value for money services including housing quality, maintenance and upkeep, fair rents etc.

In the case of major capital investment, RSLs should consider forming strategic partnerships either through design and build schemes or through private finance initiatives to reduce the financial risk and over commitment of the resources.

#### **4.7.1.2 Customer perspective factors**

In the BSC, customer related objectives and measures help identify whether an organisation's strategy, implementation, and execution are contributing to the needs of customers (Kaplan & Norton 1996). According to Niven (2006), in order for a non-profit organisation such as an RSL to achieve its mission, it must primarily determine whom it aims to serve and how requirements can best be made. Unlike the private or business sector where fiscal responsibility and stewardship are the primary factors to meet financial growth, the non-profit sector performance is dependent upon meeting the mission statement. In the case of RSLs, the main focus is to serve the affordable housing needs of the community. The detailed background of customers - who make up the main RSLs clientele, was discussed in Chapter 2. Kaplan & Norton (1996) explain that improvement in performance is achieved when the clientele of the organisation is identified. After this has been done, it is essential that organisations understand their clients so that the programs and services offered are aligned with their specific needs and is responsive to their local environment so that they have the ability to deal with external opportunities and limitations (Wylde 1986, 1996). Hence, it is important to develop open and honest communication, for needs to be recognised and addressed through service delivery and inviting tenants' participation during all crucial stages of the service delivery.

Customer factors and service delivery hinges on many interrelated variables and factors, mostly associated with customers' aspirations, expectations and needs, their demographics, and the environment (such as geographical setting, and financial and political situation and support). Social housing provision therefore does not follow a single approach or solution because each tenant base, community, the environment and the regions are different.

Within the customer perspective, asset managers need to fully understand the issues underlying their customers as well as the wider social housing issues before making appropriate decisions. Hence the RSLs through the asset managers need to share a commitment to preserving, delivering, and developing affordable housing through innovative and creative efforts (Gilliard 2011). Kaplan & Norton (1996) and Niven (2006) indicate that the identification of needs allows for the development of programs and services that achieve the mission.

The challenges of the customer's perspective were detailed in the previous chapter. However RSLs and their asset managers need to fully understand the gap that may exist between customer service delivery and customer expectations / perception. According to Parasuraman *et al.* (1985, 1986, 1988) the gap may arise from the following:

1. The Customer Service Gap - The Gap between Customer Expectations and Customer Perceptions:

The customer gap is the difference between customer expectations and customer perceptions. Customer expectation is what the tenant expects, according to available resources and is influenced by cultural background, family lifestyle, personality, and experience with similar affordable housing with other social housing providers. Hence customer perception is totally subjective and is based on the customer's interaction with the accommodation and the services provided by the RSL's. Hence perception is derived from the customer's satisfaction of the specific accommodation and the quality of service delivery. The customer gap is the most important gap and in an ideal world the customer's expectation would be almost identical to the customer's perception.

In a customer orientated strategy, delivering a quality service should be based on a clear understanding of the customer needs. Knowing customer expectations could be the best way to close the gap.

2. The Knowledge Gap: The Gap between Consumer Expectation and Management Perception:

The knowledge gap is the difference between the customer's expectations of the service provided and the RSL's provision of the service. In this case, social housing providers and their asset managers are not aware or have not correctly interpreted the customer's expectation in relation to the social housing provider's services or their assets. If a knowledge gap exists, it may mean that RSL's are trying to meet wrong or non-existent consumer needs. Hence, in a social housing, where the services are focused on the customer it is important to have a clear understanding of the consumer's need for service. To close the gap between the consumer's expectations for service and management's perception of service delivery will require comprehensive market research.

3. The Policy Gap: The Gap between Management Perception and Service Quality Specification:

According to Kasper *et al.* (2006), this gap reflects management's incorrect translation of the service policy into rules and guidelines for employees. However, the pilot study contained in Chapter 5 highlighted some of the difficulties faced by RSL's in translating consumer expectation into specific service quality delivery. This can include poor service design, failure to maintain and continually update their provision of good customer service or simply a lack of standardisation. This gap may compel the customers to seek similar affordable housing with better service from other social housing providers.

4. The Delivery Gap: The Gap between Service Quality Specification and Service Delivery:

This gap exposes the weakness in employee performance. RSLs with a delivery gap may specify the service required to support customers but have subsequently failed to train their employees to put good processes and guidelines in action. As a result, employees are ill equipped to manage the customer's needs (Parasuraman *et al.* 1989, 1991, 1993a, 1993b, 1994). Accordingly, to Brink & Berndt (2008) some of the problems experienced if there is a delivery gap are:

- Employees lack product knowledge and have difficulty managing customer questions and issues
- Organisations have poor human resource policies
- Lack of cohesive teams and the inability to deliver

#### 5. The Communication Gap: The Gap between Service Delivery and External Communication:

There may be some cases where promises made by organisations through advertising media and communication raise customer expectations. When over-promising in advertising does not match the actual service delivery, it creates a communication gap (Brink & Berndt 2008). The customers may become disappointed because the promised service does not match the expected service and consequently may create dissatisfaction with the RSL and may seek alternative social housing providers (Medley 2013b).

#### **4.7.1.3 Internal business (procedures) perspective factors**

The internal business perspective is significant in terms of the processes undertaken to achieve the RSLs mission(s). The measures from the BSC perspective summarise the extent to which the organisations' strategy, implementation, and execution contribute to improvements in programs and internal procedures. According to Kaplan & Norton (1996) these measures examines whether the internal processes in place to assist the achievement of the organisational mission or not. Niven (2003) argues that in public and non-profit sectors the internal / business perspective deals with the key internal processes that lead to improved outcomes for customers and allows the organisation to achieve their mission. However, asset managers are most familiar with this area as they manage this on a daily basis. The key

measure to this perspective is based on the '*vehicle to drive*' the business forward and delivers what the customer needs. According to Castka *et al.* (2005) and Galbreath (2008): the internal business process perspective considers the following three elements:

- Corporate Social Responsibility;
- Direct Processes;
- Indirect Processes.

#### **4.7.1.3.1 Corporate Social Responsibility**

Corporate Social Responsibility (CSR) for RSL's is not just about compliance or requirements to be a supplier, but is a statement demonstrating 'business excellence' to demonstrate their standing in the community. The main areas covered under CSR relates to the safety and well-being of staff, contractors, visitors, consumers / customers and also the planet. There are legal requirements for RSLs to manage a number of these aspects, but in addition to these minimum requirements there are also recognised International Standards in Safety, Environmental, and Quality Management namely ISO 18001/14001/9001 and these standards focus on best practice and continuous improvement of procedures and management of those procedures.

#### **4.7.1.3.2 Direct Processes**

Measurement of Direct Processes has really '*kept an eye*' on those things that directly deliver a service to the customer (Doran 2013b). In social housing, these include factors contained within the asset management cluster i.e. developing a database of type and condition of properties to enable better planning of maintenance programmes; reducing response times for emergency repairs / urgent repairs; quality of routine repairs and completion targets; quality of renovations; quality of housing; reducing level of vacant voids; energy efficiency policy; track performance Service Level Agreements and how quickly work is performed to a required standard.

#### **4.7.1.3.3 Indirect Processes**

It is quite often that measures are created in those areas directly involved with serving the customer but often the importance of the indirect processes, departments and activities are

missed (Metters *et al.* 2008). The purpose of having good indirect support in place is to support the direct operations and to ensure they function to their full potential. With this in mind, it would be prudent for RSL's to monitor the performance of the indirect processes and various departments to make sure that they are not impeding on the direct operations. In chapter 7, typically the factors that will form part of this category are identified and includes: affordable housing provision; rent collection and arrears management; financial stability; solvency - tenants ability to pay rent; minimal evictions and court actions; return on investment; market intelligence – future supply and demand trends; strategic partnerships; management culture and style of the RSL; and staff participation.

#### **4.7.1.4 Learning and growth perspective factors**

In the BSC, the Learning and Growth perspective is an area that is probably least measured by most business organisations but it holds the key to future sustainable success Niven (2003). Too many business organisations manage Learning and Growth as disjointed exercises (Doran 2013b). Combined together they very much form the main '*hub*' that will take any RSL well beyond anything it has achieved previously (Doran 2013c). According to Kaplan & Norton (2001), learning-and-growth perspective is often referred to as an 'employee metric' or a framework that assesses employee satisfaction and productivity. The conventional enablers of Learning and Growth in the BSC framework include staff competencies, technological infrastructure, and climate for action. These factors are global, remain external to the personal perspective and are insufficient for "*driving down*" strategy. Hence, Laske (2001) introduced into BSC an additional tier of "*meta-enablers*" for learning and growth. Meta-enablers are mental-growth competencies that are developed and enable the conventional enablers, such as employee satisfaction, productivity, and retention (staff competency, use of strategic technology, climate for action). This framework is not just behavioral and statistical but "*developmental*" knowledge, professional growth and competency over the life span of the employee (Laske 2000) which is a key element of strategic human resources function in any business organisation. Laske (1999) developed a novel metric tool called '*Corporate Development Readiness and Effectiveness Measure*' (CDREM) that relies on interviews and questionnaires and makes visible, and opens to intervention, the formerly intangible mental-growth assets of personnel. Measures of readiness have been shown to function as "*meta-enablers*" that "*enable the enablers*" with which they stand in a cause-effect relationship. Meta-enablers have two main features: first,

they are “*internal*” (not external) and “*qualitative*” (not statistical), in that they refer to actual individuals’ and or teams’ mental growth in terms of both kind and degree; second, meta-enablers make visible the cause-effect relationship existing between adult mental growth (“tier 1”) and customary learning-and-growth enablers (“tier 2”) – see Figure 4.2. This concept is important to asset managers where human capital investment through staff training and grooming all ‘front line’ staff in contact with customers is paramount to ensuring customer satisfaction.

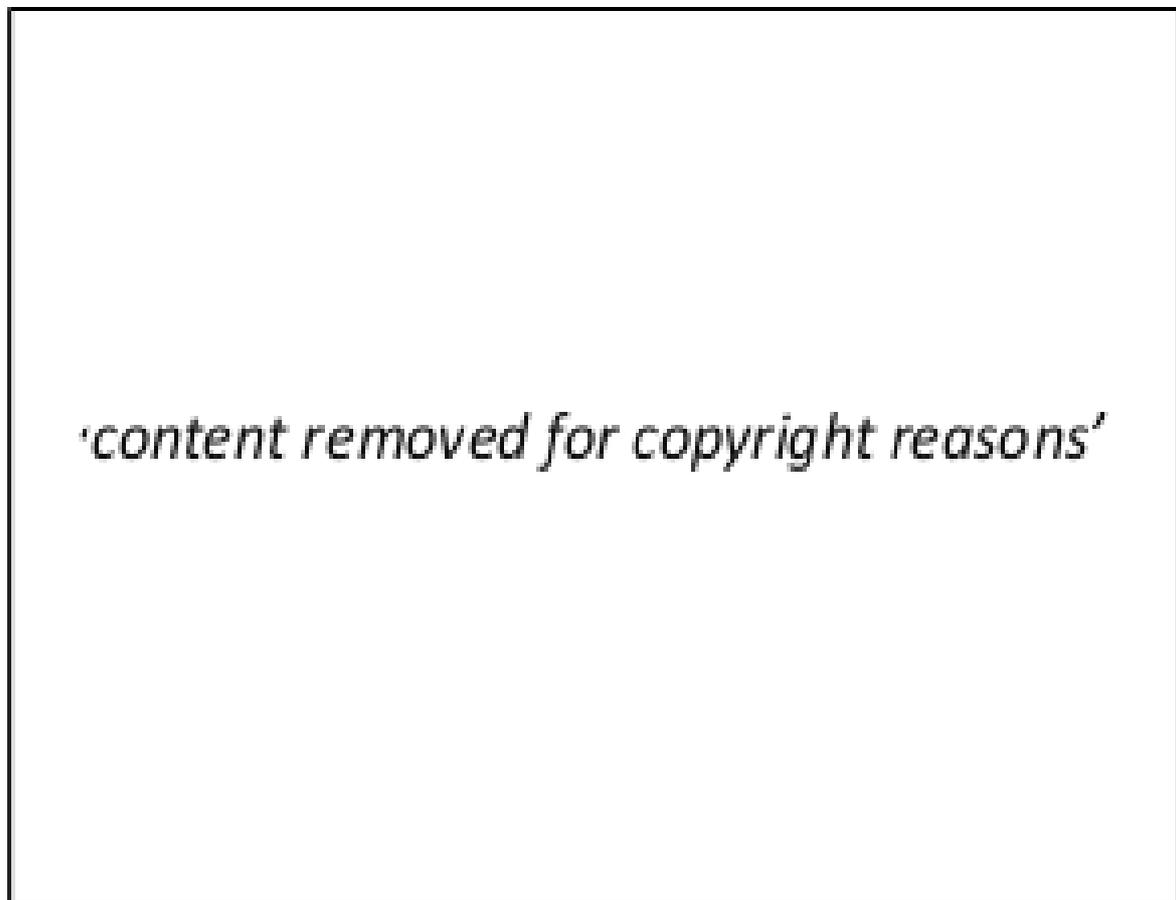


Figure 4.2: The CDREM two-tiered learning-and-growth metric  
*Source: Laske (1999)*

#### **4.8 Challenges and key success factors to implement the Balanced Scorecard**

None of the books or any publication written by Kaplan and Norton have they identified conditions that an organisation must have in order to be able to apply the BSC. The way they

describe organisations that applied the BSC in numerous examples suggests that this method is universally applicable. According to Kaplan & Norton (1996), the BSC enables companies to modify strategies. Companies in a highly dynamic environment have to change their strategy constantly which in turn leads to frequent changes in the BSC. In a critical analysis of the BSC, Nørreklit (2000) stated that companies in dynamic surroundings will frequently change their measures, resulting in a substantial uncertainty margin regarding the usefulness of the defined indicators. In general, it is difficult for an RSL to establish performance measures for activities with which the organisation has very little or no experience (Doran 2013c). The measurement of the effects are particularly difficult in companies which constantly have to adapt to new situations, the BSC is not applicable for companies in highly dynamic environments.

Although Kaplan and Norton describe many successful implementations of the BSC, they also identify sources of the failure of the Balanced Scorecard implementation. Table 4.2 shows the obstacles and key factors in the implementation of the BSC.

Table 4.2: Challenges and Key Success Factors to Implement the BSC

Authors/ (research method)	Obstacle	Description	Key factor	Where the Research objectives fit
Kaplan & Norton (2001)	Too few measures (two or three) per Perspective	As mentioned before, a good BSC should have an appropriate mix of outcomes (lagging indicators) and performance drivers (leading indicators) of the company's strategy. Therefore, when the organisation constructs too few measures in each perspective, it fails to obtain a balance between leading and lagging indicators or non-financial and financial indicators.	Obtain a balance between leading and lagging indicators.	In-depth interviews revealed 53 variables factors that can be spread across the 4 perspectives to capture the entire maintenance strategy and social housing organisation
Kaplan & Norton (2001)	The organisation adopts too many indicators	In this case, the organisation will lose focus and cannot find any linkage between indicators.	Obtain only the indicators that reflect strategy and are most critical.	The repertory grid variables have been crossed checked with RSLs customers to verify their relevance
Kaplan & Norton (2001)	Measures selected for the scorecard do not reflect the organisation's strategy	This happens when the organisation tries to apply all their Key Performance Indicators (KPIs) into each perspective without screening only for the measures that are linked to its strategy. Therefore the organisation's strategy is not translated into action and the organisation does not obtain any benefit from the BSC.	Only select measures that are linked to the organisation's strategy.	The 53 variables and their associated clusters are reflective of the RSLs business environment and the strategy.
Schneiderman (1999),	Try to make a quantitative link	The financial measures are the dependant variables and are the	Do not make a quantitative link	The repertory grid factors link well

<b>Nørreklit (2000)</b>	between non-financial leading indicators and expected financial results	retrospective, lagging indicators. Some organisations are tempted to make this linkage quantifiable, but since lag time is difficult to predict and numerous factors may influence the result, a quantitative link cannot be established. Therefore, they should not make a quantitative link between non-financial leading indicators and expected financial results.	between non-financial leading indicators and expected financial results.	with the qualitative and quantitative factors as advocated by BSC framework model
<b>Kaplan &amp; Norton (2001), Braam &amp; Nijsen (2004), Schneiderman (1999)</b>	Lack of senior management commitment	Delegation of the project to middle management and defining the project as performance measurement is described as one of the most common causes of failure, by missing focus and alignment to implement strategy. This is a process that can only be led from the top.	Senior management should support and lead defining the project as performance measurement.	The RG factors have been entirely developed by the asset managers and cross checked by senior directors and board members to confirm the appropriateness
<b>Kaplan &amp; Norton (2001)</b>	Too few individuals are involved	The senior leadership team must work together to build and support the implementation of the BSC, including objectives, measures and targets. If not, there cannot be the shared commitment which is required to align the organisation.	The senior leadership team must work together to build and support the implementation of the Balanced Scorecard.	The data used in this research have been formulated by senior managers directly in-charge of the social housing assets and day to day management of the housing stock
<b>Kaplan &amp; Norton (2001), Schneiderman (1999), Andersen <i>et al.</i> (2001)</b>	Keeping the scorecard at the top	To be effective, the BSC, including strategy and action to support implementation, must eventually be shared with every member of the organisation. If there is no deployment system that breaks high level goals down to the sub-process level where actual improvement activities reside, significant process improvements throughout the organisation fail to generate bottom line results.	Involve the whole organisation in the implementation process.	Changes in the current market impose significant challenges on RSLs and will require commitment from senior directorate to implement significant changes to managing assets.
<b>Kaplan &amp; Norton (2001), Braam &amp; Nijsen (2004)</b>	The development process takes too long	If the implementation takes too long, it can happen that during the implementation process, the strategy has changed. This results in the fact that some indicators have become obsolete and requires new indicators. Measuring with wrong indicators can distract an organisation from its strategy	Keep the development process short.	BSC will allow RSLs to fully understand the business case and transform refine their strategic and operational base and implement KPIs
<b>Kaplan &amp; Norton (2001)</b>	Introducing the BSC only for Compensation	Support for the linkage of compensation to strategic measures can only occur effectively when it is part of the process of strategy translation in the organisation	Support the linkage of compensation to strategic measures when it is part of the process of strategy translation in the organisation.	This research has identified shortcomings which can be addressed through developing and implementing BSC tools to reflect the ever changing business environment

#### **4.9 Balanced Scorecard Generation Models - \* this section has been directly extracted or paraphrased from Julyan (2011).**

The first version of the BSC (Kaplan & Norton 1992) included four perspectives, each of which posed a question, the answer to which was a goal that was translated into a performance measure. All four perspectives were linked to each other. The four perspectives were:

- Financial (How do we look to our shareholders?);
- Customer (How do customers see us?);
- Internal business (What must we excel at?);
- Innovation and learning perspectives (Can we continue to improve and create value?) (Kaplan & Norton 1992).

After the publication of the 1992 article, many senior executives requested Kaplan and Norton to help them to implement BSC in their organisations (Kaplan & Norton 1996). During the implementation of the first version of the BSC, many developments took place, the first of which was the realisation of the importance of linking the measures in the BSC to the strategy of the organisation (Kaplan & Norton 1992). While this concept appears obvious, at the time, most companies were attempting to improve the performance of existing processes – by improving quality, lowering costs and shortening response times – but were not determining which processes were strategic. Strategic processes have to be performed exceptionally well for the organisation to succeed (Kaplan & Norton 1996).

Further BSC implementations showed that the BSC represented a fundamental change in the underlying assumptions about performance measurement (Doran 2013d). Previously, as was typical of traditional performance measurement systems, control of employee behaviour was central, a practice also in line with the Industrial Age thinking. With the BSC, strategy is central, goals are established from this, and employees decide what actions are necessary to achieve these goals. The focus is therefore the achievement of strategy rather than control (Kaplan & Norton 1992).

In 1993, an article which highlighted the importance of choosing strategic measures (Kaplan & Norton 1992). The article provides corporate examples which illustrate how the BSC uniquely combines management and measurement and also includes comments from

managers on challenges and triumphs experienced with BSC implementation in their specific organisations. In this article, the BSC is found to be most successful as a means of driving change in an organisation.

Further advice and applications led to the BSC evolving from an improved measurement system to a core management system. These developments were summarised in a third article entitled “*Using the Balanced Scorecard as a strategic management system*”, Kaplan & Norton (1996). In the article, the vision and strategy have been inserted into the centre of the BSC illustration and linked to the four BSC perspectives, as illustrated in Figure 4.3. Further, the article introduces four management processes that contribute to linking long-term strategic objectives with short-term actions. The four processes are shown in a circular movement, indicative of a continual process.

- The first process – translating the vision involves managers’ finding consensus around the vision and strategy of the organisation;
- The second process – communicating and linking – requires managers to communicate the strategy up and down in the organisation by linking the strategy to departmental and individual objectives;
- The third process – business planning – allows companies to integrate their business and financial plans;
- The fourth process – feedback and learning – provides the opportunity for companies to learn from the whole process, which is referred to as strategic learning (Kaplan & Norton 1996). The BSC creation process is identified as integrating the strategic planning and budgeting processes, ensuring that budget support strategy.

The next development in the application of the BSC took place with the publication of Kaplan & Norton’s 2001 book entitled “The strategy-focused organisation”. The book is divided into five parts as follows:

- 1) Translating the strategy into operational terms;
- 2) Aligning the organisation to create synergies;
- 3) Making strategy everyone’s everyday job;
- 4) Making strategy a continual process and;
- 5) Mobilising change through executive leadership (Kaplan & Norton 2001).

This book demonstrated how the BSC can be used by management to align the key management systems and processes to the strategy; the role of strategy maps in the BSC alignment process; and introduced the application of the BSC to Non Profit Organisations (NPOs) and government organisations - suggested that the BSC be adapted for public sector use. Lastly, the concept of integrating the performance measures into a strategic management system is introduced.

*'content removed for copyright reasons'*

Figure 4.3: The Balanced Scorecard Framework to Translate Strategy into Operational Terms  
*Source: Kaplan & Norton (1996)*

Kaplan & Norton focused on how to translate strategy into operational-level objectives and in 2006 focussed on aligning the organisation to the strategy (Kaplan & Norton 2006).

Nair (2004) suggests that Kaplan and Norton were amazed that a large number of companies have adopted the BSC in a relatively short time. Other analytic applications like Activity-Based Costing / Management (ABC/M), budgeting, planning, Customer Relationship Management (CRM) and Supply-Chain Management (SCM) have taken years along the “*normal paths of recognition and adoption*” before being used extensively.

A Bain & Co study in 2004 showed that more than 50% of Fortune 1000 companies and 40% of companies in Europe were using some form of the BSC (Nair 2004, p.4). Two years later, estimates suggested that 60% of Fortune 1000 companies had a BSC in place and 96% of the global companies surveyed by the Hackett Group either had or planned to implement a BSC (Niven 2006, p.2). Just as large ships chart their position before commencing a voyage, organisations should measure their present position before determining their future direction (Nair 2004).

Kaplan & Norton (1996) argue that an organisation’s measurement system greatly affects the actions of people inside and outside the organisation. They go as far as to say: “*If you can’t measure it, you can’t manage it*”. Business performance measurement is a basic management technique; it would therefore be expected that most organisations would have an established performance measurement system by now (Neely 1999). However, performance measurement and management are generally problematic, with 80% of organisations surveyed reported that they had made changes to their performance management system during the past three years, 33% of which were major overhauls (Niven 2003, p.38). Meyer (2002, p.1) quotes an article in a 1995 edition of the Chief Financial Officer as follows: “*According to a recent survey, 80 percent of large American companies want to change their performance measurement systems*”. Results of a 1996 survey by Towers Perrin, a consulting firm, show that 64% of the respondents were more satisfied with or gained more value from the BSC than from other performance measurement approaches (Ittner & Larcker 1998, p.221-223). Before focusing on the BSC, it is necessary to consider the following insight on the role of performance measurement by Amaratunga *et al.* (2001, p.179):

*One of the hallmarks of leading-edge organisations – be they public or private – has been the successful application of performance measurement to gain insight into, and make*

*judgements about the organisation, and the effectiveness and efficiency of its programmes, processes and people.*

The BSC succeeds very well in establishing a realistic norm and a standard approach to strategic performance measurement (Srimai *et al.* 2011a). The BSC adds value because it provides relevant and balanced information for managers in a concise way (Mooraj *et al.* 1999).

Niven (2003) identifies the following three factors that have fanned the need for improved performance reporting and management and for the BSC:

- Recent corporate accounting scandals like the Enron's scandal, Lehman Brothers bankruptcy in 2007;
- Long-term reliance on financial measures as the gauge of success;
- The inability of many organisations to execute their strategy, which Nair (2004) concurs with, and which is discussed later in this paragraph.

Drury (2008) is of the opinion that the BSC concept was conceived from the need for an integrated framework which could clarify, communicate and manage the implementation of the strategies of the organisation. Kaplan & Norton (1996) argue that the BSC came into being because of the conflict between the need to build long-term competitive capabilities and the entrenched "historical-cost financial accounting model". While the historical financial measures were sufficient for industrial-age organisations, the information age calls for measures that create future value. According to Kaplan & Norton (1996a), the beauty of the BSC is that it retains financial measures of past performance, but adds measures which create future value. Through the application of the BSC, a complete framework is created where all aspects are integrated. This leads executives of information-age organisations to measure: how value is created for current and future customers, how they should enhance internal capabilities, and how to invest in employees, processes, technology and innovation. This could improve future organisational performance towards attaining the mission and meeting the strategic goals of the organisation (Kaplan & Norton 1996a).

While many people think of measurement as a tool to control behaviour, the measures on the BSC are being used to express and communicate the strategy of the organisation and then to align individual, cross-departmental and organisational initiatives to achieve a common goal (Kaplan & Norton 1996a). Some scholars suggest that an organisation should base its performance measures on its responsibilities, goals and strategies (Weil & Maher 2005).

Other scholars argue that in the information age it is essential that the mission, strategies and capabilities are used as the basis for the measurement systems of organisations where all aspects need to be measured and not just financial measures (Kaplan & Norton 1996). The BSC meets this need as it links measures from various perspectives covering the financial and more general measures such as customers, employees and internal processes and systems (Kaplan & Norton 1996a, p.25). While the importance of linking performance measurement to strategic planning has been well documented, no tools of this nature existed previously, but the BSC is a formally documented strategic performance measurement model (Atkinson *et al.* 1997). The BSC is able to measure the present position of the organisation and provide balanced action plans which cover the main financial and nonfinancial drivers that give direction in both good and poor economic times (Nair 2004). The flexibility of the BSC is illustrated by its ability to evolve (Bible *et al.* 2006).

Strategic planning exercises often promote the alignment of the vision, mission, core values and strategy (Nair 2004). Analysis of strengths, weaknesses, opportunities and threats, generally known as SWOT analysis, is also done. SWOT analysis is generally used by organisations to ensure that all elements are incorporated into the strategic plan (Nair 2004). Many organisations are experiencing problems, not with strategy formulation, but rather with strategy execution (Kaplan & Norton 2001).

NPOs and government organisations experience problems in defining their strategy, sometimes producing “*strategy*” documents of up to 50 pages which do not even state the outcomes they are trying to achieve, instead, these documents tend to list programmes and initiatives (Kaplan & Norton 2001). NPOs and government organisations are especially at risk of having a strategy that is too broad and they also need to decide what they are not going to do. Nair (2004) argues that a major challenge arises when senior management wish to drive new strategies in an organisation which is operating in a certain manner, making the greatest challenge that of bridging the gap between strategy and the execution of strategy (Nair 2004). This is confirmed by the BSC hall of fame report 2005 (2005), which emphasises that having a good strategy will not result in success – good execution of the strategy is crucial to success. In a survey done to ascertain whether the BSC adds value to companies, and if so, how it contributes to organisational performance, responses were received from 76 business unit managers from 24 different organisations who had attended BSC conferences in Zurich, Lausanne, London and Brussels in 1999 / 2000 (De Geuser *et al.*

2009). The results indicate that the BSC improves the integration of management processes, empowers people and has a positive impact on organisational performance. Performance derived from the use of the BSC had the following benefits: firstly, improved translation of the strategy into operational terms, secondly, strategising became a continual process and thirdly, units experienced improved alignment between “*processes, services, competencies and units of an organisation*” (De Geuser *et al.* 2009). By translating the vision and strategy of an organisation into operational terms, the BSC communicates the strategic intent and inspires performance against set goals (Ittner & Larcker 1998). In the application of the BSC in a local government setting in Italy, the use of the BSC improved the ability of managers and other employees to focus on strategy and targets, resulting in improved service to citizens (Farnetti & Guthrie 2008). The BSC provides an operational framework for aligning strategies with operational level actions, thereby bridging the gap between strategy and execution of strategy, as is illustrated in Figure 4.4

It is clear from Figure 4.4, that the BSC can align objectives, measures, targets and initiatives to the strategies of a facilities management organisation Smith & Pitt (2007), Amaratung *et al.* (2008), Amaratunga & Baldry (2011). The BSC can therefore solve the problem of misalignment between the strategy that top management believes are being executed and the actions being performed at various levels in the organisation (Niven 2003; Nair 2004). A 2000 / 01 study of the major companies traded on the stock exchanges of Germany, Austria and Switzerland showed that the greatest benefit experienced from using the BSC was the improvement of the alignment of strategic objectives with the actual actions of staff (Speckbacher *et al.* 2003). Aligning current operations to strategic goals is key to the long-term success of organisations (Weinstein (2009), Weinstein & Bukovinsky (2009)) and is also being used for that purpose in the public sector in Singapore (Kon 2005; Sarshar (2006) when reviewing the facilities management with hospital sector:



Figure 4.4: Where the BSC fits in FM  
*Source: Amaratunga & Baldry (2011)*

Nair (2004) identifies two forms of what he terms “strategic paradox” in strategy formulation and execution, namely:

- Mistakenly believing that strategy results in operational effectiveness;
- Mistakenly assuming that there is always an alignment between strategy and actions in an organisation, as illustrated in Figure 4.5.

In Figure 4.5, an example of strategic paradox in the private sector is illustrated, based on the following strategy: “*Dominate, with 60 percent share, the XWZ market, by building a consumer focus*” (Nair 2004, p.8-10). The three strategic thrusts in reaching the strategy are indicated on the diagram by means of rectangles. The blue triangle is the emphasis and the direction that the executive leadership of the organisation believes is being used to execute the documented strategy. The peach triangle represents the actual key actions being taken collectively by staff, or in other words the place where the resources of the organisation are being applied. The overlap between the blue and peach triangles represents the area where there is alignment between the strategy and the actual key actions. The BSC attempts to remove the strategic paradox to ensure that all actions being performed on the ground are aligned to the strategy of the organisation (Amaratunga *et al.* 2008). By identifying clear performance targets at all levels in the organisation and involving all employees in the discussion of strategic priorities, the BSC can create a link between strategic objectives and operational goals, provided that the BSC can be integrated successfully into the management control systems (Atkinson 2006).



Figure 4.5: Illustration of Strategic Paradox  
Source: Amaratunga *et al.* (2008).

Key: The blue triangle represents the key actions required to execute the strategy.  
The peach triangle represents the actual key actions being performed

While it is shown above that the BSC was developed from the need for an integrated performance measurement system, which can convert strategy into operational terms, it developed into a management system. Amaratunga *et al.* (2008), contends that the BSC attempts to move organisations from 'monitoring' to 'measurement' to 'management' to 'direction-setting', as is illustrated in Figure 4.6, which also defines the above terms. Braam & Nijssen (2004) limit their discussion of two levels of BSC adoption, namely that of a performance measurement system and that of a strategic management system. When studying innovations such as the BSC it is important to take the level of adoption into account (Braam & Nijssen 2008). When the components and functions of seventeen different performance measurement systems are compared, the BSC is one of only three systems that meet all the set criteria to qualify as a performance measurement and management system (Srimai *et al.* 2011b).



Figure 4.6: Possible Level of Use BSC  
*Source:* Own observation, adopted from Nair (2004)

#### Performance Prism

Finally, another alternative strategic tool is the Performance Prism, see Figure 4.7. It looks significantly more complex than a BSC and identifies stakeholders as everybody in the organisation as well as external customers and suppliers (Bourne *et al.* 2002). Pathirage *et al.* (2007) explains the benefit of this is that everyone as stakeholders are represented; the negative is that there are more measures to be made and is less likely to be fully understood by new practitioners of implementation.

#### **4.9.1 Adapting the BSC Framework for Public Sector Use**

Figure 4.3 illustrates the BSC framework which Kaplan and Norton developed and which was initially intended for the private sector. The BSC can be used in the public sector, but it needs to be adapted to ensure best practice in the specific area where it will be applied (Estis 1998; Kaplan 2001; Whittaker 2001; Niven 2003; Braam & Nijssen 2004). Figure 4.7 and Figure 4.8 reflects the adapted public sector BSC framework developed by Niven (2003), chosen because it is the most recent. This BSC framework was also chosen by Botes (2006) for application in a non-profit scenario.

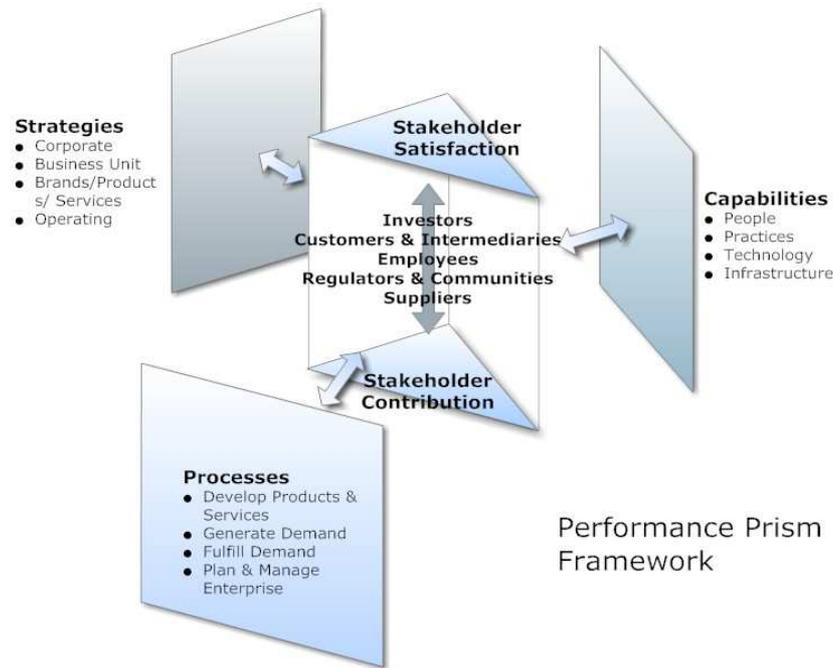


Figure 4.7: Performance Prism Framework Image  
 Source: Smart draw (2013)

Unlike in Figure 4.3, where the detailed outline of the end product is provided, Figure 4.8 only provides the general BSC outline, so that the change in emphasis from the private sector to the public sector BSC is clearly visible. As illustrated in Figure 4.8 above, the mission of the public or non-profit entity should be at the top of the BSC (Kaplan & Norton 2001; Whittaker 2001), because that is the core aspiration that the entity is striving towards (Estis 1998; Kaplan & Norton 2001; Whittaker 2001). Adapting the BSC by moving the mission to the top of the BSC, and moving the Financial Perspective down, has become a common practice for a public sector BSC (Kaplan & Norton 2001; BSC hall of fame report 2005). As will be noted from the outline of the adapted public sector BSC in Figure 4.8, adapts the BSC and retains the four perspectives used for the private sector BSC, but the focus be adapted to make them more applicable to the public or non-profit sector.



Figure 4.8: BSC Framework for the Public and Non-Profit Sectors  
*Source: Niven (2003)*

**4.10 Public sector translation process via the BSC** -\* this section has been directly extracted or paraphrased from Julyan (2011).

**4.10.1 Overall approach**

Kaplan & Norton (2001) contend that NPOs and the public sector have difficulty in clearly defining strategy, with strategy documents often running to 50 or more pages. Lists of intended programmes or initiatives are often presented as strategy, not the desired outcomes. It should be understood that strategy is not only what the organisation intends to do, but also what it decides not to do (Porter 1996 in Kaplan & Norton 2001). Figure 8.7 illustrates the BSC development process, with a summary of the terminology that Niven (2003) suggests in translating the mission of a public sector entity into objectives and measures. The BSC translation process proposed was outlined by Kaplan & Norton (1996). While the BSC is not intended to be a strategy formulation tool, different interpretations of strategy by different managers are often highlighted during the first process of clarifying the vision and strategy (Kaplan & Norton 1996). The translation of the BSC to concrete action is a problematic area (Paranjape *et al.* 2006). In Figure 4.8, the arrows indicate a top-down and a bottom-up approach. The top-down approach is one in which consensus is reached on the mission, core

values, vision and strategy, which are then translated into objectives and measures via the BSC. The bottom-up approach is one in which learning takes place through the use of the BSC. Both approaches are of equal importance (Niven 2003). The feedback and learning process, referred to as double-loop learning, is considered to be the most innovative and far-reaching facet of the whole BSC process because it enables executives to monitor and manage the implementation of their strategy, and therefore change the strategy if necessary (Kaplan & Norton 1996).

In Figure 4.9, the pyramid shape, the four steps within the pyramid and all the text in, next to and above the pyramid, excluding the text in brackets, are from Pitt (2010). The text in brackets was added to the original diagram to clarify the concepts from Niven (2003).



Figure 4.9: Public Sector Translation of the Mission into Objectives and Measures via the BSC

*Source:* adopted from Pitt (2010) and Niven (2003)

Nair (2004) does not differentiate between public and private sector organisations. His approach to creating a BSC is similar, yet different from that of Niven, as is illustrated in Figure 4.10 below.



Figure 4.10: Creation of a BSC in a Housing Association  
*Source: Amaratunga & Baldry 2010, adopted from Nair 2004*

The outline of the pyramid shape in Figure 8.8 and the text in the pyramid, with the exception of *“Build BSC”*, is from Nair (2004). The placement of the text in the pyramid in eight steps was the result of own observation. The addition of the text to the left of the pyramid and the addition of the *“Build BSC”* step is an own observation, based on Nair (2004, p.195-196).

## 4.11 Summary

This chapter reviewed different dimensions of DSS and decision making. In particular, this chapter appraised the strategic decision making theory, characteristics of strategic decision problem, definitions of DSS, types and components of DSS, characteristics of DSS, and finally various business models were examined to establish their appropriateness and usability in social housing.

Customers now have higher expectations than before, requiring everything to be done faster, better and cheaper, with product delivery, quality, after-sales service and customer satisfaction being key variables. In the public sector, reduced funding and demands for accountability and transparency have contributed to the “*new public management*” (NPM) movement which introduces private sector financial management practices into the public sector. The effect of this is that the public sector is operating more like a business than ever before.

The use of the BSC was found to meet the performance measurement needs of organisations operating in the information age. These needs include a system that is integrated, ensures strategy execution by aligning current operations to strategic goals, assesses progress in achieving the mission rather than simply measuring inputs and outputs, strikes a balance between intangible assets which are the drivers of success and the integrity of financial numbers, retains measures of past performance and adds measures to create future value. Even though time, cost and quality are just as important in the public as in the private sector, the effect of unhappy constituents is only felt in the long term, not the short term.

Having carefully evaluated the different models, all factors are indicating that the RSLs operating base is changing from the public sector to the private sector. The future of RSLs is influenced by change legislation and the current coalition government’s drive for RSLs to become more and more commercially competitive and adopt a corporate social landlord business approach in managing the service delivery. So far, BSC was found to be the most appropriate business model that encapsulates the entire core business function of RSL organisations.

# **CHAPTER 5**

## **RESEARCH METHODOLOGY**

### **5.0 Introduction**

This chapter discusses the main research instruments and the research framework adopted in this research. The research questions of the thesis are elaborated in this chapter. Furthermore, the research methods used to fulfil the stated research aims and objectives are explained and justified. Hence the chapter is divided into three main parts, the first part examines the research purpose and research methods; the second part, discusses the research framework together with justifications and the step by step procedures that were followed. The third part examines the application of the research methods used.

### **5.1 PART 1: Research Purpose**

The main aim of this research is to develop a Decision Support System (DSS) for evaluating housing maintenance strategy for use by social housing asset managers. If the DSS is used effectively, it will allow RSLs to deliver the best possible customer services to their residents in the current economic market where public resources (finance, human and technological) are extremely limited. In order to succeed in doing so, it is essential for asset managers and business managers to develop accurate management information tools that will assist them in mapping out those key business risk factors that affect the effective maintenance service provision to their key customers Marsden & Littler (2000). Balanced Scorecard (BSC) was chosen as business management tools for modelling a framework for housing providers to improve business performance and the quality of the various components that makes up the process for better management, housing maintenance services and customer service delivery. These key factors would need to be modelled to assess their individual impact on the organisations business plan with a view of creating an effective facilities maintenance management plan (Amaratunga 2002). To conduct research that can inform and improve housing maintenance strategy, it is essential to understand how senior housing asset managers construct physical interactions within their environment, what are their preferences and needs (Graafland 2001), i.e. how reality is socially constructed through different kinds of

interactions and experiences (Jankowicz 1990; Marsden & Littler 2000; Berger & Luckman 1976).

### **5.1.1 The Research question**

This research questions the following issues:

- How to address the subjective aspects of developing housing (asset) maintenance management strategy?

A huge number of factors determine the nature of housing maintenance management strategy – the user, the houses in which they live in (type, construction, age, condition, location) the quality of service delivery provided by the RSL, RSL policy / organisation and the RSL relationship with their tenants. These factors are also interrelated which makes the context a complex web of interdependent factors. Ideally, the asset managers would like to map all possible factors and their interrelations.

One of the key step to delivering a successful asset management strategy is to achieve an understanding of the nature of the assets and understanding the tenants (customers).

- How tenants view their accommodation and experience of the RSL?
- How asset managers develop maintenance strategies within the environment they are working in? and
- How RSL policies influence over the decision to develop an objective strategic approach?

In this context, the asset management tools and techniques to consider appropriate factors that are integral to the assets themselves. Then, it should be considered how to elicit asset manager's thought process of developing asset management strategies and users' satisfaction perceptions of the assets?

As already stated in Section 1.3, this research develops a DSS for housing maintenance management strategy. This is carried out by seeking answers to the following key research questions:

1. *‘in light of the constrained nature of housing maintenance in the social housing sector and given the present economic climate and changing legislations what factors do you feel will affect the housing maintenance strategy both today and in the future’?*
2. *‘in light of the constrained nature of housing maintenance in the social housing sector and given the present economic climate and changing legislations what factors do you feel will affect the customer expectations and customer service delivery both today and in the future’?*

In order to seek the answer to these key questions several sub-questions have emerged from this research:

1. *What are the changes in the regulatory framework in social housing and what are the challenges faced by registered social landlords (RSL) in today’s economic climate;*
2. *What is the role and responsibility of RSLs? and what are the key factors that affect development of maintenance management strategy of their social housing stock;*
3. *How do RSL relate to their customers (do they understand their customers expectations) and how successful are they with customer service delivery?*
4. *What are the critical factors which influence the development of housing maintenance management strategy and customer service delivery?*
5. *What is the ‘best’ business model that encapsulates the entire core business function of RSL organisations?*

## **5.2 Paradigms of Research**

Research can be described as a careful search or investigation or more specifically as a “*systematic investigation towards increasing the sum of knowledge*” (Fellows & Liu 1997). Research for a doctoral degree is likewise described by Phillips & Pugh (2010) as “*a process of investigation which contributes to an existing body of knowledge*”. Naoum (2012) also comments this should be done in a scientific or critical manner and have an aim and objective.

With this in mind when undertaking a piece of research, the research design and methodology used are crucial to identify the research phenomena in question. How the data is collected,

analysed, and interpreted can significantly affect the way research aim and objectives are approached and answered. It is therefore essential to consider the methodological framework used in research projects and how the researcher and participants affect the final outcome of the research process.

The challenge is to develop a robust system that can assist senior asset managers to improve service delivery, performance management and also adding value to the business decision making process of an RSL organisation (Pitt 2010; Popov 2002).

A researcher will normally consider the elements that constitute a valid research and pursue appropriate research methods. The research paradigms will guide the researcher to conduct and / or evaluate the research, and consider how elements of the research area fit together (Denzin & Lincoln 2000; Wisker 2001). The research approach systematically describes the activities that will be performed in order to achieve the research goal. The approach consists of three aspects (Vreede 1995):

- a. Research principle: an underlying philosophy to guide the way the problem is studied;
- b. Research strategy: the method to accomplish the research goal;
- c. Research instruments: the tools to carry out or implement the strategy.

The research approach is chosen based upon the characteristics of the research goal and the existing literature.

### **5.3 Research Methodologies**

The purpose of this research is to develop a decision support system for housing maintenance strategy to aid asset managers in delivering customer services in social housing. This involved undertaking 'in depth' interviews with industry's experts to capture knowledge and the thought processes involved in developing an affective housing maintenance strategy. Drawing on the literature on research methodology (Creswell 2009; Baskerville 2000; Fellows & Liu 1997) and the assistance of experts in the field of maintenance management the researcher adhered to a critical 'common sense' approach in order to identify, investigate, and interpret the effects of maintenance management strategies.

This study makes extensive use of qualitative research methods. Some researchers see quantitative and qualitative methods as ‘two sides of the same coin’ and argue that both have their place within contemporary social science research. Others, however, take a different view: *Quantitative and qualitative methods are more than just differences between research strategies and data collection procedures. These approaches represent fundamentally different epistemological frameworks for conceptualising the nature of knowing, social reality, and procedures for comprehending these phenomena* (Filstead, 1979, p.45)

Quantitative research is grounded in the evidence of observation and technical procedures such as statistical analysis. In qualitative research, with its different evidence base, there can be a difficulty of generalising from the results, which is one of the reasons why a qualitative research framework may be criticised by quantitative researchers. On the other hand, quantitative approaches are criticised by some philosophers of science. Harre (1986) notes that a quantitative methodological approach based on positivism fails to give adequate recognition to particular scientific theories of hypothetical entities. Qualitative methods have been applied by social scientists for both underlying philosophical background and the investigation of social reality. The characteristic of qualitative research is *‘its express commitment to viewing events, action, norms, [and] values from the perspective of the people who are being studied’* (Bryman, 2008, p.61). Denhardt (2011) said that the perspectives of the people being studied can often be the best way to understand complex issues in social science. Qualitative methodology in particular is suitable when there is a prior set of assumptions about the study of social reality.

The main method of qualitative research is participant observation to describe and analyse the culture and behaviour of individuals and groups from the point of view of the participant observer(s). This approach applies also to the use of unstructured interviews in qualitative research, which is different to the use of structured large scale, statistically determined sample surveys. However, neither unstructured nor structured interviews can expect to observe all relevant situations and processes and this is recognised as one of the limitations of qualitative research (Bryman, 2008).

## **5.4 PART 2: The Research Framework**

The research design maps the objectives of this study. In order to facilitate data collection and ensure that accurate housing and asset management information was analysed, the researcher adopted a pro-active and progressive research strategy in this otherwise complex and politically sensitive area of social and public study.

As an overview, the research framework was designed and followed in a systematic approach described below, and clearly taking into account prior considerations of research strategies outlined earlier in this section. The main knowledge acquisition strategies utilised in this study by the researcher were fragmented into the key stages as illustrated in Figure 5.1.

The research process used to carry out this investigation comprised of the following key stages outlined below:

1. Literature Review;
2. Case Study with key 5 RSLs;
3. Workshops 1 - disseminate findings;
4. Pilot survey;
5. Workshop 2 – eliciting and laddering of some key strategy constructs for dry running;
6. Dry Runs;
7. Repertory Grid in-depth interviews;
8. Data analysis;
9. Development of model and validation of the model.

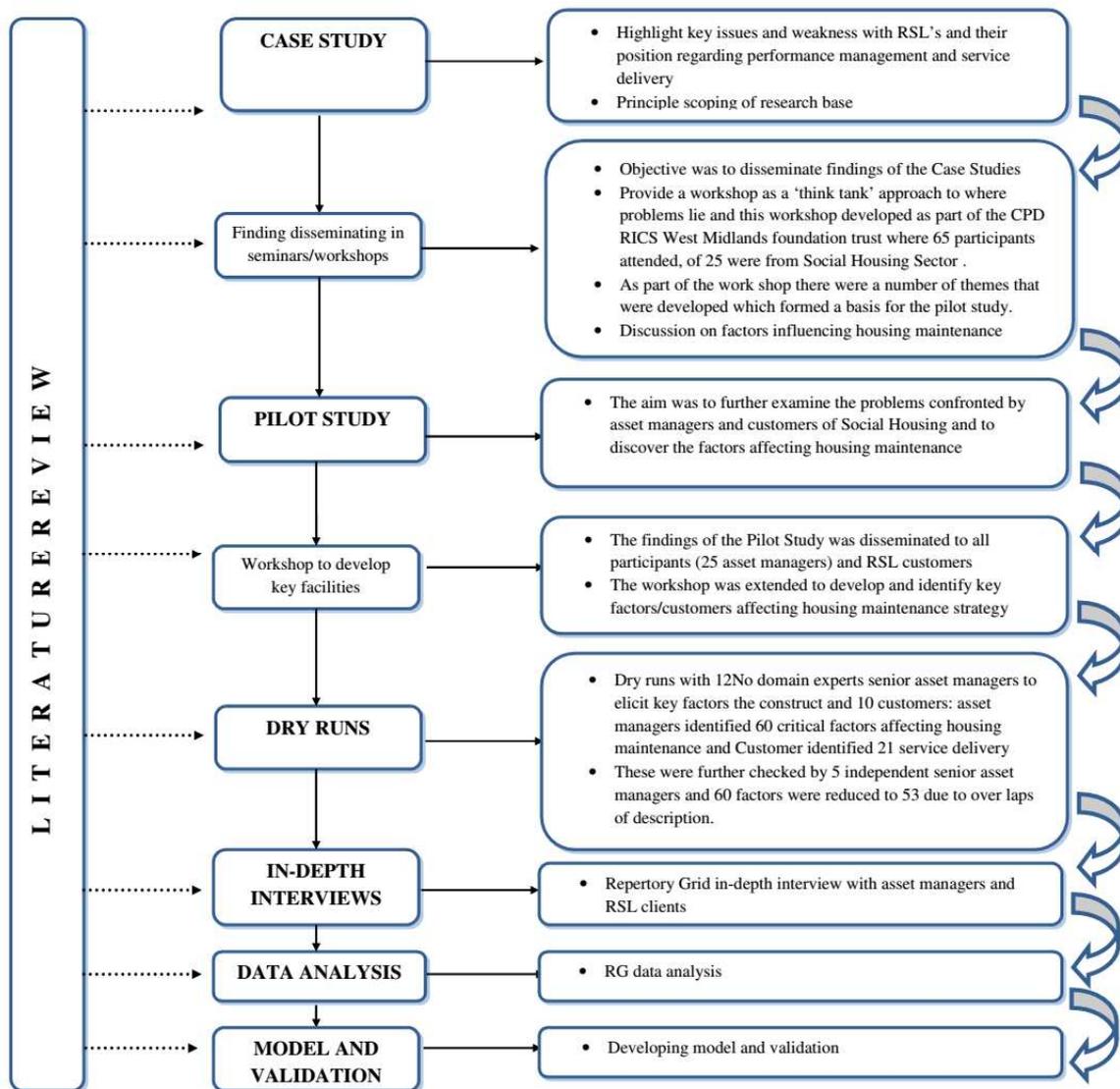


Figure 5.1: The Research Framework

## 5.4.1 Justifications for the Research Framework

### 5.4.1.1 The Literature Review

As Creswell (2009) describes, determining the questions that are most significant for a topic and gaining some precision in formulating these questions require much preparation. One way is to review the literature on the topic. Hence a literature review is therefore a means to an end and not, as many people have been taught to think, an end in itself (Yin 2009). With this in mind the research began with an extensive literature search – this allowed the researcher to fully understand the business decision making process, a deeper understanding of the housing maintenance process, housing management, the tenant mix and performance management improvements associated with this process was required. This involved

undertaking a detailed literature review of the current knowledge available via textbooks and research publications (conference papers and refereed journal papers). This exercise firstly confirmed the weakness inherent and the challenges presented in the social housing sector as well as social housing providers.

#### **5.4.1.2 The Case Study**

The literature, assisted in directing the researcher into the challenges faced by RSLs and the current changes that are being introduced by the coalition government. Due to the paucity of literature material on social housing providers, a desktop case study was adopted to allow the researcher to gain an insight into the ‘real problems’ faced RSLs; identify areas of weaknesses and nature of service delivery. The case study formed part of the first stage of this research. This approach is supported by various researchers (Eisenhardt 1989; Easton 1992; Platt 1992; Hamel 1993; Hamel & Prahalad 1993; Robson 1993; Yin 2009; Ghauri *et al.* 1995; Perry 1998; Gomm *et al.* 2000; Saunders *et al.* 2000; Flyvbjerg 2006).

However, the ‘real problems’ as to where RSLs are in relation to their particular challenges within their organisation (internal procedures and strategies) related to:

- Managing housing stock;
- Maintenance strategies;
- Tenants (customer satisfaction),
- Access to services;

What stages are the RSL currently in relation to achieving corporate social landlord and their position with regards to performance management? and what factors contribute to poor performance? The lack of strategic governance was not sufficiently detailed in the literature review and without the case studies this would have directly affected the approach taken in selecting appropriate research tools.

In total five RSLs were randomly selected from the Audit Commission website on the basis of similar profile - range of housing stock (age, condition and construction style), tenants and deprived neighbourhoods. Due to the confidentiality, ethics and data protection issues each RSL have been numbered as RSL 1, RSL 2, RSL3, RSL4, RSL5 (See appendix A).

The use of case studies also allowed the researcher to fully understand the key issues before arriving at the position where some of these debates start to have some meaning and to adopt a very practical approach to research design (i.e. qualitative or quantitative approaches). The researcher is of the opinion that by adopting a case study approach as a preliminary stage within research, it provided a firmer foundation for understanding and managing issues such as scoping, validity, and reliability, and for structuring data collection and analysis, and therefore the research methodology became clearer and straightforward.

#### **5.4.1.3 Workshop 1 – Stage 1**

The findings of the case studies were revealed through a seminar CPD workshop held in conjunction with the CPD Foundation Trust (RICS) at Coventry University. In total 65 participants attended the seminar from which 25 were Asset Managers working with 15 different housing providers. The workshop was specifically designed to highlight aspects of the literature review and the key issues arising from the case studies. The researcher found that the workshop was extremely useful as the participants were able to engage and share some of their concerns on customer service delivery and organisation problems related to constraints, management style and the shortcomings. All participants were engaged in the group discussions. This also provided opportunities to network with Asset Managers and their respective employers – the RSLs as an aid to developing the subsequent stages of the research.

The rationale for this first workshop was primarily to contextualise the research and engage with social housing providers (experts) and their customers. A series of investigative questions based on the key themes were presented and all participants were asked to complete the initial investigative questionnaire whilst they attended the workshop. The questions allowed the participants to comment on:

- Defining social housing maintenance management practices in their LA;
- Type of LA and core services offered;
- Annual estimated budget in use;
- Key types of property tenures offered to their customers / tenants;
- Job title and responsibilities most senior maintenance manager;

- A list of social housing maintenance services outsourced and also in sourced;
- Social housing maintenance procurement methods currently in use;
- Scope and management of social housing maintenance services;
- Annual estimated social housing maintenance service budget and;
- The key business factors that affect the effective delivery and management of housing maintenance services.

This formed a basis for the pilot study.

#### **5.4.1.4 Pilot study**

The literature review highlighted several key factors that are used by regulatory bodies to form an assessment as to how well the RSLs are performing. In addition, the case study confirmed these factors alone would not entirely explain the business model used in managing social housing stock by RSLs. This was a starting point for the overall analysis of social housing business operations in RSLs, given the facts that invariably some RSLs may have recognised and embraced and have integrated asset management into their organisation. Asset maintenance management departments can be seen as a service provider Wordsworth (2001, p.65) “*Asset maintenance management is as much about delivering a satisfactory service to people and organisations, as it is about the ‘hardware’ of the actual fabric of buildings and services. Often, users will judge a maintenance service on how it has directly affected them rather than on the quality of the repair carried out. Therefore, the degree of perceived client satisfaction with the overall service provided (rather than just the cost-efficiency of the repair and servicing work done) is a key indicator of service quality*”.

With such crucial problems being central, the RSLs are currently looking for any business approaches that would revitalise their operations to effectively care for their customers. As a result of this, the TSA has allowed free market participation of the more-innovative and competition-gearred private sector to provide operational efficiencies and bring in more private resources in the form of finance and expertise.

There is a plethora of commentary and the justifications advanced by numerous researchers (McNeill & Chapman 2005; Jackson 1998; Moser & Kalton 1986; Henry 1990; Saunders *et al.* 2000; Olubodun 1996; Olubodun 2001; Grimshaw 1999) for the importance attached to

the pilot study. To date, there are no data available to confirm the impact of current asset management strategies in RSLs; although it is estimated that social housing maintenance activities were worth £7 Billion in the United Kingdom (UK) and represent 45% of the total UK construction output (DTI 2006).

The rationale behind instigating the pilot study was to undertake a research mapping exercise that gave information regarding the development and operation of social housing maintenance services. The pilot study enabled to explore the organisation value, planning capabilities, organisation responsibilities that couple strategic with operational decision making at all levels and across all functional lines of authority in RSL organisations – i.e. strategic management.

The pilot study approach has been supported by numerous researchers (Bryman 2008; Tucker 1990; Olubodun 1996; Brown *et al.* 2002; Gruis 2002; Gruis *et al.* 2003, 2004a, 2004b, 2004c). The questionnaire was designed using a choice menu answers approach (Moon & Mullee 1999; Thomas & Lynn 2009; Hoinville & Jowell 1985; Saris & Gallhofer 2007), where the respondent simply either ticking a box provided or filling in the required information a space provided on the questionnaire as proposed by various researchers.

Initially the workshop, described above with 25 experts (representing 15 RSLs), gave impetus to also extend the survey to tenant focus groups. Each asset manager was asked to identify a minimum of five tenants from each of the RSLs who may be interested in participating in the survey. Thus, a potential 15 focus groups (each having 5 tenants) were sent invitation letters via the RSLs and a short de-briefing seminar was developed specifically for the tenants held at Coventry University (transportation and buffet lunch provided). From the potential 15 focus groups only 10 groups confirmed their attendance.

Hence two separate pilot study questionnaires were developed, one for the senior asset managers and the other for the social housing tenants (customers) and the rationale behind was essentially to identify any variations and differences between the views of asset managers and the tenants to highlight any variations that will help clarify any key factors or underlying issues that may require further probing (see Appendix B and C for the sample pilot questionnaires). The pilot study was designed to corroborate the lists of management activities that were developed over the first stage of the project, and to gather information on

staff, resources, overheads and other factors that can be used in building-up the costs associated with a good management service. Information on the frequency of responsive repairs was also collected, although difficulties in obtaining detailed information across the board meant that these aspects of the interviews proved to be of only limited use. The practice examples are taken from case studies as well as the second workshop which covered a range of issues including:

- Effectiveness of RSL in Maintaining Housing stock and Maintenance Budget;
- Factors Contributing to Maintenance Management;
- Best Value framework;
- Other Key factors that affect housing maintenance management.

The analysis of the Pilot study is detailed in Chapter 6.

#### **5.4.1.5 Workshop 2**

##### **5.4.1.5.1 The Experts**

The rationale for the second workshop was a follow up to solicit research interest regarding this complex study, the researcher disseminated the findings of the pilot study via two workshops (one for RLS - asset managers focus group and the other customer focus group) and publication of a conference paper. These workshops were solely initiated to allow for further collaboration with senior asset managers (and their RSL organisations) and the researcher. The workshop organised via the RICS CPD Foundation Trust within West Midlands Region and Coventry University. Similar seminars were also held separately with customers (RSL tenants) based on 'themes' these were extremely useful for developing the primary research and help to shape the main in-depth interviews with asset managers and the customers.

The respondents (experts) participating in the pilot study were invited to attend a workshop specially designed to provide feedback on the findings of the pilot survey. Furthermore this workshop was also used to generate key factors elicited from the research themes and a series of questions related to social housing provision in the UK and the wider corporate

governance related to the performance of RSLs were presented. All the 25 (expert) participants who took part in the pilot study attended the workshop.

However, according to numerous researchers (Neimeyer *et al.* 2005; Kimbell *et al.* 2006; Björklund 2008), eliciting knowledge from experts can be difficult and sometimes they may be unwilling to tell about their secrets and methods and tell the truth. The standard interview techniques to probe the conscious, rational and logic mind of the expert can become challenging as the experts may only state the things, the interviewer wants to hear. Hence the general sets of rules are formulated and standard procedures developed from the data and the interview may not truly reflect the experts' thoughts and decision-making logic. This procedural knowledge is hidden even from the expert and this is referred to as 'tacit' i.e. 'we know more than we can tell' (Kelly 1955; Polanyi 1966).

This knowledge is made explicit unconsciously in an implicit way, often outside our own awareness. It is also used in an automatic way and is therefore difficult to elicit by introspection. In cognitive science dual cognitive systems theories have matured during the last 20 years and has given us new ways of understanding tacit knowledge, expertise, intuition, insight and automation (Cronin 2004; Epstein *et al.* 1992; Ericsson & Charness, 1997; Lieberman 2000; Nightingale 1998; Reber 1989; Sloman 1996; Sun *et al.* 2005). Tacit knowledge may be in a very simplified model where individuals store sensory information in implicit memory as a signal pattern together with an emotional qualitative assessment of the event. This provides a tool to make meaning of phenomena in the world just by the recognition of the sensory pattern they experience and what is stored in their implicit library of old experiences. In this way one is able to '*learn*' what is dangerous, what is not, what is beautiful, and what is ugly, what is edible and not, recognise faces and scenes, sounds and odours. However, to be able to access the thought process when decisions are made, one has to understand more about the strategies, the skills, the abilities, and the habits of mind of experts. What behaviour is to be encouraged and which signs of progression are to be identified? Often a change in behaviour occurs during problem-solving activities (Dreyfus & Dreyfus 1986) when the experts concentrate on the salient features of the task, they act fast and proficiently and they share some important habits of mind controlling their design process (Middleton 2002). Another characteristic of an expert is the inability to verbalise the 'know how', because it's tacit.

Hence this stage was so crucial in establishing the key factors that influence developing an effective asset management strategy.

The workshop focused on the key question related to housing maintenance strategy such as **‘in light of the constrained nature of housing maintenance in the social housing sector and given the present economic climate and changing legislations what factors do you feel will affect the housing maintenance strategy both today and in the future?’**.

This approach was particularly effective in providing a focus without the researcher imposing structures. This simple question provides a rich source of interpretative data, which can be explored collaboratively or individually with asset managers. These, propositions formed the basis of informed (practical) expert knowledge (Hillier 1998).

From this question, the participant revealed several issues listed below which were worthy of further investigation:

- Performance measurement of RSLs – what does this mean in contexts of social housing; how is it measured; what are the challenges; how often it is carried out and by whom; how effective is it and does it cover every aspect of the organisation; any comparison with other RSL organisation undertaken; how does this affect service delivery;
- Corporate governance – does everyone understand it, how does this filter down from management to the shop floor and the customers and the service delivery; HR training to update knowledge and awareness;
- Challenges – localism, legislation, funding, deprived / stress neighbourhoods, anti-social behaviour, customer profile, delivering quality services and quality accommodation, tenant selection criteria..etc;
- Legal factors – regulations, crime, anti-social behaviour, evictions and court actions, rent arrears, legal obligations and tenancy types;
- Physical Asset factors – age, condition, accommodation, location, quality standards, repairs (urgent, routine and cyclical) including quality, responsive time and modernisation;
- Customer factors – communication, participation, satisfaction, access to services, value for money, fair rents, choice base lettings and tenant selection criteria;

- Market factors – fair rents, demand versus supply, waiting list, demography, new versus old housing stock, SWOT analysis of the RSL;
- Financial factors – rent arrears, affordability, investment in property versus property values.

The asset managers were also asked to look at pairs of key factors and tell if they are similar or dissimilar in some way. If they were judged as dissimilar, then they had to explain how, with a single word or a short phrase and also state the opposite of this term. If they are judged similar, then they were asked to select a third and dissimilar factor and then explain similarities and dissimilarities with simple phrases. This was a crucial step in clarifying a poorly-described or less relevant constructs elicited may undermine the research. For this reason, the researcher used the '*laddering technique*' to gather background comments from respondents about how they define their constructs. This allowed to probe questions (“why is that?”) which help elicit the meaning of the attributes. “*Laddering up*” questions were also used to link constructs and identify clusters so that all ‘like minded’ constructs can be grouped together. “*Laddering down*” questions were also used to get more detail about a construct the respondent has given. For example, if a construct is “good service-bad service”, good service may mean efficiency to one person and courtesy to another. Hence the workshop formed a primary vehicle develop the repertory grid framework and to elicit key factors supplemented with laddering. Both laddering and repertory grid originate from a similar psychological approach and the two techniques have been proven to work effectively together (Reeve *et al.* 2002; Phillips & Reynolds 2009; Jüttner *et al.* 2013).

On each of the themes, the participants were asked to identify key factors they considered as extremely important in measuring performance of social housing providers. Some of the factors were similar to the ones listed by the Audit Commission directives related to Key Line Of Enquiry (KLOEs) these have been discussed in detail in Chapter 2. Whilst KLOE are well established and are extremely popular with RSLs they are often to no avail because there are not linked to the performance of the RSL. Many RSLs have instigated a ‘front end’ call centre to deal with this aspect of the customer satisfaction and the phone is answered before 3 rings. However, as the repairs are unlikely to take place immediately, it becomes a meaningless measure that doesn’t account for anything and makes the whole system inefficient and ineffective. Most of these factors have become obsolete because of the

economic base of the country as well government's requirement for RSLs to operate in a manner similar to a private sector business organisation.

However, further probing into the developing maintenance strategies and building on the knowledge from practitioners played a vital role in unveiling 60 variables that have an impact on maintenance strategies and service delivery in social housing. These factors are more akin to business success factors and show some similarity in findings of the research conducted by McGeorge & Betts (1990) and Okoroh *et al.* (2001) while others researcher have focussed more on the operational aspects of maintenance management (Olubodun 1996,2000, 2001; Kangwa & Olubodun 2003, 2005).

#### **5.4.1.5.2 The Tenants**

Similarly, a separate workshop for the tenants was set up to provide feedback to all participants in the pilot survey. In the main, the pilot study identified key customer satisfaction factors that were considered by the tenants to be essential in service delivery of asset management. However the question that started to generate discussions and to elicit key factors affecting the customer expectations was *'in light of the constrained nature of housing maintenance in the social housing sector and given the present economic climate and changing legislations what factors do you feel will affect the customer expectations and customer service delivery both today and in the future'?*. Further probing into their concerns highlighted completely different critical factors and showed some similarity with the business factors identified by the experts.

#### **5.4.1.6 Dry Runs**

Before the researcher performed the main housing maintenance knowledge collection exercise, the researcher performed several 'dry run' interviews with independent asset managers working in social housing. The main objective of the dummy runs was to identify any deficiencies in the trial runs and make amendments and modifications to the grid (elements and constructs) before the main 'in-depth' interviews were executed. These dry runs provided the researcher an opportunity to familiarise with RG processes for knowledge eliciting. This stage was considered extremely useful not only as a learning curve for the researcher, but also undertaking an experimental exercise in how to ask questions and

adjustments to approach taken in knowledge elicitation was made together with the structure of the RG used.

However, it was observed during the dummy runs that some of the participants had difficulties in creating new sets of constructs that represented the research problem. Due to these problems, the researcher used the 'dyads' elicitation technique. This method allowed careful selecting and comparing of two elements at a time and participants were asked to state whether they were alike or different, and what it was that made them similar or different from each other? This technique played a major role in providing an interview friendly environment for participants and eased the elicitation process of the constructs. This approach was successfully administered by Okoroh & Torrance's (1999) and Gombera (2003)

Before the interviews commenced the researcher assured the participating senior asset managers that all completed Grid data would be kept in confidence. Having agreed with the confidentiality, the researcher proceeded by asking the participants to provide a list of the most critical factors they considered affected housing maintenance within the social housing sector and service delivery.

During the elicitation of constructs, a set of elements was displayed and the domain expert asked how they considered the importance of service delivery and possible risk exposure. The senior asset managers were also asked to show, with reference to constructs that they would use to describe the difference in management strategies between the two.

Having obtained the key factors impacting on developing the housing maintenance strategy from the asset manager's viewpoint and key customer factors that are considered to be core to customer satisfaction; there were a huge range of factors that needed re-evaluate the importance of the multi-variable roles, relationships and varying influences of each factors have on formulating a maintenance strategy. It was therefore necessary to fully understand the relationships between the factors and possible refinements. Hence two dry runs were set up. These dry runs were considered to be crucial in re-assuring with the confidence that the key factors were a true representation of the 'world' as seen by the experts and the customers. The 60 factors were reduced down to 53 due to the similarity and the wording of the factors. This also allowed the researcher to fully understand the complexity of the issues and the

perception as to what is happening with the service provider and the users of the services. These aspects simply would not come without preparation, practice, and probing to gain a deeper understanding.

Hence, during the first dry run involving 12 independent senior asset managers employed with 12 different social housing organisations (RSLs), participants were asked to review the key factors. Similarly, 10 different resident / tenant groups were involved in reviewing the key factors of tenants' customer satisfaction factors. This exercise allowed the key factors to be refined further. Some the factors had slightly changed in their description as opposed to the contents e.g. equality policy as opposed to equal access for ethnic minorities etc.

However, the second dry run with 5 independent senior asset managers indicated that the 60 factors elicited by the first dry run could be reduced to 53 factors. Furthermore, six customers were also asked to verify the 21 factors that affect them as sitting tenants. Both the asset managers and customers confirmed that factors were accurate and well elicited by asset managers and customers – this gave the confidence that the final factors were appropriate for the in depth study. These factors are discussed in detail in section 7.1.

From this point onwards it became clear which research method was to be adopted for this study and, in conjunction with the researcher's director of study, it was decided that a qualitative approach would be most suited, due to sensitivity attached to the 53 critical success factors that influence the housing maintenance strategy, to capture the knowledge and the thought process (decision-making) of the senior asset managers in developing strategic maintenance programmes.

#### **5.4.1.7 The Repertory Grid (RG)**

The Personal Construct theory, commonly known as Personal Construct Psychology (PCP) is a theory of personality and cognition developed by George Kelly (1955). From the PCP Kelly derived a psychotherapy approach and also a technique called *The Repertory Grid interview* (method) which was specifically designed to elicit systems of personal meaning where Kelly's patients were able to uncover their own "*constructs*" (ways of seeing the world) with minimal intervention or interpretation by the therapist. Kelly believed that most people could take responsibility for how they conduct their lives, so he proposed that, like

scientists, people seek to predict and control the course of events in their environment by constructing a mental map of the world (Shaw 1989). When people need to make decisions, they refer to these mental maps. This notion of Kelly has received empirical support (Bender 1976; Fransella & Bannister 2004). Kelly was also able to relate our mental map to our emotions (Jankowicz 1995).

On the other hand, Kelly's methodological concern about observer's bias induced him to develop an investigative technique that could remove the influence of the observer's frame of reference on what is observed (Shaw 1989). Kelly's theory needed complex mathematical modelling in order to give expression to his concern for rigour in psychological theory so he proposed a method of psychological assessment called the Repertory Grid, an interviewing technique that was initially developed to explore people's personalities in terms of his theory; for use in clinical settings (Slater 1977), allowing to quantify and make an objective of the nature of people's cognitive maps. Kelly was a keen geometer with experience in navigation and an interest in multi-dimensional geometry, so he presented his theory as the geometry of psychological space.

PCP considers that things and events do not have fixed meanings, instead there have a potentially infinite variety of the alternative meanings or constructions that may be attached to them and are known as '*constructive alternativism*' (Kelly 1955). Kelly assumes that people cannot easily separate the things perceived from the way they perceive them, the event from the construction of it, so the construction is in the perception, 'construing' is a process, it is how people use concepts (Jankowicz 1995), and people use a category system of concepts to help them make sense of the world. Moreover, PCP maintains that mental models are regularly adjusted on the basis of feedback from the environment (Bannister & Fransella 1986), enabling people to articulate testable hypotheses about future events. These hypotheses are the constructs, or bipolar dimensions, representing two contrasting poles, an emergent and a contrasting pole, hierarchically arranged into networks of constructs related to each other (Fransella 1982). Moreover, the term construct holds two important and distinct meanings, a construct can represent either the way a person classifies or has constructed his / her past experience, or the person's predisposition to perceive or construe in the future (Stewart & Stewart 1982).

A RG involves the selection of a topic, and the generation of a list of items, named elements, related to that topic. A RG is a two-way classification of data in which elements and constructs are interviewed (Stewart 1975). Kelly (1955) believed that people's thoughts were made of elements and constructs, where the elements are the objects of people's thoughts and the constructs are the qualities that people use to think about the elements (Smith & Stewart 1977). The elements may be people, things, events, or experiences, which are related to the particular problem or purpose for using the grid. A RG investigation usually proceeds through six stages as follows:

1. Elicitation of elements;
2. Knowledge elicitation phase;
3. Preparing the grid;
4. Grading the grid;
5. Analysing the grid;
6. Interpreting the results.

#### 1. Elicitation of elements:

The elicitation of elements is a crucial phase as it forms the basis of everything which comes next. Elements define the focus and outcome of the grid data, so it is important that special attention is given to their selection. There are several ways to elicit elements, but Easterby-Smith (1981) suggests that, whatever method one uses, elements should be as specific as possible. Easterby-Smith (1981) also suggests that elements in a grid need to provide representative coverage of the research subject. Pope & Keen (1981) suggests that eight to fifteen elements are usually sufficient for a well-balanced grid but according to Easterby-Smith (1981) elements should be no less than six or seven and no more than twelve.

#### 2. Knowledge elicitation phase:

Kelly suggested the use of a triadic method of construct elicitation. Each individual's constructs are elicited in response to a given category of elements. Three of the elements are chosen each time and the subject is presented with a series of triads of elements. It is advisable to deviate from the random selection of elements, as it might be better to structure selection to ensure that no element is used more often than any other. Both the elements in each triad and the ordering of triads should be previously selected. For each

triad, the participant is asked to state the most important attribute that distinguishes the two most similar members of the presented triad from the third outlying member. The discriminating construct is recorded under the similarity pole and the opposing construct is recorded under the contrast pole. This process is repeated until the subject runs out of constructs, i.e. several constructs are repeated and new constructs no longer emerge. By the end of this phase, each construct is represented as a row in the grid form.

Pope & Keen (1981) suggests that “prior to the elicitation of a first grid from an individual or group of individuals, it is a sensible idea to complete a small 'dummy' grid in order to come to grips with some of the ‘mechanics’ of completing a grid”. This study adopted this approach as it is good practice, since most people have never participated in a repertory grid task before, this is true, especially as most participants will not clearly understand what to do from the beginning, and the whole process will become invalid and destabilised. Hence, the procedure outlined in Figure 5.3 was adopted so that the participants were given a ‘walk through’ of the research area and a series of themes on the challenges of social housing and the research rationale. In this way, the participants were able to grasp the basics of the repertory grid without running the risk of being unwittingly influenced by the researchers view on the real subject.

Hence the constructs were developed by the asset managers and evolved through several stages of dry runs to establish the key factors that influence the decision making process in developing a housing maintenance strategy. Although there is no limit to the number of constructs as the participants should be allowed to express their views and thoughts, most researchers (Shaw 1989; Easterby-Smith 1980; Pope & Keen 1981) feel that eight to fifteen constructs are adequate. Given that this research is an attempt to model the asset managers thought process and in order to do this it's important to clearly understand the critical factors that influence decision making process and these factors may be complex and interrelated with varying degree of influence (multi-variant), the researcher attempted to capture all these without any influence.

There are several ways to formulate bipolar constructs, the simplest being to ask the participants to write them on the grid sheet. Pope & Keen (1981) and Easterby-Smith (1980) all say that this is the best way if the subjects can spontaneously produce constructs. This was the approach taken in this study. Each participant was asked list and

describe the constructs which they felt was highly relevant and then to highlight a term that summarised the description “likeness” (or emergent) pole and also an opposite term “contrast” (or implicit) pole, (usually on the left side of the grid).

Constructs and bi-polars are those critical features that make up the key issues that contextualise the framework for the thought-process behind the development of a strategy for asset managers.

### 3. Preparing the grid:

Generally, the grid is prepared with the elements along the top and the constructs down the left hand side. When designing a grid, it is important to include identification numbers and aids to facilitate data preparation. It is valuable to ask respondents for their comments on the draft grid.

### 4. Grading the grid:

Once a representative list of constructs is elicited, the rating grid phase begins. Participants are then asked to score all elements in terms of each construct, i.e. all of the bipolar scales represented by the rows on a seven or a five point scale with the number one rating assigned to the similarity or emergent pole and a number seven or five rating assigned to the contrast pole. Kelly (1955) suggested a 2-point scale, but some modern grids use anywhere up to a 16-point scale. Longer scales provide participants with more scope to express themselves, but it is difficult for the individuals to make the fine grain distinctions that longer-scale ratings dictate (Edwards *et al.* 2009). Furthermore, Stewart & Stewart (1981) argue that rating scales beyond 5-points are difficult to use and that a 7-point scale is the limit of most participants’ discriminative powers. Consequently, a 5-point rating scale has been used to obtain the ratings of each construct. It is considered that a 5-point rating scale will provide a precise picture of what the participant wishes to communicate about each construct against each element. The ratings include:

- Not so important [1]
- Neither important / unimportant [2]
- Important [3]
- Very important [4]
- Extremely important [5]

If the research participant is unable to give a rating for one of the elements on a particular construct, stating that it does not apply, the element will be left blank.

The midpoint, number two of the scale, is used for elements that are characterised by neither pole. Thus, the normal procedure consists of picking the similarities and differences existing among the selected elements by considering various triads, groups of three elements, selected successively from the whole list. The similarities and differences elicited by this procedure are referred to as poles. Constructs are defined by pairing each successive set of similarities and differences together as opposite poles of a continuum, subsequently graded using a rating scale (Smith 1986). The subjects then rate all elements for each construct. For each subject, responses are then put into the form of a grid, a matrix of cells with rows representing constructs and columns representing the elements.

Table 5.1 displays a typical arrangement of an RG and its associated data. The table is split into columns and rows, where all the ‘constructs’ are listed on the extreme left hand side (i.e. the first column) of the table and the ‘bi-polars’ are listed on the opposite extreme right hand side of the table. The columns in the middle (i.e. between the ‘constructs’ and the ‘bi-polar’) are provided to insert the elements. Each of the constructs is rated or scored by the respondents to the in-depth interview.

Table 5.1: A Typical Arrangement of a Repertory Grid

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Bi-Polar
<b>Customer Factors</b>							
1 High customer care provision levels	3.0	3.0	2.8	3.3	3.7	4.0	Low customer care provision levels
2 Excellent communication with tenants	2.5	3.5	2.0	3.1	3.4	3.5	Poor communication with tenants
3 High customer satisfaction with service delivery	3.0	2.5	2.1	3.0	4.0	3.5	Poor customer satisfaction with service delivery
4 High opportunities for tenant participation	2.5	3.2	2.6	3.5	4.0	4.0	Poor opportunities for tenant participation
5 Excellent equality policy	2.5	3.7	3.5	3.5	3.5	4.0	Poor equality policy
6 High customer satisfaction with their housing quality	2.5	2.6	3.5	4.0	4.0	4.0	Poor customer satisfaction with their housing equality
7 Good accessibility of services	2.5	3.4	2.0	3.5	3.5	4.5	Poor accessibility of services
8 High service level agreement (SLA)	3.0	3.5	2.5	3.5	3.0	4.1	Poor service level agreement (SLA)

## 5. Analysing the grid:

Some content analysis can be performed without a computer but it is often restricted to a content analysis of the elements and the constructs. A full analysis of the grid requires specialist software packages - there are several software packages to analyse individual grids or a couple of them together, though when analysing a considerable number of grids other statistical procedure may be required.

## 6. Interpreting the results:

The interpretation usually proceeds in five steps:

1. Examination of constructs
2. Examination of elements
3. Examination of component space
4. Examination of nature of components
5. Drawing the cognitive maps

The rationale for selecting the Repertory Grid (RG) is that, RG allows for clear comparisons between research participants responses and highlights the key relationships between the data elicited. The RG bridges the gap between quantitative and qualitative research and allows the topic to be analysed holistically. The next section will focus on the development of personal construct theory and explore the use of the RG.

### **5.4.1.8 The Data Collection**

The Repertory technique was applied in this research and the procedure comprised of several stages (See Figure 5.2 and Figure 5.3), beginning with a development stage, where the parameters of the research and the grid are decided. Next is the administrative stage, where elements, constructs and a rating system are used by the subjects. The final stage includes the analysis and interpretation of the grid data.

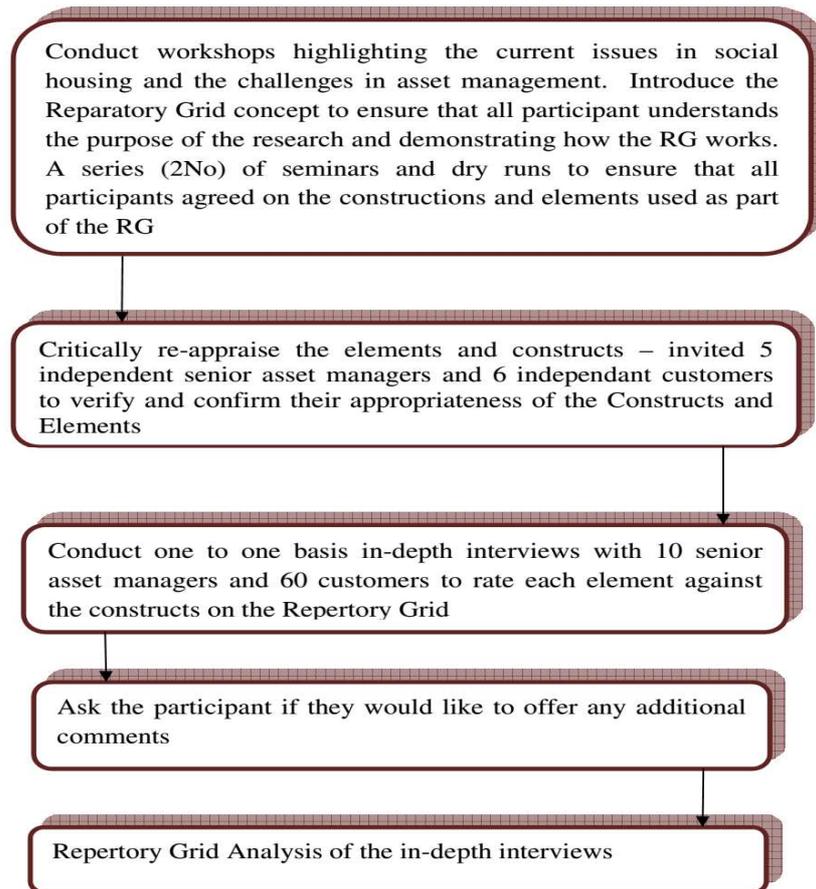


Figure 5.2: Outline Approach to RG Interview Process

Dry-run tests to selected property maintenance domain experts for a fair view on the acceptability and success rate of the in-depth interview survey were conducted to ensure that data being elicited were accurate and truly reflected the critical factors attributing to the decision making process before its final survey.

Having de-briefed all 10 asset managers on the research and RG via workshop and each asset manager was interviewed separately on a ‘one to one’ basis, it was agreed with the asset managers and their employers to conduct the in-depth interviews within the 14 day period following the workshop, this was to ensure that the research rationale / RG remained relatively fresh in their minds. On average, each interview took 4 hours. The in-depth interviews with 10 asset managers working with 10 different RSLs were conducted over a period of 2 weeks.

Similarly, workshops (4 in total) and in-depth interviews were arranged for the customers. Each in-depth interview with the customer varied from one hour to two hours and were

conducted over a period of three months and in total 60 customers participated in the RG interviews.

Figure 5.4 outlines the key stages that have been followed to attain the RG data and result analysis.

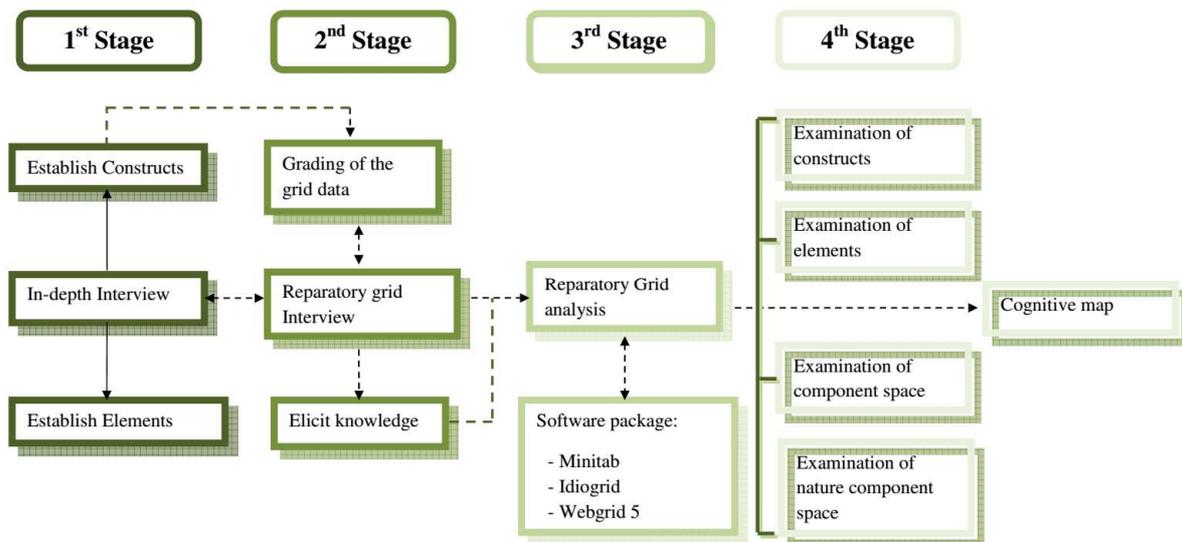


Figure 5.4: Repertory Grid Stages

### 5.4.1.9 Eliciting the components of the Repertory Grid

#### 5.4.1.9.1 Eliciting the ‘Elements’

In social housing, particularly housing maintenance, elements can be either represented as physical objects that is to say assets which are occupied by the tenants / customers and which may be classified as:

- Terraced housing;
- Semi detached houses;
- Detached houses;
- Bungalows;
- Low rise flats;
- High rise flats.

These assets can vary greatly in terms of their age, condition of their building fabric, the building type (which may be designated as defective or otherwise), the particular location of

the property and the type / status of the tenant for example single, married, one parent, disabled, employed, semi employed or wholly unemployed. Hence, one might expect a huge range of variation between each of the factors related to the property type its condition, location etc., this approach was ignored. However, this research is an attempt to understand the tenant / customers experience and the ability of the RSL to deliver quality services to its customers. Any strategy being applied will therefore have an impact on the customer experience and the perceptions as to whether the strategy is successful or otherwise. The customer profile was considered by the asset managers to be a vital factor in developing a strategic maintenance plan. Elements elicited by the senior asset manager are discussed in detail in Section 7.1 and it is generally accepted by all RSLs that tenants can be classified based on their capacity to pay the rent, their personal circumstances, the physical and mental health condition. All 10 asset managers elicited the following tenant's categories:

- Private tenants;
- Affordable housing tenants;
- Leaseholders;
- First time buyers;
- Shared ownership;
- Sheltered.

#### **5.4.1.9.2 Eliciting the Constructs and the Bi-polars**

10 asset managers were interviewed and total 53 constructs were highlighted by the asset managers as key factors that contributed towards developing a strategic maintenance plan. The data populated by the asset managers is appended in Appendix D and E. Section 7.2 of Chapter 7 describes the constructs elicited by asset managers together with the customers, and describes their relative importance in developing strategic social housing maintenance.

#### **5.4.1.9.3 The Repertory Grid Administration**

Prior to administering the RG, all the participants agreed on the make-up of the grid, the researcher further approached five independent asset managers and six tenants to confirm and verify that the grid factors i.e. the elements and the constructs are appropriate and reflected

the decision making process. None found the elements / constructs to be unsuitable or a distorted their view. Table 5.2 shows a sample of a blank RG sheet.

Table 5.2: Sample of a Repertory Grid

Constructs	Bi-polars						
	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	
<b>Customer Factors</b>							
High customer care provision levels							Low customer care provision levels
Excellent communication with tenants							Poor communication with tenants
High customer satisfaction on service delivery							Poor customer satisfaction - service delivery
High opportunity for tenants participation							Poor opportunity for tenants to scrutinise service
Excellent equality policy							Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality							Poor customer satisfaction with their housing quality
Good accessibility of services							Poor accessibility of services
High service level agreement (SLA)							Weak service level agreement (SLA)
High customer care provision levels							Low customer care provision levels
<b>Asset Management Factors</b>							
Good condition property Verses high demand							Poor condition property Verses less demand
Excellent Housing provision DHS							Poor Housing provision DHS
An accurate database of type and condition of properties							Weak database of type and condition of properties
Highly developed planned maintenance programmes							Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property							Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)							Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met							Poorly planned routine repairs and completion targets met
High quality of repairs and performance							Poor quality of repairs and performance
High quality of renovations							Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas							Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy							Weak energy efficiency policy
Reduced level of voids vacant							High level of vacant void
A few abandonment of properties by residents							High level of abandonment of properties
<b>Tenancy Factors</b>							
Good Tennant Selection Criteria							Weak Tennant Selection Criteria
Reduced waiting list							High waiting list
High level of tenancy offers that are frequently refused							Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings							Poorly overcrowded dwellings
Minimised homelessness issues in the area							Weak homelessness provision in the area
Easy to buy or shared ownership							Weak right buy or shared ownership provision
<b>Neighbourhood and community Factors</b>							
Good quality tenants							Weak quality tenants
High tenant satisfaction with local environment							Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements							Poor Neighbourhood improvements
Excellent outsourcing services and partnering							Poor outsourcing services and partnering
Reduced Anti-Social Behaviour							High level of Anti-Social Behaviour
<b>Financial and economic Factors</b>							
Excellent Fair rents							Poor rents
High affordable housing							Poor affordable housing
Good rent collection and arrears management							Poor rent collection and arrears management
Good financial stability							Weak financial stability
High Insolvency – tenants ability to pay rents							Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions							Poorly managed evictions and court actions
Good return in investment							Poor return in investment
Good refurbishment and redevelopment opportunity							Weak refurbishment and redevelopment opportunity
Excellent disposal of property							Poor disposal of property
<b>(Business) Continuous Service improvement Factors</b>							
Excellent tenants participation							Weak tenants participation
High level of stakeholder involvement and partnering							Poor stakeholder involvement and partnering
High security provision							Weak security provision
Excellent strategic partnerships							Poor strategic partnerships
High Market intelligence – future supply and demand trends							Weak market intelligence – future supply and demand trends
<b>Corporate Factors</b>							
High understanding and compliance of legislation							Poor understanding and weak directives
Strong corporate governance							Weak corporate governance
Sound Health and safety policy and security							Weak health and safety policy and security
Excellent Bench Marking							Poor Bench Marking
High Social corporate responsibility							Weak social corporate responsibility
Well managed organisation - management cultural and style							Poorly managed organisation - management cultural and style
High staff participation							Poor staff participation

#### 5.4.1.10 The Data Analysis

The RG data based on in-depth interviews was analysed using a combination of a visual examination is made in the grading given to the elements and the constructs as a cursory inspection of the statistical averages and the general relationship between each elements. This consists of calculating the average grade given, across all elements for each element

enabling the identification of the constructs above and below average for each participant(s) to the survey. A similar procedure is followed by examining the constructs.

Using Standard Statistical software (MINITAB), show the correlations between elements and constructs and their inter-relationship. A value closer to 1.0 means a positive linear correlation when comparing like with like however, the minus value indicates a linear correlation opposite relationship exist. The software will allow 'Euclidean distances' to be produced see Figure 7.7, which represents the distance between two elements in the  $c$ -dimensional space formed by the constructs and these distances provide co-ordinates for the vectors on a cognitive map (Barrett 2006).

The RG software programmes ('IDIOGRID' and WEBGRID 5) based upon Kellys Repertory Grid were used for enabling a visual graphical display showing the relationship between constructs, between elements and their inter-relationships.

## **5.5 PART 3: Application of the Interpretive Research Framework using the PCP Theory**

This chapter examined some of the underlying assumptions, research objectives, and practical applications of the repertory grid (RG) technique in social housing maintenance management research. It also described why the use and evaluation of the RG should be grounded in the assumptions of the theory from which it derives, George Kelly's personal construct psychology (PCP), and examines the way in which it is both congruent with and can contribute to the development of the emerging interpretive paradigm in social housing maintenance and management research. The specific questions that the RG can help to answer about housing providers and purchasers' (customers) behaviour experience are identified and illustrated by the current research and empirical study. Overall, it is argued that when the RG is employed within the current framework guidelines of PCP it provides a useful interpretive research framework for exploring some of the similarities and differences in the content and structure of asset managers and consumers' subjective meaning systems. Although, the RG framework was primarily created for use in clinical settings to assist with the understanding of the patients' psychological problems, the flexibility of the framework, concepts obtained through the Grid method has enabled its application in a great variety of situations outside the clinical field.

Hemmecke & Sary (2005) discovered that the increased division of labour and social character of work, knowledge sharing between communities in Austria was difficult. They introduced this research framework to elicit knowledge about work practices of individual stakeholders by capturing the personal constructs, historic-social and material knowledge. Hemmecke & Sary were able to feedback elicited knowledge to customer relationship managers and were able to apply various business process models to capturing community knowledge and working practices.

Marsden & Litter (1998) examined the underlying assumptions and objectives of the research framework in consumer research. Their findings suggest that the RG produced a holistic picture of consumer experience as it identified the categories that consumers use to group different products and services, which are often treated separately. The RG is capable of eliciting a wide variety of constructs (cognitive, effective, conative) from consumers at different levels of psychological abstraction.

Crudge & Johnson (2006), also used this research framework for the determination of users' representations of search engines, formed during their interaction with these systems. They evaluated the extent to which these elicited "mental models" indicate the system aspects of importance to the user and from this their evaluative view of these tools. The RG was used to elicit a set of constructs that define facets within the mental model of an individual. Laddering technique allowed each of the users constructs to determine the reasons for its importance within the users mental model. The model derived from the qualitative data comprises three hierarchical strata and conveys the interrelations between basic system description, evaluative description and the key evaluations of ease, efficiency, effort and effectiveness.

This research framework has been successfully applied in the Facilities Management sector particularly criteria used in appointing sub-contractors for building refurbishment contracts by Okoroh (1998) whereby critical constructs were identified for selecting and appointing subcontractors and culminating in developing an expert system. Whilst Jones (2001) examined the role of facilities Management in small to medium hotels and perception of key factors that impact on customers and facilities managers. Gombera (2003) focussed the research on the nature of facilities management in the NHS and developed key business factors that led to better management of the facilities which culminated in the development of

an expert decision support system. Liyanage & Egbu (2004) examined the role of facilities management in the control of healthcare associated infections, the findings led to the development of expert knowledge based systems. Bärtolo (2002) examined the application of RG to the assessment of users' perceptions of design quality in construction of the lecture rooms at Reading University. These are a few examples where the above researchers have successfully used and implemented similar research framework methodology within the built environment sector.

This research framework is very flexible and can be adapted to suit the dynamics of knowledge in work activities, at any time and in any organisation setting and in any domain. Hence, the research framework has been the object of an increasing interest in diverse fields ranging from organisational culture and orientation which has led to development of predictive models; education – understanding teacher/student performance, teaching styles and the environment leading to better understanding of interaction with the users and providers of the services and teaching environment; computing IT and human interaction; Marketing research; Management and Human Resources see table 5.3.

Table 5.3: Applications of Research Framework

<b>Application Of RG</b>	<b>Purposes</b>	<b>Researchers</b>
<b>Organisational Culture and orientation.</b>	<ul style="list-style-type: none"> <li>• Intervention limited to a few levels or departments or organisation wide</li> <li>• Know why the organisation's culture is needed - what are the pressures and the organisations responses (i.e. for preparation on competencies)</li> <li>• Know what the history of intervention is - is there mistrust of like processes?</li> <li>• Know what are expectations for the future - closures and redundancies? support management decision-making;</li> <li>• capture a representation of an organisation's culture;</li> <li>• used in market research;</li> <li>• gain insight into how the organisation manages change and crises;</li> <li>• understand the perceptions of an expert;</li> <li>• support developing management competences and facilitating an organisational change programme; and support a study programme</li> <li>• is the organisation's own, expressed in their language and reflecting their business priorities;</li> <li>• involves managers in their development, thus ensuring their commitment to the competences and to the demands which might be made on them in order to bring the competences to life;</li> <li>• ensures that the gap between past and future competences has</li> </ul>	Smith & Stewart, 1977; Easterby-Smith, 1981; Easterby-Smith <i>et al.</i> 1996; Yahya and Goh 2002; Jasimuddin, 2005; Jasimuddin <i>et al.</i> 2005; Busch, 2006; Pathirage <i>et al.</i> 2007; Muir, 2008.

	been addressed, with action plans as appropriate.	
<b>Education</b>	<ul style="list-style-type: none"> <li>• help students learn individual topics and develop generic analytical, navigation, and learning-to-learn skills</li> <li>• training needs analysis</li> <li>• training evaluation</li> <li>• selection interviewing</li> <li>• analyse learning styles</li> <li>• offer career counselling</li> <li>• counsel students with personal problems</li> <li>• teacher exploring his perceptions of his class</li> <li>• to support the teaching of course material - e.g. modern history</li> <li>• help the teacher and student explore the circumstances under which the student learns best setting goals</li> </ul>	Pope & Keen, 1981; Smith, 1986; Stewart, 1997, Christie & Menmuir, 1997; Derry & Potts, 1998; Roy L 2001; Wang, 2004; Jafari <i>et al.</i> 2007; Kington <i>et al.</i> 2008; Maimunah, 2008; Jafari <i>et al.</i> 2010; Lemke & Petersen, 2013; Walker 2013.
<b>Human computer interaction Artificial intelligence</b>	<ul style="list-style-type: none"> <li>• Product to process research and development</li> <li>• Communication from individuals to groups – network, conferencing, stakeholders and partners</li> <li>• Laboratory to workplace</li> <li>• Analysis to design</li> <li>• User centred to user involved design</li> <li>• User requirements specification to iterative design</li> <li>• Understanding complex decision making</li> <li>• Programming and virtual environment</li> <li>• Embedding and imposing certain rules</li> <li>• Creating an implicit community by linking work task or several people</li> <li>• Trigger predetermined responses</li> </ul>	Gaines 1989; Shaw 1989; Petty <i>et al.</i> 2008; Millward <i>et al.</i> 2010; McDonald, 2011; Toosi <i>et al.</i> 2013 Corporaal 1991; Pope & Denicolo, 1993; Boyle, 2005; Song & Gale, 2008; Goffin <i>et al.</i> 2010; Goffin <i>et al.</i> 2012; Jafari <i>et al.</i> 2013; Boose, 1985; Gaines & Shaw, 1992; Noh <i>et al.</i> 2000; Childs <i>et al.</i> 2006; Tonge, 2008; Barnes <i>et al.</i> 2012.
<b>Marketing research</b>	<ul style="list-style-type: none"> <li>• Can encourage your customer to define the ideal product,</li> <li>• Can make trade-offs,</li> <li>• Assign priorities,</li> <li>• Experiment with different scenarios, and</li> <li>• Can see how your customers' views of your product compare with those of your staff, and learn whether they see the same things as important.</li> </ul>	Frost & Braine, 1967; Riley & Palmer, 1975; Goffin, 1994; Marsden & Littler, 2000; Rogers & Ryals, 2007; Beverland <i>et al.</i> 2010; Goffin & Koners, 2011; Whyte & Classen, 2012; Evans <i>et al.</i> 2012; Yeo <i>et al.</i> 2012; Goffin, 2013; Pepe, 2013.
<b>Management and Human Resources</b>	<ul style="list-style-type: none"> <li>• evaluate the effectiveness of training: knowledge-based training, skills training, and major developmental interventions;</li> <li>• act as a selection interview tool, either in assessing knowledge or as a highly advanced behaviour-based interview;</li> <li>• develop person-specifications, for an existing job or for concentrating attention on the demands of a new job;</li> <li>• develop person specifications by analysing the characteristics of existing jobholders</li> <li>• measure organisation culture, facilitate change, and develop management competences;</li> <li>• develop individual training needs and act as a tool for performance counselling;</li> <li>• reflect on personal experience, for example examining individual learning styles, self-analysis of skills and abilities, and examining people's experience with systems such as performance appraisal;</li> <li>• design attitude surveys, for example on work stress;</li> <li>• design a training programme for knowledge or skills;</li> <li>• support an organisational review;</li> </ul>	Brown, 1992; Reger & Huff, 1993; Hunter 1997; Hunter & Beck, 2000; Micheli <i>et al.</i> 2012; Bauman, 2013; Cottrell <i>et al.</i> 2013.

## 5.6 Summary

This chapter provided insight into the various research methodologies available; this study has adopted a qualitative approach. Based on the case studies and pilot study, this research utilises the Kelly's Personal Construct Psychology as a novel approach to elicit crucial factors that impact on the decision making process. This chapter discussed the make up of the RG framework which was directly elicited by the asset managers and customer of the social housing. They ensure that all factors included in the RG (i.e. constructs and elements) reflected the '*real world*'. Several developmental protocols have been adopted in the form of workshops and dry runs were conducted to eliminate any errors prior to conducting in-depth interviews.

# **CHAPTER 6**

## **PILOT STUDY DATA ANALYSIS**

### **6.0 Introduction**

This chapter discusses the data obtained from the two pilot studies. The first pilot study was designed for asset managers (in which 25 asset managers took part) engaged in managing and developing housing maintenance strategy within the social housing sector. Whilst the second pilot study was devised for tenants / customers / users currently occupying social housing, in which 50 tenants participated. The chapter discusses the rationale behind undertaking the two pilot studies.

### **6.1 The Case Study Summary of Findings**

All case studies are appended in Appendix 1 and the overall findings suggest that different local authority landlords (RSLs) are at various stages in their development of a performance management framework. While some may be operating at a sophisticated level, others may be concentrating on the basic elements. However, the RSLs' housing stock and estates suffer from years of lack of integrated property information management systems, proper investment and neglect, and is not well managed due to limited public resources, and hence does not meet the minimum government property rating and maintenance standards.

The case studies confirm the above primary reasons for RSLs not adopting smart business strategies to manage their housing stock, and lack of knowledge about their customers' expectations, which can vary from one local neighbourhood to another, and from RSL to another. The implications are, where the good practice is being implemented; adequate repair of housing stock, good customer care and tenant satisfaction, and continuously ongoing service quality improvements prevail; which is often absent in some of the weaker performing social housing providers example RSL 1, RSL 2 and RSL 5 are much weaker in comparison with RSDL 3 and RSL 4.

However, there is compelling evidence that social housing maintenance strategies used by RSLs to manage social housing stock effectively today is very much largely dependant upon

multivariate key factors such as business and commercial management intelligence, geography, technical performance, political, statutory, economic and investment, social deprivation and end-user / customer related factors, which are in some form of dynamic relationship with one another (McGeorge & Betts 1990). Some of these key factors can be pre-determined when the physical stock is being designed such as the end-user and sustainability, whilst others are determined during the asset life cycle management (i.e. innovative procurement, construction, and facilities management) of the building. However, various researchers (Partington *et al.* 1992; Malpass *et al.* 1993; Malpass 2000; Malpass & Mullins 2002) found that the real cause for concern is a set of underlying and uncertain factors that are responsible for disrepair and deterioration of public housing stock and its use, this is rarely understood by social housing providers.

According to Currie & Currie (2005), a good practice guide uses the examples from the case studies and recommendations from literature to provide an in-depth guidance on key features of performance management frameworks and checklists to support organisational development. There is no single 'correct' performance management system. One critical factor in improving services is to ensure that the performance management framework suits the needs of the business and that action is taken when required to address areas of weakness and build on areas of strength.

## **6.2 Pilot Study**

There were two pilot studies, first being conducted with Asset managers and second being with tenants. The rationale behind conducting pilot study with Asset managers and tenants was to establish if there were any gaps between what was being provided by the RSLs and the tenants' perceptions as to what services they considered were important and their expectation of the social housing provider.

The pilot survey questionnaire with a cut off date was distributed to all participants with self-addressed and pre-stamped envelopes and survey return. From the 25No questionnaires posted to Senior asset managers only 20No questionnaires were fully completed and received compared to the 100% response feedback was received from 50No randomly selected tenants within 14 days of the workshop. This was surprising and against the norm as it is expected response would be extremely very low. One of the reasons that could be advanced is

associated with the tenants becoming more acutely aware of their rights as tenants and would like to influence the decision making which ultimately affects their future and having transparent approaches, value for money and customer satisfaction were perhaps the main incentives.

### **6.2.1 Pilot study – Asset Managers also known as the domain ‘Experts’**

The asset managers were asked the following questions:

- How effective was the RSL in maintaining its housing stock;
- How maintenance budget are developed and was it under spent or over spent;
- What are likely causes for budget being under spent or over spent;
- What are key factors that creates maintenance of housing;
- What are the key factors that have an impact on Best Values performance;
- What are key KPIs.

### **6.2.2 Pilot study – tenants – customers (end user of the housing services)**

The tenants were asked the following:

- What services are provided by their RSL;
- Select one service that its was important to you;
- How satisfied or dissatisfied they were RSL performance;
- The tenants view of the current rent and value for money;

## **6.3 Pilot study Data Analysis – Asset Managers**

### **6.3.1 The respondents**

From the 25No questionnaires distributed to asset managers only a total of 22No questionnaires were returned from which only 2No questionnaires were partially completed and were discarded in the analysis (see Table 6.1 below).

Table 6.1: Survey Responses

Questionnaires	Number of responses
Returned complete	20
Returned incomplete	2
No response	3
Totals:	25

Taking into account the sensitivity nature of the data required to complete the questionnaire; the number of questions posed in the pilot survey, and the time involved in completing the questionnaire; the response rate achieved in the pilot survey (20 out of 25 representing 80 percentage) was regarded as extremely good in comparison with the general ‘lukewarm’ attitudes and interests towards completing questionnaire surveys which often averages out to 30% (Meddis 1984). There are several possible reasons that can be advanced for the high response rate to the pilot study. Firstly to date there has been no research carried out to capture the ‘real problems’ problems of housing maintenance management in the social housing sector. Secondly due to the challenges faced in the social housing, as discussed in Chapter 2, the respondents are genuinely interested looking towards finding a way forward.

### **6.3.2 How effective is your organisation in maintaining its housing stocks?**

The asset managers were asked to evaluate how effective their organisation was in maintaining their housing stock (see Table 6.2 below). The results were very interesting with 55% of the asset managers feeling that their organisation have done well. However 30% rated that their effectiveness was poor to very poor. This view mirrors the findings in the case studies where performance of 3 RSLs out of the 5, leans very much towards the poor end of the scale and the remaining 2 RSLs performance who have embraced changes in their organisation have been successful in maintaining their housing stock. From the preliminary workshop/seminar which led as a build up to the pilot study the attendees at the seminar highlighted the various reasons as to why some organisation were doing extremely well compared to others. This primarily relates to the amount of capital being raised or lack of money available which prevented investment in maintaining the stock together with a lack of

corporate governance and direction being provided. Meanwhile some of ALMO's who appear to be better performing which maybe down to being able raise capital against their assets leading to increased spending power and increased investment which in turn as far as the respondents are concerned. However, this improvement could also be down to better management and strategy. When, examining this argument against the case studies contained Appendix 'A' several short comings are highlighted in relations to organisation ability to recognise the key issues of the customer, limitation of the housing stock, transparency within the organisation and its procedures.

Table 6.2: An Evaluation of How Effective has your RSL been in Maintaining its Housing Stocks?

Rating	Response
Very Good	35%
Fairly Good	20%
Neither	15%
Fairly Poor	25%
Very Poor	5%

### 6.3.3 How is maintenance budget developed?

The pilot study investigated the budgets used for maintenance within social housing provider in terms of its past performance against budget, the reasons for such and the development of the maintenance for the ALMO - see Table 6.3. The survey showed that 100% of respondents believed the budget was very likely to be developed based upon historical findings. This could be in several forms but mainly this appears to have been based upon past performances and previous issues were most probably well considered when the maintenance budget for social housing provider is set. The KPIs and performance also scored highly in the likely stakes. Respondents were torn between the 'very likely' and 'likely' category and thus it can be assumed that performance does have a role to play when the budget is / was developed.

Table 6.3: An Evaluation of How Maintenance Budget have been Developed

<i>Factors</i>	<i>Very likely</i>	<i>Likely</i>	<i>Unlikely</i>	<i>No Opinion</i>	<i>N/A</i>
Historical	100	-	-	-	-
Performance (KPI)	40	60	-	-	-
Other RSL	-	30	70	-	-
Other	-	-	100	-	-

Only approximately 30% supposed other RSLs to have a likely bearing upon the budget while the remainder were equally split between the influence being unlikely and having no opinion.

It seemed that the respondents were reluctant to divulge other factors that may have a contributing factor for this particular question. It could be assumed therefore that not all relevant factors were indeed included.

#### **6.3.4 Was your maintenance budget over or under spent?**

The respondents were asked to identify the budgets of their organisation regarding the actual performance (see Table 6.4). It emerged that 55% of the sample considered had a budget that was actually under spent in the years 2010 / 2011, with the remainder 45% hitting the target and being on budget. A question relating to overspend was discarded as none of the respondents had been experienced within the sample had this experience. This feedback is typical response of the public sector; the researchers personal experience of working in the sector was that the planning was very much stop and start when it came to budgets and strategies on prioritising repairs. It is too often that budgets are assigned at the beginning of the financial year with the first three months being spent developing strategies on how spend the allocation. For the next 6 months cautious approach was taken to spending and in the last three months the approach was to spend, spend, because if allocated budget are under spent then the entire remaining surplus will be taken away and next year ends up with reduced budget.

Table 6.4: An Evaluation of Budget 2010 / 2011

<i>Budget</i>	<i>Percentage</i>
Overspent	-
Under spent	55
On Budget	45
Others	-

### **6.3.5 What are the causes of budget being over spent and under spent?**

The causes are shown in Table 6.5. The lack of overtime and contractors were considered to be unlikely causes by 100% and can therefore safely be ruled out. The lack of extra works was considered to be very likely by 100% of the sample and this would suggest that this very much had a part to play. The factors identified in the previous section also have an effect with planning of works only being undertaken in the first 3 months of the fiscal period. This then leads to work being allocated to contractors in an unplanned way this prevents the contractors from being able to allocate adequate staff for the works to be completed within time scales. It could be the case that extra works were expected and budgeted when in actual fact they were not carried out or required. The encouraging results come from the good management and performance categories where all of the responses have been split between 'likely' and 'very likely'. The respondents obviously believe that their ALMO have performed well and managed the budget well in order to have an under spent. If this was not the case the under spent incurred would be worrying, if money was reserved that should have been spent, the question of why works weren't carried out would be asked and the fact that they need to be would be a worrying matter and would indicate of poor management.

The legal notices category caused a split between respondents where 55% believed that the lack of legal notices was likely to have an effect and 45% believed that the lack of legal notices was unlikely to have an effect. Legal notices include section 604 of the Housing Act where a property fails to meet the fitness standard criteria and RLS fails to undertake improvement works. Thus the Housing Act allows the tenant to instigate legal proceedings and works can be undertaken by external contractors at the expense of the RSL.

Table 6.5: An Evaluation of the Causes for Under Spending Maintenance Budget

<i>Factors</i>	<i>Very likely</i>	<i>Likely</i>	<i>Unlikely</i>	<i>No Opinion</i>	<i>N/A</i>
No Overtime	-	-	100	-	-
No Contractors	-	-	100	-	-
Materials (cheaper supplier)	-	55	-	45	-
No Extra Works	-	100	-	-	-
No Legal Notices	-	55	45	-	-
Good Performance	55	45	-	-	-
Good Management	55	45	-	-	-

### 6.3.6 What are the key factors contributing to housing maintenance?

This question is considered to be a vital question as it highlights some of the critical factors that have a significant impact upon developing a maintenance framework. Each respondent was asked to rate the importance of the factor with relation to maintenance and the results collected were analysed. The factors were split into categories of dwellings, customer, area and human habitation – see Table 6.6.

#### Dwellings

Numerous researchers (AC 2009; Cave 2007; Seeley 1985, 1997; Shabha 2003; Shapely 2008; Olubodun 1996; Wordsworth 2001) have identified the various categories of dwellings as low rise, high rise, size, design construction and age of property. Of the sample, approximately 80% of the asset managers ranked this as ‘*very important*’ with the remainder opting for the ‘*important*’ response. The results suggest that there is a strong belief that high rise buildings have an important role to play in the maintenance. This may be due to the age group of the respondents and many years experience as asset managers, hence it is assumed that all the respondents have had experience of living in high rise, have been involved in maintenance works on high rise and or general awareness of the past history of housing disasters associated with high rise block of flats of the 1960’s (despatches 1980). Often the importance is associated with the height at which the problems occur, this ultimately increases the expenditure and leads to higher importance.

Table 6.6: An Evaluation of Factors that Contribute to Maintenance Plan

Factors	P E R C E N T A G E				
	very important	Important	Not so Important	No opinion	N/A
<b>Dwelling:</b>					
<i>Low rise</i>	-	30	35	-	35
<i>High-rise</i>	80	15	5	-	-
<i>Size</i>	-	35	55	-	10
<i>Design</i>	75	20	5	-	-
<i>Construction</i>	65	20	15	-	-
<i>Age of property</i>	60	40	-	-	-
<i>Location</i>	55	40	5	-	-
<b>Customer:</b>					
<i>Age of tenant</i>	20	65	15	-	-
<i>Stable tenant</i>	-	55	45	-	-
<i>Support</i>	-	45	55	-	-
<i>Family size</i>	-	40	60	-	-
<i>Children</i>	-	35	40	-	25
<i>Black &amp; Ethnic minority</i>	-	-	-	-	100
<i>Disability</i>	-	55	20	-	25
<i>Vulnerable</i>	-	20	55	-	25
<i>Health of tenant</i>	40	55	5	-	-
<i>Right to buy</i>	45	35	20	-	-
<i>Difficult Tenants</i>	55	45	-	-	-
<i>Tenancy issues</i>	55	45	-	-	-
<b>Area:</b>					
<i>Orientation of dwelling</i>	20	75	5	-	-
<i>Exposure of dwelling</i>	35	60	5	-	-
<i>Income level</i>	-	20	75	-	5
<i>Anti social behaviour</i>	35	40	25	-	-
<i>Crime</i>	45	40	15	-	-
<i>Vandalism</i>	35	45	20	-	-
<i>Graffiti</i>	35	45	20	-	-
<i>Infrastructure (travel)</i>	-	5	95	-	-
<b>Human Habitation:</b>					
<i>Structurally stable</i>	100	-	-	-	-
<i>Serious disrepair</i>	100	-	-	-	-
<i>Dampness prejudicial to health</i>	100	-	-	-	-
<i>Lighting, heating, ventilation</i>	25	75	-	-	-
<i>Supply of water</i>	35	65	-	-	-
<i>Satisfactory facilities Cooking, hot &amp; cold water</i>	15	75	75	-	10
<i>Water closet</i>	35	65	-	-	-
<i>Bath or Shower WHB hot + cold water</i>	35	60	5	-	-
<i>Drainage of foul, waste &amp; surface water</i>	25	55	20	-	-
<i>Legionaries</i>	100	-	-	-	-
<i>Asbestos</i>	100	-	-	-	-
<i>Legal notices</i>	15	30	55	-	-
<i>Energy efficient</i>	55	25	20	-	-
<i>Environmentally Friendly</i>	40	-	60	-	-
NB: * indicates respondents gave no response					

The design of the building along with the construction returned with identical results and this shows that individuals may link the two factors together both of which were considered important. In the cases of low rise and size, the majority of responses 30% and 35%

respectfully considered the factors to be unimportant with the not applicable category also taking a share.

### Customer

The category of customer other factors relating to the nature of the customer were considered. The most prominent result is that of the black and ethnic minority factor where 100% of the respondents considered this factor to be not applicable, this is of course the politically correct answer was expected, otherwise RSL may expose themselves as not providing equality. In considering all the factors, the respondents considered right to buy, difficult tenants and tenancy issues to be very important. The factors of age of tenants and disability were considered to be important while factors such as stable tenant, support, family size and children were all considered in the main to be not important. The factor of vulnerability was mainly considered to be not applicable or not important. It can be seen from the Table 6.6, that the results were varied amongst factors and in order to remain concise the majority vote has only been noted.

### Location - Area

Other factors to be considered were the area factors that affect maintenance for the group. This category ranges from orientation to vandalism in order to cover all aspects that could have an effect. Once analysed the results showed that in the main all factors were considered to be important with only income level and infrastructure having a majority for not being in not important and not applicable respectively. The remainder of factors all appeared to be viewed as important or very important. The factor of crime received a high percentage that believed it to be 'very important' (45%) and associated factors such as Anti-Social Behaviour (ASB), vandalism and graffiti produced similar results, and in fact the three factors received identical results indeed showed a strong link between the factors. This is true of the orientation and exposure of the dwelling which were also similar in response and both considered to be important factors.

## Human Habitation

Fitness standards contained in the Section 604 of the Housing Act 1985 stipulates the minimum standards that a property needs to comply with, in order to be classifiable as fit for human habitation. The first three factors of structurally stable, serious disrepair and dampness prejudicial to health and the factors of legionaries and asbestos sparked the unanimous responses of 'very important', this not only highlights their level of importance but reinforces the level at which these factors are considered by all. None of the factors in this section were considered to be "*not important*" and the value received in this field received a low percentage this is an admission by the asset managers that their housing stock complies with decent home standards. The remaining factors were in the main considered to be important ones with energy efficiency taking a majority in the "*very important*" field.

However, the respondents show a varying response to the factors that have an impact on housing maintenance programme in social housing; this suggests an element of subjectivity is present in developing maintenance plans. This data has been grouped together to identify the 'positive' and 'negatives' percentages / factors from which a ranking order of importance has been extracted - see Table 6.7.

From Table 6.7 the following trends are evident:

### Dwelling

The age and condition of the property has been ranked as a major concern by the respondents, followed by geographical location of the property and their design was considered to be the second important factor as well as high rise construction. The least important being the size of dwelling and type of construction.

### Customer

The respondents have indicated that difficult Tenants and tenancy issues are a problem and any maintenance must be 'sensitive' to the tenant. Second most important area of concern is the tenant health and the age of the tenant suggesting that RSLs must carefully consider the implication of the aging customers and their specific needs.

Table 6.7: An Evaluation of the Positive Factors that Contribute to the Maintenance Plan

<i>Factors</i>	<i>Factors that may contribute to maintenance</i>		
	<b>P E R C E N T A G E</b>		
	<i>Positive*</i>	<i>Negative**</i>	<i>ranking order of importance</i>
<b><i>Dwelling:</i></b>			
<i>Low rise</i>	30	70	5
<i>High-rise</i>	95	5	2
<i>Size</i>	33	65	4
<i>Design</i>	95	5	2
<i>Construction</i>	85	15	3
<i>Age of property</i>	100	0	1
<i>Location</i>	95	5	2
<b><i>Customer:</i></b>			
<i>Age of tenant</i>	85	15	3
<i>Stable tenant</i>	55	45	5
<i>Support</i>	45	55	6
<i>Family size</i>	40	60	7
<i>Children</i>	35	65	8
<i>Black &amp; Ethnic minority</i>	-	100	
<i>Disability</i>	55	45	5
<i>Vulnerable</i>	20	80	9
<i>Health of tenant</i>	95	5	2
<i>Right to buy</i>	80	20	4
<i>Difficult Tenants</i>	100	-	1
<i>Tenancy issues</i>	100	-	1
<b><i>Area:</i></b>			
<i>Orientation of dwelling</i>	95	5	1
<i>Exposure of dwelling</i>	95	5	1
<i>Income level</i>	20	80	5
<i>Anti social behaviour</i>	75	25	4
<i>Crime</i>	85	15	2
<i>Vandalism</i>	80	20	3
<i>Graffiti</i>	80	20	3
<i>Infrastructure (travel)</i>	5	95	6
<b><i>Human Habitation:</i></b>			
<i>Structurally stable</i>	100	-	1
<i>Serious disrepair</i>	100	-	1
<i>Dampness prejudicial to health</i>	100	-	1
<i>Lighting, heating, ventilation</i>	100	-	1
<i>Supply of water</i>	100	-	1
<i>Satisfactory facilities Cooking, hot &amp; cold water</i>	85	15	3
<i>Water closet</i>	100	-	1
<i>Bath or Shower WHB hot + cold water</i>	95	5	2
<i>Drainage of foul, waste &amp; surface water</i>	80	20	4
<i>Legionaries</i>	100	-	1
<i>Asbestos</i>	100	-	1
<i>Legal notices</i>	45	55	6
<i>Energy efficient</i>	80	20	4
<i>Environmentally Friendly</i>	40	60	5

NB: \* Positive = Very Important +Important,      \*\*Negative = Not so Important + Not applicable

### Location - Area

Building orientation and its exposure were considered to be a highly important factor which contributes to the frequency of maintenance required on property. Second and third ranking was associated with crime, vandalism, graffiti and anti-social behaviour suggesting that maintenance managers have problems with deprived neighbourhoods

## Human habitation

All of the factors within this category were highly important apart from legal notices, energy efficiency and environmentally friendly factors.

### **6.3.7 What are the key factors that have an impact on Best Values performance?**

Best values, bench marking and performance measurement are often used as a yardstick to measure the success of social housing providers, the respondents were presented this question to check and confirm that they were aware and familiar with the yard stick measures used by the regulators. The results to this question are displayed in Table 6.8 and suggest that the respondents are aware of the key factors that affect best values. Apart from rent collection and operating costs which may not be entirely the responsibility of the respondents participating in the pilot study.

Table 6.8: An Evaluation of Factors that make up Best Value Framework

Factors	P E R C E N T A G E				
	v important	important	not so important	No Opinion	N/A
Void Management	35	65	-	-	-
Rent Collection	60	20	20	-	-
Repairs overall	75	25	-	-	-
Tenant satisfaction	100	-	-	-	-
Operating Costs	15	35	50	-	-
Stock transfer and energy efficiency	25	75	-	-	-

### **6.3.8 What are the key KPIs?**

The responses to this question are shown in Table 6.9 and it is clear from the responses received from the asset managers that there are aware of the KPIs used to bench mark their RSL organisation by the external government bodies such as the AC, TSA and HCA. Whilst being aware of the KPIs, it was apparent that the asset managers were still unsure how each factor was measured and how their roles and responsibilities contributed to each of the KPIs. This seemed a little strange but each RSL organisation has a different organisation structure and management style, together with varying roles and responsibilities of asset managers

(some involved more in day to day technical maintenance of assets, whereas others seems to have a broad function including dealing with core functions the RSL business). These issues will be detailed later in Chapter 7.

Table 6.9: An Evaluation of Factors that make up the KPIs

Factors	P E R C E N T A G E				
	v. important	important	not so important	No Opinion	N/A
Access, customer care & user focus	35	65	-	-	-
Diversity	60	20	20	-	-
Strategic approach to housing	75	25	-	-	-
Making the best use of existing housing	100	-	-	-	-
Enabling the provision of more housing	10	35	55	-	-
Value for money	25	75	-	-	-

#### 6.4 Pilot study data analysis – the Tenants / residential focus groups

##### 6.4.1 Which do you feel are the most important services to you by your RSL?

The tenant's views on the importance they attach to the services provided by the social landlord are tabulated in Table 6.10. 66% of the tenants (two thirds) reported that the repairs service is of the highest priority to them and inference of this data may suggest that RSLs are falling short in the ability service the essential maintenance repairs. This may be due to the property age, condition, and perhaps the ability to produce an effective and an efficient maintenance strategy. The second highest important service was quality of the accommodation and the third important service being dealt with nuisance from adjoining neighbours. The least concern is associated with wider estate management and the upkeep and maintenance of communal grounds; this indirectly suggests the tenants' views and their mind set of the importance attached to surrounding. There are two factors that are in joint third position concerning this being nuisance neighbours (anti-social-behaviour) and lower rents. This mirrors the concerns raised in Chapter 2 and Cave (2007) in that there is an unpleasant element in society and indeed the wider community that needs to be handled very sensitively. Through the legislative framework RSL have to put in place policies, procedures and protocols linked with the enforcement authorities such as police and social services to adequately tackle the problems of anti-social-behaviour. The lower rents and affordability has mostly dominated the social housing sector during its birth and still remains a key

concern to the tenants. The fourth most important factor is customer services and least important is modernisation. These findings are extremely useful as it reflects the views of tenants and that RSLs are failing to provide core services - response to maintenance repairs. This further reinforces the reasons as to why there is a need to examine and develop a robust decision support system for asset management.

Table 6.10: An Evaluation of the Importance of Current Services Provided

Services	R A T I N G					Raking * score
	Very Imp	Imp	Neith	NI	NA	
Efficient day to day repairs service	16	50	10	14		1
Allocations, including managing waiting lists for housing and requests for moves and transfers	-	-	-	-		-
Customer service	10	30	10	10	40	4
Security/ Keeping the buildings	-	6	30	6	58	8
Involving tenants in decision making	-	-	-	-	-	-
Dealing with anti-social behaviour	6	10	20	30	34	6
Dealing with nuisance neighbours	22	24	20	10	24	3
Complaints handling	-	-	-	-	-	-
Wider estate management/ Upkeep and maintenance of communal grounds	6	8	6	40	40	7
Taking tenants views into account/listening tenants	-	-	-	-	-	-
Good quality housing/accommodation	30	30	20	10	10	2
Major modernisation/upgrades/improvement programmes (kitchens, bathrooms etc.)	16	18	20	30	16	5
Other please state <b>Lower rents</b>	24	22	16	-	38	3
Nothing specific	-	-	-	-	-	-
Don't know	-	-	-	-	-	-

\*Ranking order = very Important + important = Score

#### 6.4.2 Select one of the service that is the most important to you?

When the tenants were asked to select what they considered to be the most important service they perceived – see Table 6.11. The priorities of tenants were centred immediate on the core service provision of the RSL related to ‘good quality accommodation’ and ‘everyday’ services that directly affect the quality of tenants’ lives on a daily basis as opposed to the other services. The second most important service related to having a fair system for managing lists for housing, requests for moves and transfers which attracted an overall 14% response from the tenants, followed by dealing with anti-social behaviour (10%) as being ranked the third important service; thus highlighting some areas are deprived than others and an important issue which affect their daily and their well being. Good customer services, major modernisation, and improvement work both attracted a response of 8%.

The priorities of tenants were centred immediate on the core service provision of the RSL generally relate to ‘house keeping’ issues i.e. the response to ‘day to day’ repairs is considered to be vital as customers may feel that this affect their lives and its importance is attached to the general quality and condition of the property. It was suggested that this may not be happening satisfactorily. The second most important service related to having a fair system for managing lists for housing, requests for moves and transfers which attracted an overall 14% response from the tenants. The inference of this factor suggests that RSLs need to be make policies / procedures clearer and transparent for their tenants. Third and fourth ranking of most important core services are how well RSLs deal with ASB, ‘good customer services’ and ‘dealing with nuisance’. These factors suggest that the tenants are being housing on estates that are undesirable and are consequently affecting the tenants’ daily lives.

Table 6.11: An Evaluation of the Most Important Service to You.

Service	Percentage response	Ranking
A good day to day repairs service	20	1
Efficient maintenance of the estate and communal grounds	-	
Major modernisation and improvements work (e.g. kitchens and bathroom upgrades)	8	4
A fair system, for managing waiting lists for housing and requests for moves and transfers	14	2
Good customer service	8	4
Effective complaints handling procedures	6	5
Keeping the buildings and entrances secure	-	
Dealing with anti-social behaviour	10	3
Dealing with nuisance neighbours	6	5
Involving tenants in decision making	6	5
Taking tenants views into account	4	6
The provision of good quality accommodation	20	1

Those services that are less likely to directly affect tenants are identified as ‘effective complaints handling procedures’, ‘dealing with nuisance’ and ‘involving tenants in decision making’ all three attracted an overall 6% response; taking tenants views into account (4%). Clearly, these survey results for service priorities are based on the perceptions of tenants who primarily are service users and having first-hand experience of services received from the social landlord. These core services are paramount to any organisation as well as social housing providers to ensure that service being provided to the purchases of the services (i.e. RSL tenants) is delivered efficiently and affectively.

### 6.4.3 How satisfied are you with the service providers' performance?

To contextualise service priorities, the researcher also asked the tenants focus group as to how satisfied they were with their landlord's performance in providing services, the results are shown in Table 6.12. In analysing the results of this question it is important to note that the results displayed on Table 6.12 have been averaged out and there may be a huge variation in the responses due to tenants background, age profile, location issues, type of accommodation (terrace, semi-detached, maisonette, flat etc...), quality of accommodation and their social housing provider (housing associations as opposed to the local authority / ALMO).

From the Table 6.12 the tenants identified that they were satisfied with their landlord's performance at efficiently maintaining the estate and communal grounds (78%), good quality accommodation and keeping building entrance and security both having equal preferences (76%) followed by day to day repair services (70%). Having effective complaints handling procedures (66%), taking tenants' views into account (62%), carrying out major modernisation and improvement work, involving tenants in decision making and fair system associated with waiting / transfer all attaining 60% response. The worst dissatisfaction responses were associated with dealing with anti-social behaviour and nuisance neighbours.

Table 6.12: An Evaluation of How Satisfied / Dissatisfied are you with the Performance of Your Housing Provider

Services	P E R C E N T A G E S						O V E R A L L	
	VS	FS	N	FD	VD	NA	Satisfied*	Dissatisfied**
Providing a good day to day repairs service	30	30	10	20	10	-	70	30
Efficiently maintaining the estate and grounds	20	32	26	-	12	10	78	22
Carrying out major modernisation + Imp	10	40	10	10	20	10	60	40
Fair system for waiting /moves/transfers	12	28	20	8	22	10	60	40
Providing good customer service	32	26	10	12	8	10	70	30
Having effective complaints handling	18	30	12	18	16	-	66	34
Keeping the buildings and entrances secure	30	46	-	12	12	-	76	24
Dealing with anti-social behaviour	16	32	4	20	20	6	54	46
Dealing with nuisance neighbours	12	38	8	6	38	-	56	44
Involving tenants in decision making	22	28	10	14	18	8	60	40
Taking tenants views into account	20	30	12	16	26	-	62	42
Providing good quality accommodation	28	38	10	24	-	-	76	24

Key:

VS = Very Satisfied; FS = Fairly Satisfied; N = Neither Satisfies or Dissatisfied; FD = Fairly Dissatisfied; VD = Very Dissatisfied  
 NA = Not Applicable; \*Satisfied = Very satisfied + Fairly Satisfied + Neither; \*\* Dissatisfied = Fairly Dissatisfied + Very dissatisfied + Don't Know

#### 6.4.4 Do you think the rent paid by you reflects value for money?

As well as establishing the tenants perception on the level of service (satisfaction, and priorities) the survey also probed into the tenants' perception of value for the services delivered by social housing providers in relation to the amount of money paid in rent. The results are shown in Table 6.13, which indicate the majority of tenants (66%) rated the accommodation and services provided by their landlord as representing good value for money.

Table 6.13: An Evaluation of Residents Response to 'Value for Money' Services Provided by the RSL

<b>Value for Money</b>	<b>Response</b>
Very good value	32%
Fairly good value	34%
Neither good nor poor value	8%
Fairly poor value	16%
Very poor value	6%
Don't know	4%

#### 6.4.5 Why do you rate your rent to represent good value for money?

Table 6.14 displays the results of the tenants' perception as to the reasons why they feel they are getting value for money. 36% of the tenants felt good value money was being associated with the provision of good standard of accommodation whilst 30% of the tenants viewed that rents were reasonable.

The other explanations received a low response from the tenants these were in the main 'work carried out promptly', 'important services by the landlord' and landlords improvements/modernisation each receiving an 8% response, whilst, 'services are performed to a high standard' and 'good standard of facilities and amenities only received 6 % and 4% response.

Table 6.14: An Evaluation of the Reasons Why it's Good Value for Money Service

Services	Percentage	Ranking
	Response	Order
They make sure important services are looked after	8	3
Work is carried out promptly	8	3
Services are performed to a high standard	6	4
Rent is reasonable	30	2
Landlord keeps residents informed of what is going on	-	-
Good standard of accommodation/living conditions	36	1
Good standard of facilities and amenities	4	5
Landlord listens to tenants/Involve tenants in decision making	-	-
Landlord makes improvements/modernisations to my home	8	3
Other please state.....	-	-
Don't know	-	-

#### 6.4.6 Why do you rate your rent to represent poor value for money?

The explanation given by the tenants who rated the services provided by their RSL as poor value for money based their views on the quality of accommodation (28%) and cost of rent (20%) see Table 6.15 below.

Table 6.15: An Evaluation of the Reasons Why its Poor Value for Money Service

Services	Percentage	Ranking
	Response	Order
Important services are not provided	8	4
Take too long to carry out work	8	4
Services are performed to a low standard	8	4
Rent is too high	20	2
Residents are not kept informed about what is going on	-	-
Poor standard of accommodation/living conditions	28	1
Poor standard of facilities and amenities	12	3
Landlord does not listen to tenants/Involve tenants	4	5
Landlord does not make improvements/modernisations to my home	12	3

The focus on the quality of accommodation as the core determining reason for landlords providing good or poor value for money was also reflected in the discussion during focus meetings / seminars with groups. It was apparent in discussions with tenants that receiving good services was the key issue to them and was more important to them than the cost of rent. Specifically, tenants believed value for money is linked to key services being delivered

effectively and furthermore the difference between receiving good/poor value for money hinged on having suitable accommodation that catered for their needs and circumstances.

#### 6.4.7 What changes are required for RSL to provide a better value for money services?

Furthermore, the tenants were asked what changes/improvements would they like their landlords to make to enable significant improvements to increase the value for money tenants receive; Table 6.16 highlights the feedback provided by the tenants. Interestingly the tenants raised issues on the core provision of the social landlords. They would like to see a significant improvement in the services delivery related both to ‘improved quality of facilities’ and ‘efficient repairs’ both of which received a 20% response. The ‘keeping property in good condition’ and ‘modernising properties’ received a 14% vote; with better control of cost and fiscal management had 12% return; ‘listening to tenants’ received 10% response; and afford rent had a least amount of response and 2% of the respondents to the survey proposed no changes.

Table 6.16: An Evaluation of What Changes are Needed to Provide Better Value for Money

<b>Improvements</b>	<b>Percentage response</b>
Better cost control / fiscal management	12
Modernising / upgrading properties	14
Listening to tenants	10
Keeping property in good condition	14
Ensure rents are affordable	8
More efficient / quality repairs	20
Improved quality of service facilities	20
No change – we get better value for money	2
Don't Know	-
Others	-

The response to the question demonstrates the tenants’ desire and expectation of the service provided and place more emphasis on the quality of housing and the quality of the repairs. This presents huge challenges for social housing providers, where the housing stock is ageing (or aged). The external envelope of these properties (roof, chimney stacks, lead flashing, rainwater gutters and down pipes, windows, doors, external walls, boundary walls/fences) is rapidly deteriorating. The RSLs will need to constantly upgrade these building to meet the

current decent homes standard and often play a 'catch up' repairing properties on ad-hoc basis.

## **6.5 Findings**

### **6.5.1 Asset Managers**

The findings of the asset manager's pilot study corroborate with research undertaken by Olubodun (1996, 2000), highlighting the factors impacting on building maintenance. The first is budgets when in the fiscal year there are allocated and how these are deployed on ad-hoc basis without much thought and pre-planning. Secondly although, the asset managers are aware of the key construction elements and factors contributing to day to day maintenance of housing stock from the answers provided they neither do nor fully understand the factors contributing towards best values. This may be due to the fact that asset managers are solely concerned with managing the day to day maintenance issues and may not be entirely aware of the wider issues contributing towards developing housing maintenance strategy.

The knowledge gap may also be associated with the changes being imposed by the governments' desire for social housing providers to adopt private sector approaches in managing housing assets, where asset manager having to play a '*catch up*' in line with the government / organisational thinking. This may be an indication that asset managers either need better training and that senior management does not carry out adequate and robust audits or that the strategy being deployed is incorrect.

These findings mirror the concerns advanced in Chapter 3 and 4 and will form the basis for developing in-depth interviews to fully understand the cognitive approach adopted by asset managers in developing a housing maintenance strategy.

### **6.5.2 Customer – tenants**

In order for social housing providers to deliver customer orientated housing maintenance services they must fully understand their services users and the expectations. It is very clear from the analysis of the pilot study that for this to be achieved as far as the tenants are concerned that they need to fully understand the core services provided by the service provider and recognise their expectations of the services. These relate to housing quality and

repairs, upgrading existing housing stock, value for money, tenants voice and affordable rents.

## 6.6 Summary

This chapter presented the results of the pilot study completed by asset managers (known as the ‘experts’) and highlighted some of the variables that play a key role in determining maintenance strategy and affect the delivery of housing maintenance services. However, tenants concerns such as:

- better cost control;
- modernising / upgrading properties;
- listening to tenants;
- ensuring rents are affordable;
- quality repairs and disturbance;
- improved quality of service facilities.

These appear to be largely ignored by the asset managers (and social housing providers) due to lack of knowledge of their customers and their expectations of the services and lack of knowledge to achieve best values.

The findings of these pilot studies played an important role in developing the early stages of the DSS model for this research. The findings were disseminated in the form of workshops formed the basis for the researcher to probe further research questions to identify the key factors influencing housing maintenance strategy. These questions were split in two parts firstly the asset managers were asked *‘in light of the constrained nature of housing maintenance in the social housing sector and given the present economic climate and changing legislations, what factors do you feel will affect the housing maintenance strategy both today and in the future?’*. Secondly the tenants where asked *‘in light of the constrained nature of housing maintenance in the social housing sector and given the present economic climate and changing legislations, what factors do you feel will affect the customer expectations and customer service delivery both today and in the future?’*. The answers to these themes assisted in the development key critical factors which formed a basis of developing RG in-depth interviews and the DSS model which are detailed in Chapters 7 and 8.

# CHAPTER 7

## REPERTORY GRID ANALYSIS

### 7.0 Introduction

This Chapter discusses the data elicited from ‘one to one’ basis individual in-depth interviews with 10 Senior Asset Managers (known as the domain ‘experts’) and 60 customers. The Repertory Grid primarily hinges upon accurately selecting the elements and the associated constructs which are populated by the respondents to the survey to identify key factors that influence the decision making process in developing a housing maintenance strategy. Hence this Chapter is split into 2 main parts, firstly the elicited elements and constructs are discussed in detail and secondly, the data analysis of the populated into the RG and the results are analysed. These results in turn identify the key attributes or factors that contribute towards the development of a strategic housing maintenance.

The RG data was analysed using *IDIOGRID* and *WEBGRID 5* software computer packages based on Kellys Repertory Grid technique (Jankowicz 2005). In analysing populated RG data, the researcher firstly undertook an ‘eyeball’ examination of the grids and grouped all similar constructs into clusters so it was easier to analyse the RG data within the group. The commentary on the ‘eye ball’ examination was extended to focus on the descriptive responses for each of the constructs and the corresponding elements and finally the data was analysed using the computer software to examine any underlying relationships between the constructs with a view to develop clusters. The analysis would then form a basis of the decision support model.

### 7.1 PART 1: Eliciting elements and constructs – in-depth interview

Chapter 5, explained the basis of the in-depth interview and the how the RG data is collected with a view to identifying key factors influencing the decision making process for development of a strategic maintenance management planning system. The success of any RG framework primarily hinges on the accuracy eliciting of the elements and the associated constructs and these have evolved using the laddering technique. This section describes and discusses elements and constructs elicited by 10 Senior Asset Managers and 60 Customers

(service users) of the social housing. From the 53 constructs elicited by the senior asset managers 21 were identical to the ones identified by the customers.

### **7.1.1 Elements eliciting by Senior Asset Managers**

In social housing, the housing maintenance elements can be either represented as physical objects that is to say assets which are occupied by the tenants / customers and which may be classified as:

- Terraced housing;
- Semi detached houses;
- Detached houses;
- Bungalows;
- Low rise flats;
- High rise flats.

These assets can vary greatly in terms of the age, the condition of the building fabric, the building type (which may be designated as defective or otherwise), the particular location of the property and the type / status of the tenant for example single, married, one parent, disabled, employed, semi employed or wholly unemployed. Hence one might expect a huge range of variance between each of the factors related to the property type its condition, location this approach was ignored. However, this research is an attempt to understand the tenant /customers experience and the ability of the RSL to deliver quality services to its customers. Any strategy being applied will therefore have an impact on the customer experience and the perceptions as to whether the strategy is successful or otherwise. The customer profile was elicited as key elements by the senior asset managers to be a vital factor in developing a strategic maintenance plan. A variety of tenures are to be found in the public housing sector and this really depends on an individual situation however from previous chapters it is generally accepted by all RSLs that tenants can be classified based on their capacity to pay the rent, their personal circumstances, the physical and mental health condition. Tenants can be broadly grouped in the following categories:

- Private tenants;
- Affordable housing tenants;
- Leaseholders;

- First time buyers;
- Shared ownership;
- Sheltered.

#### **7.1.1.1 Private Tenants**

Tenants who have the ability to pay full market rent are classified as private tenants. This class of tenant may occupy under either an assured tenancy or a regulated tenancy. An assured tenancy means the tenant has the right to occupy a property for a certain period of time. There are two categories of assured tenancies namely, fixed term tenancies and periodic tenancies. A fixed term tenancy is one granted for a fixed period such as 6 months whereas periodic tenancy is rolling type i.e. from week to week or month to month. The rent must be paid regularly to the landlord and the landlord can take legal action should the tenant fail to make payment pay in accordance with the terms of the tenancy agreement. Major repair works required for properties occupied under tenancies of these types will be a landlord's responsibility. The landlord does not have the right to enter the property without tenant's permission. Regulated tenancies are also for a fixed time but for a longer period. The contractual / statutory rights of the tenant are essentially the same under both types of tenancy.

#### **7.1.1.2 Affordable (housing) Rents**

Affordable Rent is a new more flexible form of social housing provision, which allows a more diverse offer to be made to people attempting access social housing. Tenants who qualify for housing in this category are generally on low income and are unable to afford to buy or rent properties by paying full market value. Affordable rented homes will be made available to tenants at up to a maximum of 80% of market rent. RSLs will normally have the freedom to offer Affordable Rent properties on flexible tenancies tailored to the housing needs of individual tenants. The government has introduced a series of other measures such as changes to the system of social housing tenures. It is no longer a requirement for social housing landlords to grant lifetime tenancies and are now free to offer shorter terms (but subject to a minimum term of two years). This change was introduced with a view to introducing an element of flexibility into the management of the social housing stock in their

strategic housing role and options improve the mobility of tenants wishing to move to another area perhaps in order to take up an offer of employment.

### **7.1.1.3 Leaseholders**

Leaseholders are deemed to have a right of ownership of the building which they occupy for a fixed period of time as defined in their lease. Leaseholder in the majority of cases will have paid a substantial sum referred to as a premium, but unlike a freeholder has no right of ownership in the land upon which the building has been constructed. At common law at the end of the contractual tenancy the land together with the building erected upon it would revert to the landlord. This situation was felt to be inequitable resulting in statutory intervention in the form of the Leasehold Reform Act which gave the qualifying tenant the right to acquire their landlords' freehold interest in their property. Tenants occupying under long leases will normally have responsibility for keeping the property in good repair. In the case of houses this will be a direct responsibility. However, in the case of flats tenants will normally have a limited direct repairing responsibility to the landlord taking responsibility for structural and external repairs and repairs to common areas but with the costs of doing so being recoverable from the tenants by way of service charge provisions with the leases.

### **7.1.1.4 First time buyer**

This form of occupation (also often referred to as Rent to Buy) provides an opportunity for prospective tenants to purchase a share in the property which they occupy after a pre-defined period of occupation. Frequently the RSL will grant assured short hold tenancies, typically based on an affordable rent of 80% of market rental value, giving an opportunity for the tenant to set aside the saving between the affordable rent and the properties market rent in order to build-up a deposit in order to buy a share by way of mortgage.

### **7.1.1.5 Shared Owner or Shared Equity**

Shared Ownership was introduced to affording tenants opportunity a means of getting a foot on the housing ladder who were not otherwise be able to buy a home on the open market. This facility allows the tenant to buy a share in a new leasehold property (either a house or an apartment) on a part buy/part rent basis and paying a subsidised rent on the part that is not

owned by the tenant. Most RSLs offer shares for sale of between 25% and 75% of the property depending on how large a share the tenant can afford to purchase with a rent charged on the RSLs remaining share. The larger the share being purchased by the tenant, the less rent the tenant will be required to pay to the RSL.

#### **7.1.1.6 Sheltered schemes**

Sheltered schemes or Supported Housing is intended for tenants who require a range of care and / or support. The level of care and support provided will be determined by the tenant's particular needs including monitoring if the tenants condition so requires. This type of housing may be provided to any of the groups listed below:

- people with physical disabilities;
- older people particularly those with physical disabilities or physical limitations;
- people with mental health needs;
- people with learning disabilities;
- young people leaving care and those setting up home for the first time;
- people with alcohol and/or substance misuse problems;
- people fleeing domestic violence;
- homeless people in temporary accommodation;
- people who need support to live independently.

#### **7.1.2 Constructs Elicited by Senior Asset Managers**

The following section describes the constructs elicited by senior asset manager and their relative importance attached to developing housing maintenance strategy in social housing.

##### **7.1.2.1 High customer care levels**

Most organisation, (RSL are no different in this regard), will attach considerable importance to the achievement of a high level of customer care and satisfaction. An effective management system should be capable of collecting reliable customer feedback as a basis for assessing the extent of customer satisfaction (or otherwise) and opinion which in turn can assist in forward planning and gauging the success or failure of existing policies, systems and

methods in relation to customer needs and aspirations. The customer care function should if operating efficiently, will form an important a link between the customer and the RSL providing asset manager with an insight into their customer's expectations and the extent to which the services provided accord with these expectations. Customer feedback should also provide an important source of data in the formulation of bench marks against which the quality and relevance of services may be gauged. This also provides an avenue through which for tenants to express their complaints and concerns and also suggestions as to how services might be improved shortcomings addressed.

#### **7.1.2.2 Achieving excellent communication with tenants**

The establishment and maintenance of good communications between RSLs and their tenants was considered to be a vital factor by the responding Asset managers in keeping both tenants and RSLs departments' informed and undated thereby identifying potential problems and sources of dispute which may arise from time to time due to a lack of understanding and appreciation of developing problems. Communication will involve the transmission of information, the expression ideas and suggestions in relation to a range of activities, the expression of concerns, discussion between tenants and their RSLs with a view to resolving issues in a fair and transparent manner. The RSLs have an obligation to keep the tenants informed in relation to services to which they are entitled, how access to the services may be made and also with regards to proposed changes to services. These ends may achieved by holding group meetings periodically with tenants or with their representatives, by means of ad-hoc meetings intended to deal with single issues, the use of newsletters or mailing or the presence tenant representatives as board members.

#### **7.1.2.3 High customer satisfaction with service delivery**

According to Cave's review (2007) RSL need to 'put the tenant first' is one of the measures of how successful the social housing providers are and it is important therefore to make the customers feel satisfied with the services being provided to them throughout their tenancy experience. This in turn will relate to housing quality, asset maintenance, complaint handling procedures, the tenants needs (which can vary from one person to another) are being met,

well groomed staff and dissatisfied tenants may create huge problems for RSL s and the their neighbours / the neighbourhood as a whole.

#### **7.1.2.4 High opportunity for tenant participation**

Asset Managers have highlighted the importance of providing opportunities for tenant participation in the decision making process and or to scrutinise proposals for changes to the services which they receive from their RSLs. By facilitating tenant participation RSLs an opportunity is created whereby RSLs may more fully understand their tenant's needs and to deliver services which more closely accord with those needs. In return tenants will have an opportunity to express their dissatisfaction if they are not satisfied with the services they receive. To improve customer satisfaction the RSLs must be prepared to accept criticism from their tenants and other key stakeholders and where appropriate to take note and act on this in seeking to develop a quality of service delivery.

#### **7.1.2.5 Excellent equality policy**

As part of diversity agenda RSLs are required to treat all tenants equally regardless of their colour, gender, language, age or health condition so that all tenants have equal access to housing and services. This would normally include the provision of assistance with translation for non English speaking tenants (or the provision of documentation) and also the provision of additional facilities for tenants who need special care without discrimination.

#### **7.1.2.6 High level of customer satisfaction with the quality of their housing quality**

Customer satisfaction will often hinge upon the provision of good quality housing or at least housing which will meet the minimum standard of statutory fitness as specified under the decent home standard thereby, permitting tenants to occupy accommodation of reasonable quality provided with reasonable modern facilities . In the long term RSLs need to ensure that their housing stock is kept in good condition through the application of on-going maintenance strategies and improvement and up-grading, in order to prevent the deterioration of housing assets. Not infrequently in the past social housing stock will have been deprived of investment for a range of socio-economic or political reasons, resulting in the inability of RSL to deliver good quality accommodation.

### **7.1.2.7 Good accessibility of services**

Services offered by RSLs must be available to all tenants with sufficient information provided regarding the services they will receive and how these may be accessed and should also be clearly set out in the tenancy agreement. The asset managers who were interviewed were of the view, that lack of knowledge and unawareness on the part of tenants of the range services provided by their landlord the part of the tenant may create lost opportunities for tenants to avail themselves of the services provided by their RSL and create grounds for otherwise avoidable disputes and complaints.

### **7.1.2.8 Clear and comprehensive service level agreements (SLA)**

As part of the tenancy agreement, RSLs have an obligation to provide a service level agreement. This agreement may include details of services that are available to their tenants and the procedures relating to how and when these services may be accessed. For example SLA may include in service level agreements details of servicing of boilers, gas fires and central heating systems, response time in the case emergency repairs (12 / 24 hour), and complaint handling time are but a few examples. The services provided under a SLA must be of satisfactory quality and standard but tenants in return must provide accessibility as and when reasonably required and not obstruct their landlord's personnel and contractors in the course of providing those services.

### **7.1.2.9 Good condition property Verses high demand - Property condition and location and impact demand**

It would be reasonable proposition to expect that good quality housing in good locations will be in greater demand than poor quality housing located in poor locations. The participating asset managers appear to have generally held to this presumption. However, an unintended consequence of the properties being in good condition is that they will tend to be reflected their better condition in the higher rental levels which they will tend to attract and which in turn will have an adverse impact upon their affordability, pushing the threshold of rent beyond the means of a proportion of potential tenants to pay. Tenants not under financial restrictions would be expected to prefer to live in a good quality dwelling in a desirable area. But depending upon their financial means a proportion of tenants may not have such a choice

and will have to accept the property within their budget rather than a better quality property in a more desirable location. However, RSLs legally obliged to ensure that their housing stock complies with decent home standards and maintained in good condition and the incidents of voids minimised.

#### **7.1.2.10 Excellent Housing provision DHS**

To a significant extent customer satisfaction will stem from tenants being provided with good quality housing. All social housing is required to meet with the minimum statutory standards of fitness for human habitation. The challenges highlighted in Chapters 2 and 3 often related to the need to bring existing housing stock (which is frequently obsolete in terms of its construction, aging and subject to rapid deterioration and may also be approaching the end of its useful economic life) up to current acceptable minimum standards. The RSLs must have the ability (both in physical and financial terms) to provide dwellings which match tenant need and reasonable expectations.

#### **7.1.2.11 Accurate database of type and condition of properties**

To establish and maintenance of an accurate database of construction types and property condition is clearly apparent from this construct, that without the establishment and maintenance of an accurate and sufficiently detailed and comprehensive asset profile and property recording system it will be difficult to develop systematic and well planned maintenance strategies. Lack of adequate will also create problems in predicting the costs of future maintenance plans and budgeting future expenditure. Data base may contain such details as the age of the housing stock, the house type, stock condition, extent of accommodation, and records of repairs and improvements previously carried out etc. The development of a reliable and comprehensive property data base will provide a platform upon which rational management decisions may be made in formulating future maintenance plans and budgetary allocations.

#### **7.1.2.12 Highly developed planned maintenance programmes**

Periodic and routine maintenance of properties is necessary to keep them in satisfactory condition for the present and to ensure that they will remain into the future. An effective

planned maintenance program can only be developed where the characteristic of the housing stock is known and understood and previous repairing history accurately recorded and are accessible. Having a comprehensive maintenance strategy makes it easier for the RSL and their asset managers to understand when, where and how to do undertake repairs and refurbishment and to estimate the extent of the funds which will be required and to control expenditure over a period of time.

#### **7.1.2.13 Accurate service cost certainty and investment per property**

Obtaining value for money in property investment is as important as achieving cost certainty. The services provided to tenants must be of satisfactory quality. As rent payers (and also often as service charge payers) tenants will have expectations as to the quality of services which they might be provided by their landlord. Customer satisfaction depends on service cost certainty too. Are they happy with the services they receive, is there cost certainty, do they get good quality services for the rent and other charges they pay.

#### **7.1.2.14 Rapid response time to Emergency Repairs and Urgent Repairs (reactive)**

In the case of some types of emergencies, landlords or concerned personnel must respond as quickly as possible. In situations such as burst pipes, gas leaks or lack of electricity etc. which would be viewed major issues and similarly issues such as defective doors/windows, drainage related problems etc. which although immediately less pressing nonetheless need to be treated with a high degree of priority important because of potential health and security risks. Tenants will need to be reassured that their landlord is aware the seriousness of the seriousness of the disrepair and that all necessary steps will be put in hand as a matter of urgency. Major problems should be resolved within a maximum of 2 days and minor repairs within a stated fixed period of time, without causing difficulty to tenants. A rapid response on the part of landlords in respect of emergency/urgent repairs will add significantly to the achievement high customer / tenant satisfaction.

#### **7.1.2.15 Well planned routine repairs and completion targets met**

Routine repairs and maintenance must be well planned. The required works should be clearly identified, accurately specified, and scheduled. Good liaison should be maintained by the tenants to ensure that the landlord's maintenance personnel / contractors have reasonable access to the tenant properties in order to carry out the required works. It is also important to complete the repair works within the time period notified to tenants and that a system of feedback established and a named point of contact advised to tenants. Good contract programming and the adoption a systematic methodology will assist in the achievement of projected commencement and completion dates with a potential reduction of disturbance and disruption to tenants.

#### **7.1.2.16 High quality of repairs and performance**

The quality of repair work is considered to be of considerable importance. The adoption of poor quality repairs, even if this is done in order to minimise cost and to expedite repair, particularly where this is adopted as a general policy, must be viewed as an undesirable practice. Doing this will have an adverse effect in the future. Poor quality repairs are likely to have a shorter life expectancy than repairs which are carried out in accordance with good building and craft practice using suitable materials. Poor quality repair work because of the failure of the repair or because of its shorter effective life will frequently not result in a cost saving in the long term. Tenants will be aware that they are being fobbed off with second best giving rise to tenant resentment and a loss of tenant confidence and goodwill.

#### **7.1.2.17 High quality of renovations**

In order to ensure that the social housing stock continues to meet the current and future needs of tenants and also continues to achieve a socially acceptable concept of habitability, it is necessary in addition to external refurbishment, to up-date the facilities within dwellings to a good modern standard and in accordance with modern taste. Housing which is maintained in good condition incorporating modern facilities is more likely to generate tenant demand and reduce potential void levels and improve the general appearance of an area. Properties (and estates) which are well maintained are more likely to be treated with respect by tenants thereby contributing to a reduction in incidences of tenant misbehaviour and levels of social

problems. Having a number of similar modern houses in a neighbourhood will have an uplifting influence upon the neighbourhood as a whole. Because of the potential benefits which may accrue it is a short sighted policy to skimp upon the quality or extent of refurbishment and large scale renovation schemes.

#### **7.1.2.18 Easy-to-manage properties / estates in deprived and stress areas**

Effective housing demand in areas exhibiting significant levels of economic and social deprivation will be significantly less than in neighbourhood which are not materially affected by such problems. In deprived areas / estates the rental levels will be generally measurably lower compared with better quality areas. By directing investment into maintenance and modernisation of properties stressed/low rental areas over time housing quality will improve with a commensurate improvement in tenant demand, fall in void numbers and a rise in rental and capital values. Such changes will be of particular benefit landlords, as they may more easily let their properties (notwithstanding that rent increases may remain modest in the shorter term) resulting in a reduction in the period for which dwelling remain void and thereby increasing total rental income.

#### **7.1.2.19 Excellent energy efficiency policies**

The equipment installed in dwellings should be energy efficient in order to reduce carbon footprint. Additionally such a policy will reduce cost in use to tenants helping to reduce their outgoings in respect of fuel and power. The provision of energy efficient boiler, the fitting of thermostatic valves to radiators, low energy lighting will also permit the more efficient use of energy. Particular attention should be directed towards the conservation of energy by upgrading thermal insulation for example by installing double glazing, providing cavity wall insulation (or where external walls are of solid construction lining internally with insulation boarding or applying a render system externally incorporating thermal insulation) and insulating roof voids. The need for tenant education must not be overlooked with tenants being made aware of how to efficiently use the appliances within their property in order to reduce energy usage and reduce cost.

#### **7.1.2.20 Reduced level of voids vacant**

The importance of void reduction cannot be overemphasised. A void dwelling will not be generating rental income the landlord during the period it remains void. Accordingly landlords should operate an effective voids policy with the period of the turn round clearly defined but sufficiently flexible to reflect the extent of the work which may be required for a dwelling to bring it up to a satisfactory condition for re-letting. As part of an efficient voids policy, there should be a close liaison maintained between housing management staff and maintenance staff to ensure that potentially voids or potential properties can be inspected and work schedules at the earliest possible opportunity to enable work to be programmed. However, notwithstanding the temporary inflow of rent, voids provide an opportunity for major improvement and repair works to be carried out which would be otherwise be difficult when a property is tenanted such as replacement of bathroom and kitchen fittings and re-wiring or the construction of an extension. Accordingly, the opportunities created by a dwelling becoming void should be fully taken advantage of. The presence of a large proportion of voids within a locality will tend to have a depressing effect upon the area and attract vandalism.

#### **7.1.2.21 A few abandonment of properties by residents**

As an obligation of their tenancy, tenants have an obligation to treat their properties in a tenant like manner and not to cause damage. Failure on the part of RSLs to act in the event of tenant breach of obligation in this regard, can have significant negative knock-on consequences for the area as a whole in which a property is situated, in addition to any remedial work which may be required to the particular property. It should be impressed upon housing management staff the importance of identifying problem tenants or previously satisfactory tenants who are experiencing problems, to enable an early intervention with a view to assisting the tenant. Tenants with major problems such as substantial rent arrears or domestic problems are often more inclined to abandon their tenancy resulting in an unplanned void property and an interruption of rent flow.

### **7.1.2.22 Good Tenant Selection Criteria**

Good tenant selection is one of the cornerstones of effective housing management. In addition to allocating housing to a prospective tenant on the basis of their housing needs, careful consideration should also be given to a number of other factors. These might include the prospective tenants previous housing history and background, criminal convictions, income, physical and mental disabilities etc. A comprehensive preliminary assessment will assist housing management staff to identify prospective tenants' particular needs and to match those needs as closely as possible to the available housing and to allocate support services should these be required. The elderly and those who need access to support services or cannot live fully independently can be placed in sheltered accommodation where their particular needs can be catered for. For families who are on low incomes will require access to subsidised accommodation. If there is a long waiting list, allocation will be prioritised on the basis of need. The homeless, old and vulnerable, single parents for example will normally be given the highest priority.

### **7.1.2.23 Reduced waiting list**

As demand for rented accommodation increases, the number of applications will also increase resulting in a lengthening waiting list. As a generality, demand for social housing accommodation will substantially exceed supply (without a massive programme of social house building this situation will clearly continue into the indefinite future). In these circumstances, RSLs must be seen to be fair and transparent in the way they allocate such accommodation as they are to avoid criticism and accusations of favouring one group over another. Accommodation must be seen to be allocated in accordance with objective housing need. However, a RSL who are perceived as being good landlord maintaining their stock to a high standard are likely to attract a higher level of demand for their properties than a RSL having a less enviable reputation with the result that their waiting list is likely to lengthen (the law of unintended consequence intervenes once again).

#### **7.1.2.24 High level of tenancy offers being refused**

In order to reduce the level of refused tenancy offers, it is important for the tenants' needs and aspirations to be matched as closely as possible to any offer of accommodation which might be made to them. However, it should not be overlooked that a proportion may have unrealistic expectations which the RSL may not be able to accommodate and it will be necessary for housing management/lettings staff to be firm with prospective tenants who insist on maintaining unrealistic or unreasonable expectations. However, where the tenancy of particular property (or group of properties) has been refused by a number of prospective tenants the reasons for this should be established and if practical steps taken to address those reasons to improve let-ability.

#### **7.1.2.25 Minimised overcrowding in dwellings**

As far as possible, overcrowding of dwellings should be avoided and the level of occupancy should be kept within the permitted statutory levels. Overcrowding may produce a number of undesirable effects such as increased stress which can impact upon tenant health, pressure on relationships and increased family break ups, reduction in privacy, reduction in available space, distress, bad effect on children etc. and they will tend to do anti-social and illegal activities. These problems can spill over into the wider community impacting adversely upon neighbours and contribute towards the development of anti social behaviour. It should be added that overcrowding is conducive to children not being able to study adequately resulting in children performing less well at school. Housing management staff should take action in cases involving unauthorised persons living within their RSLs properties or the presence of unauthorised lodgers.

#### **7.1.2.26 Minimised homelessness issues within a locality**

Homelessness should always be viewed as a serious issue and one needing to be seriously addressed. Homelessness will frequently be associated with a range of personal and social problems for example family or relationship break down, drug abuse, loss of employment, mental health problems, criminal behaviour by way of example. Not infrequently, homelessness will lead to a reduction in health and a reduction in life expectancy and life chances. It is also difficult for those not having a fixed address to obtain any form of regular

employment. In setting criteria for tenant selection, homelessness should be given high priority as a matter of course reflecting its social impact. However, it will be often necessary in the first instance to provide in certain cases accommodation incorporating a sheltered element also to provide support services.

#### **7.1.2.27 Easy to purchase or shared ownership**

Schemes such as a first time buy (Right to buy / acquire) provide an opportunity for eligible young people, who would otherwise be unable to do so, to take their first step on the housing ladder. Both of these schemes allow prospective purchasers to pay rent at a discounted rate, enabling them to save towards the purchase of a property when ready to do so or acquire a share in their property.

#### **7.1.2.28 Good quality tenants**

Well selected tenants are more likely to look after the property which they occupy and be less likely to create problems for neighbours. Efforts should be made to identify potentially problematic tenants at the selection stage (this may include taking up references with previous landlords and criminal and background checks). However, RSLs are general housing providers and providers of last resort and in view of this are less able than private sector landlords to be overly selective with regards to those seeking housing. However, it is generally accepted that good quality tenants are easier to satisfy than poorer quality tenants and less likely to create problems for their landlords or their neighbours. In many instances skilled and intensive housing management can deal with many tenants' generated problems however, there will be cases where this approach despite the best of effort, will not be successful. In such a situation other tenants on an estate, who are suffering from the behaviour of particular tenants, will look to their common landlord to take effective action including possession proceedings to evict the offending tenants. But what landlords can do is to study the tenant's background, if a tenant has a criminal background, but have met all other criteria for selection, the landlord can nonetheless grant a tenancy subject to conditions.

An RSL, may if they, suspect that a prospective tenant may prove to be problematic consideration might be given to offering a property where any adverse impact might be

minimised and perhaps that an alternative property might be offered at the end of a probationary period.

#### **7.1.2.29 High tenant satisfaction with local environment**

Tenant satisfaction is not only based on the quality of the house with which they have been provided and services they receive from the landlord but also be influenced the nature of the neighbourhood and the local community. RSLs by virtue of the fact that their property holdings are generally held in the form of estates will be viewed as having both the ability and a responsibility to keep the neighbourhood and communal areas in safe and well maintained condition. A well maintained environment will tend to discourage antisocial or illegal thereby reducing stress levels within a community and adding to the store of tenant satisfaction and encouraging community stability. A well maintained estate will also help to generate a sense of pride on the part of tenants and help to maintain both tenant demand and rental and capital values within a locality.

#### **7.1.2.30 Excellent Neighbourhood improvements**

As mentioned above there are a range of benefits which may stem from the creation maintenance of a good quality local environment. Should a neighbourhood have been permitted to degenerate into a rundown and neglected state steps should be taken to reverse this process because of the potential resulting benefits to the community and also in all probability to the RSL. Remedial action may include taking steps to remove tenants or who constantly create problem for their landlord and other tenants or obtaining injunctions to control their behaviour, maintaining the estate clean and tidy condition, introducing suitable hard and soft landscaping, removing graffiti, carry out works to reduce the institutional appearance of a locality for example. A well maintained and pleasant local environment will help to maintain demand for accommodation within the area and add to the level of tenant/community satisfaction.

#### **7.1.2.31 Excellent outsourcing of services and partnering arrangements**

Outsourcing to external companies will help the organisation improve significantly. They can use the external organisation's ideas and take the advantage of their facilities in a good

way to improve the housing quality and condition. By choosing the best outsourcing criteria, they can develop in a number of ways and can also improve customer satisfaction.

#### **7.1.2.32 Reduced Anti-Social Behaviour**

Having anti-social activities in a neighbourhood is as bad as having one problematic household in a house. The landlord will have to work really hard to eradicate anti-social activities completely from the neighbourhood. He / she will have to work in co-operation with police and other agencies to remove it completely. Necessary actions must be taken against them. Reduced anti-social behaviour will improve the quality of neighbourhood and also increase the value of properties.

#### **7.1.2.33 Excellent Fair rents**

The rents must be set in such a way that the tenants can afford to pay it every month. Houses and rent must be allocated by considering the person's financial ability, the size and use of accommodation. This considerably reduces rent arrears and putting them in difficult situations to pay rent.

#### **7.1.2.34 High affordable housing**

Affordability is also very important while allocating houses. That is why there are affordable houses that give people the opportunity to rent / buy houses at rates that are lower than market rate but still people can afford it. There must be more number of affordable houses so that more and more people can enjoy a life in decent homes with a lot of modern facilities at an affordable rate. This makes the life of tenants easier as they do not have to worry much about the rent they will have to pay, if their monthly income is less.

#### **7.1.2.35 Good rent collection and arrears management**

Tenants must be given an option to pay their rent the way they want. It can be paid directly to the landlord, online transaction or by telephone and postal and also on a particular day of every month (within the first week). Having a number of rent payment options makes it easier for tenants to choose the method of payment and also on a comfortable day. For

tenants who have rent arrears, that collection must also be well managed and must be given a number of options to pay it out, such as paying 2 month's rent together or as an instalment etc. Keeping a record of rent payments and of tenants who have rent arrears will make it easier for landlords to manage them systematically.

#### **7.1.2.36 Good financial stability**

Before selecting tenants, the landlord must make sure that they have the financial ability to pay the rent every month without having to remind them regularly. That is why it is important to know about the applicant before selecting them. Tenants must give details about themselves to the landlord at the time of applying, details such as their job, sources of income, number of dependents, monthly income etc. If the applicant is financially weak, without a proper job and sound income he / she will struggle to pay monthly rent. Hence it is important to find out a lot about the applicant before selecting them and after selecting the houses must be given as per their financial ability.

#### **7.1.2.37 Reduction of Tenant Insolvency – tenants ability to pay rents**

Tenant's ability to pay the rent must be checked before letting the property. Tenants 'job, their main source of income and how much they earn each month etc., will give an idea about their ability to pay rent. If insolvency is higher it will create a lot of issues to the landlord, i.e. failing to pay their rent and having rent arrears. A complete financial and personal check is necessary before giving them a property to let and landlord must make sure that the selected tenant can pay his/her rent regularly. On the other hand, if the applicant is found to have too many debts and doesn't have a proper monthly income, it is clear that he / she will not pay the rent regularly. This is unnecessary bothering to the landlord as he / she will have to find out alternatives to enable them to pay rent and at the end will have to ask them to leave the property. So to avoid all the unnecessary hassles it is essential to find out the tenant's ability to pay the rent before allocating a house.

#### **7.1.2.38 Minimise Costs associated with evictions and court actions**

Lack of proper checks before granting of a tenancy, may increase the level of landlord risk of tenant default. Examples of tenant default may include failure to pay the rents in accordance

with the terms of their tenancy agreement, damaging and misusing the property let to them; creating nuisance and anti-social behaviour, unlawful use of the property are the results of a minor careless mistake on the part of the landlord. In the most severe cases of tenant breach it will be necessary for an RSL to make recourse to court action in many cases resulting in the landlord being granted possession by the court. However, court proceedings have a significant cost implication which in the majority of cases will not be recoverable from the tenant.

Pre-tenancy checks will only reduce the potential risk of a tenant failing to honour the terms of their tenancy agreement will not eliminate this risk. However, good housing management procedures will help to identify the development of problems with particular tenants, enabling early corrective action to be taken. For example procedures can be adopted requiring accounts staff to automatically notify housing management staff once there is evidence of arrears. An obvious policy which could be adopted would be the institution of annual property inspections, however, it is suspected that a proportion of tenants would interpret this as oppressive and an undue interference in the enjoyment of their property and accordingly resisted by a proportion of tenants.

#### **7.1.2.39 Good return in investment**

Good maintenance practice is fundamental to the preservation of housing stock in a state capable of attracting satisfactory tenants and commanding a level of rent sufficient to meet the RSLs costs of operation, carry out improvement schemes and produce a sufficient surplus for reinvestment in new development. Their housing stock will represent the bulk of assets held by RSLs. RSLs having a large proportion of poorly managed and maintained properties amongst their stock will have a lower total asset valuation than a RSL which effectively manages its stock. Good asset management will involve both long and short term strategic management based upon the collection of adequate reliable data, the identification of properties having high cost in use characteristics and poor energy performance, the identification of areas (or particular housing types) associated with high levels of voids and low tenant take-up. Over time good asset planning should result in the physical improvement in estates/housing stock, increasing rent roll, reduction in costs in use (including management costs) and improving capital values. Asset management planning should provide for the disposal or demolition and redevelopment of unsatisfactory dwelling within the stock. This

practice should result in the generation of capital receipts (which can be reinvested) and overtime a reduction in maintenance cost and an improved stock profile.

#### **7.1.2.40 Good refurbishment and redevelopment opportunity**

Planned refurbishment and redevelopment probably represent the most effective (including cost effective) maintain the quality of housing stock and maintain high levels of tenant satisfaction. Obsolete properties with associated high costs in use (but otherwise structurally sound) may be capable of being brought up to an acceptable modern standard at a cost considerably below that of replacement with new build equivalents. Skilled refurbishment can usefully extend the economic lives of older properties almost indefinitely. This is an important factor given the present shortage of affordable rented housing in many localities. However, sufficient funds will need to be allocated to enable a good quality of refurbishment. Skimping upon specification or the setting of unrealistic budgets may in the longer term be found to represent an unsound policy. Scheme with a high level of tenant consultation / participation will often be more successful than refurbishment scheme where significant tenant input is lacking particularly in terms of tenant satisfaction.

#### **7.1.2.41 Excellent disposal of property**

Properties which cannot be refurbished/brought up to an acceptable modern standard at acceptable cost or having unacceptably high maintenance / running costs, will need to be identified with a view to disposal or redevelopment. Disposal in the open market is most effectively conducted through firms of chartered surveyors / external property agents. Such firms will have knowledge of property values and valuation methodology, the nature of the local property market and will also be experienced in negotiating with local planning authorities. Disposals of the surplus or unsatisfactory properties will generate capital receipts and should also reduce RSLs outgoings. Redevelopment will permit replacement of dwellings comply with current regulatory standards which more closely accord with modern needs and with tenant expectations. The replacement dwelling will also be more energy efficient than those which they replace and redeveloped schemes can be constructed for rent but would attract potential shared ownership tenants. It should be added that as an alternative to directing capital receipts towards construction related uses RSL may opt to direct receipts to dept reduction with a view to improving the financial profile of the organisation.

#### **7.1.2.42 Excellent tenant participation and representation**

It is now recognised that a high level of tenant participation and representation in the management of RSLs is conducive to achieving tenant satisfaction in addition to providing a valuable avenue of communication between the RSL and its tenants. By encouraging tenant participation RSLs be perceived as being less remote than would otherwise be the case. Tenant representative will often be perceived by tenants as more approachable than members of the RSLs staff and will also (and as a tenant representative gains experience) a trusted advocate in communication tenant grievances, concerns and views to the RSL and as a means of providing feedback to tenants. The presence of tenant representative at the board level will encourage tenant confidence in board policy and reduce tenant mistrust. Tenant representative may also make better communicators of policy to tenants because of the commonality of background and interest. However, it is of considerable importance that tenant participation is not treated as mere tokenism and that tenant representatives are kept adequately informed made to feel that their views and contributions are valued, if the potential benefits of tenant are to be obtained.

#### **7.1.2.43 High levels of stakeholder involvement and partnering**

In order to obtain the maximum benefit from partnering an open and transparent relationship need to be maintained with a free flow of information between partner organisations and stakeholders. Common aims and objects need to be agreed and defined by tasks allocated according to the particular experience, skills, and resources of the participants.

#### **7.1.2.44 High levels of security provision**

Adequate thought and resources need to be directed towards the provision of security either in relation to individual buildings or in relation to an estate as a whole to ensure that tenants and the community as a whole can feel safe and secure and the opportunity for criminal and anti-social activity reduced or discouraged. In the design stage (either new build or large scale refurbishments), careful consideration should be directed to security issues including consultation with the local police crime prevention team under the secure by design initiatives. Security measures which could be adopted in the case of high rise / flatted flats might include the provision of security cameras and remote door entry systems. External

doors need selecting for robustness and incorporate secure locking systems. Visually dead areas around dwelling should be designed out to ensure that such areas are eliminated which might otherwise facilitate anti-social activity. External materials to be used in certain locations should be designed for ease of graffiti removal.

#### **7.1.2.45 Excellent strategic partnerships**

The housing associations and local councils must have a good strategic partnership. They must have a good relationship with the various service providers and others who work in partnership with them. This helps them to improve by sharing ideas and working with mutual understandings.

#### **7.1.2.46 High market intelligence – identifying future supply and demand trends**

Records should be maintained with regards to enquiries by prospective tenants in order to establish relative demand for different types and sizes of accommodation to assist with rational forward planning and to ensure that the housing stock reflects changing tenant need and demand.

#### **7.1.2.47 High understanding and compliance with legislation**

RSLs need to ensure that their staffs are kept up to date with relevant changes in law and regulations and that where required that steps are taken to comply with those changes.

#### **7.1.2.48 Strong corporate governance**

Management has the responsibility of providing policy and direction to an organisation, identifying opportunities, ensuring that resources are provided and that staff are motivated. Historically housing has been viewed as unattractive and not particularly remunerative and according staff of the highest quality have not been attracted particularly for higher level posts.

Promotion was often made on the basis of seniority/time served within the organisation resulting in a conservative approach to problems and reluctance to innovate. To a large degree this situation remains unchanged.

#### **7.1.2.49 The development and maintenance of sound health and safety policies and security**

The health and safety of tenants and staff must be given high priority. The dwellings need to be maintained in a safe and healthy condition and in accordance with statutory standards of fitness. Gas appliances and electrical installations and equipment must be checked regularly and maintained in satisfactory order and if found to be defective to be replaced as a matter of urgency. Risk assessment should be carried out where there are potential risks to staff and steps initiated to eliminate or reduce risks to an acceptable level.

#### **7.1.2.50 Excellent Benchmarking**

One of the most effective ways for an organisation to improve its performance is by comparing its performance with that of similar organisations. This is referred to as benchmarking. Comparison may be based upon a range of selected indicators with a view to identifying strength and weaknesses with a view to improving performance.

#### **7.1.2.51 High social corporate responsibility**

RSLs as creatures of statute and recipients of public funds are expected to act with a high degree of corporate responsibility and carry out their responsibilities in an open and ethical manner. They must in their decision making consider any adverse social impact which may result from their actions.

#### **7.1.2.52 Well managed organisation - management cultural and style**

Well developed management skills are necessary in order to ensure the efficient running of organisations. Board members and senior executive should be adequately qualified and suitably experienced and capable of giving positive direction to their organisation.

### **7.1.2.53 High staff participation**

It is important that staff is adequately trained for the post with which they are entrusted and understand how the responsibilities relate to the organisation as a whole. Staff should be encouraged to be supportive of each other and should expect to be supported and encouraged by line and higher management. Staff will need to appreciate the need for enquiries and on occasion for complaints to be dealt with promptly and in a pleasant and courteous manner with tenants feeling that they are valued

### **Summary**

The RG framework was populated by 10 Senior Asset Managers representing 10 different social housing providers in tabled in Appendix F (for the individual RG of each asset managers) and Table 7.1 shows a summary of RG data collected from the experts.

## **7.2 PART 2: Repertory Grid data analysis - Asset Managers – an overview**

The general framework and the approach RG was discussed in Section 5 of Chapter 5 and the above section 7.1 discussed elicited elements and constructs that make up the RG framework for this research.

An eye ball examination of the 10 RG for the senior asset managers (see Appendix F) shows there is a lot of similarity between the score ratings provided by the participants. In order to identify any variations in the opinions and rating of the constructs against the elements of each asset manager RG data was compared. Figure 7.1 illustrates that the variations between the rating of each of the construct is not significant to warrant examine each grid separately, as each score ratings elicited by the senior asset managers have a similar 'profile' and in statistical terms the correlation was  $>0.905$ . If there had been a significant variation in the responses of the in-depth interview data between asset managers, then each asset managers RG data have to be analysed separately to evaluate the key differences and any underlying trends.

The inference from this data suggests that despite asset managers as 'experts' employed by different social housing organisations (having a different organisational structure, varying

asset portfolio and a varying range of tenants and issue) they seemed to broadly agree with the scores given to each of the constructs.

Table 7.1: Summary of Asset Managers Repertory Grid Data

Constructs		Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bio-polar
<b>Customer Risks</b>								<b>Customer Risks</b>
1	High customer care levels	3.0	3.0	2.8	3.3	3.7	4.0	Low customer care levels
2	Excellent communication with tenants	2.5	3.5	2.0	3.1	3.4	3.5	Poor communication with tenants
3	High customer satisfaction - service delivery	3.0	2.5	2.1	3.0	4.0	3.5	Poor customer satisfaction - service delivery
4	High opportunity for tenants participation	2.5	3.2	2.6	3.5	4.0	4.0	Poor opportunity for tenants to scrutinise service
5	Excellent equality policy	2.5	3.7	3.5	3.5	3.5	4.0	Poorly equality –tenants are not treated equally
6	High customer satisfaction with housing quality	2.5	2.6	3.5	4.0	4.0	4.0	Poor customer satisfaction with housing quality
7	Good accessibility of services	2.5	3.4	2.0	3.5	3.5	4.5	Poor accessibility of services
8	Good service level agreement (SLA)	3.0	3.5	2.5	3.5	3.0	4.1	Poor service level agreement (SLA)
<b>Asset Management Risks</b>								<b>Asset Management Risks</b>
9	Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	4.6	Poor condition property Verses less demand
10	Excellent Housing provision DHS	3.1	2.4	3.5	4.0	4.5	4.0	Poor Housing provision DHS
11	Good accurate database of type and condition of properties	2.5	2.8	1.0	3.0	3.5	4.0	Weak database of type and condition of properties
12	Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
13	Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.0	3.0	4.5	Weak service cost certainty and investment per property
14	High response time to Emergency Repairs and Urgent Repairs	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
15	Well planned routine repairs and completion targets met	2.5	3.6	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
16	High quality of repairs and performance	3.0	3.5	2.0	3.5	3.5	4.0	Poor quality of repairs and performance
17	High quality of renovations	3.5	3.0	1.0	3.5	3.5	4.0	Poor quality of renovations
18	Easy-to-manage properties/estates in deprived and stress areas	2.5	2.0	3.0	2.5	3.0	3.5	Difficult –to-manage properties/estates in deprived and stress areas
19	Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
20	Reduced level of voids vacant	4.0	2.0	5.0	4.0	4.5	5.0	High level of vacant void
21	A few properties abandoned by tenants	3.0	2.0	5.0	4.5	5.0	5.0	High level of properties abandoned by tenants
<b>Tenancy Risks</b>								<b>Tenancy Risks</b>
22	Good Tennant Selection Criteria	3.0	2.6	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
23	Reduced waiting list	3.0	4.5	1.0	3.0	3.5	4.0	High waiting list
24	Low level of tenancy offers that are frequently refused	4.0	4.5	1.0	2.0	3.0	3.0	High level of tenancy offers that are frequently refused
25	Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
26	Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
27	Easy to buy or shared ownership	2.0	3.1	4.5	3.5	3.5	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>								<b>Neighbourhood and community risks</b>
28	Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
29	High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
30	Excellent Neighbourhood improvements	3.0	2.8	3.4	3.0	3.5	4.0	Poor Neighbourhood improvements
31	Excellent outsourcing services and partnering	3.1	3.0	4.0	4.0	4.5	4.1	Poor outsourcing services and partnering
32	Reduced level of Anti-Social Behaviour	3.5	2.6	3.6	3.6	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>								<b>Financial and economic risks</b>
33	Excellent Fair rents	3.9	3.0	3.9	4.1	4.0	4.9	Poor rents
34	High level of affordable housing provision	2.1	3.9	3.9	4.0	4.0	4.5	Poor level of affordable housing provision
35	Good rent collection and arrears management	3.0	2.5	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
36	Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
37	Good solvency - tenants ability to pay rents	4.0	2.0	5.0	4.0	4.5	5.0	High level of insolvent tenants
38	Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.5	3.5	4.6	Poorly managed evictions and court actions
39	Good return on investment	4.0	2.5	4.0	3.5	3.5	4.6	Poor return on investment
40	Good refurbishment and redevelopment opportunity	3.5	1.5	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
41	Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>								<b>(Business) Continuous Service improvement risks</b>
42	Excellent tenants participation	3.0	3.0	2.6	3.5	3.5	2.5	Weak tenants participation
43	High level of stakeholder involvement and partnering	2.6	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
44	Good security provision	3.0	3.0	3.0	3.5	3.5	5.0	Weak security provision
45	Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
46	Good Market intelligence - future supply and demand trends	2.0	3.0	5.0	3.5	4.0	4.5	Weak market intelligence
<b>Corporate risks</b>								<b>Corporate risks</b>
47	High understanding and compliance of legislation	3.5	4.0	3.5	4.0	4.0	3.5	Poor understanding and weak directives
48	Strong corporate governance	3.5	4.5	2.5	3.6	3.6	4.0	Weak corporate governance
49	Sound Health and safety policy and security	3.0	3.5	1.7	3.0	3.0	5.0	Weak health and safety policy and security
50	Excellent Bench Marking	3.7	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
51	High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
52	Well managed organisation - management cultural and style	3.2	3.4	3.2	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
53	High staff participation	2.4	4.0	1.7	3.3	3.3	5.0	Poor staff participation

The closeness of the dots in Figure 7.1 show the scores assigned by the asset managers are similar and it is possible to visualise a straight line through the comparative data which represents 0.905 correlation between the construct ratings (scores) provided by the asset managers.

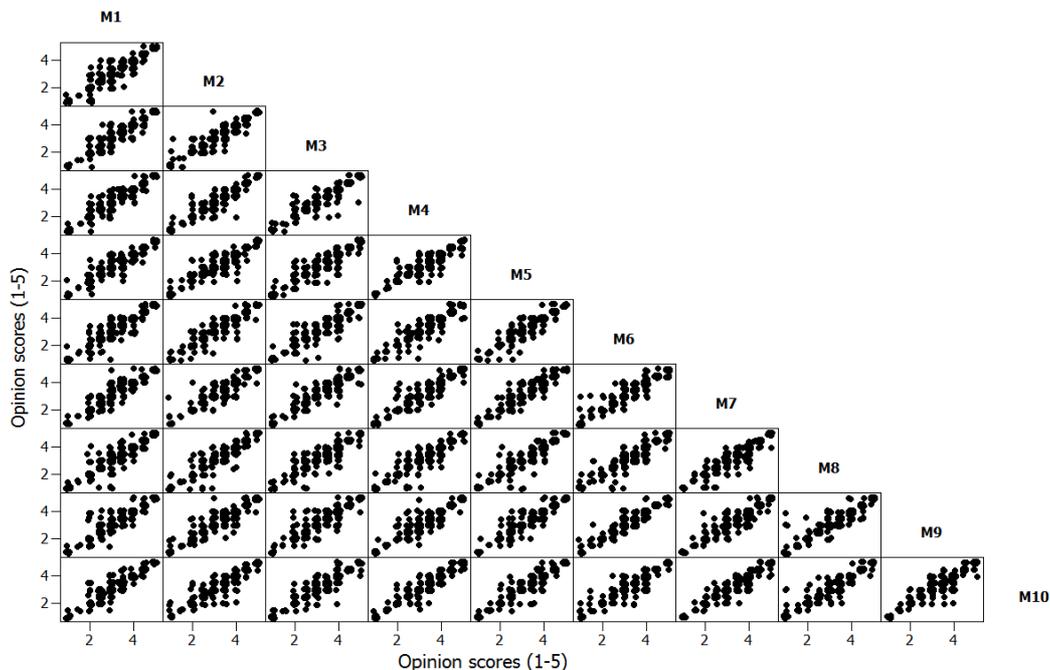


Figure 7.1: Correlation Between Asset Managers

The data also shows that the asset managers share similar views and there consistency in their ability to ‘bench mark’ the ratings for constructs; and demonstrates their understanding and maturity in making value judgements and managing social housing maintenance related to the 53 constructs. However, alternatively this data also suggests several weaknesses which are; the RG data is only as good as the knowledge and understanding of the experts. Given that these experts are constantly making business decisions based around the constrained resources - lack of funds; deteriorating assets; unable to fully satisfy the customer(s) expectations and inability to make the right decision in the best interest for the future of asset portfolio and the sustainability of the assets. This scenario was highlighted in Chapter 3 (sections 3.9 and 3.10) and current strategies developed by asset managers tend to be more on reactive and responsive maintenance rather than corrective and diagnostics. Secondly the asset managers’ knowledge and experience is very limited and are unable to fully understand the wider aspects of social housing agenda presented by the Coalition Government which is driving the RSL into adopting a corporate social landlord approach. This is more in keeping

with the private sector landlords whereby a business decision based on service delivery, investment equals return and adopting strategies to get more out of the assets and realising its limitations and developing strategies to manage the asset portfolio.

Hence rather than considering each individual asset managers' ratings, it is therefore appropriate to consider the average ratings of all ten asset managers to provide a more meaningful analysis, the summary of the average rating is tabled in Table 7.1. Since there are 53 constructs and for ease of data analysis these constructs have been grouped together in various categories or clusters which best describe their function and purpose. Okoroh (1998), Jones (2001), Gombera (2003) and Liyanage & Egbu (2004) have used similar approaches.

The dendrogram shows the cluster analysis of elements derived from the averages of RG scores for the asset managers is shown in Figure 7.2 where the elements are displayed along the bottom and the proximity of the lines shows the strength of the measured relationship between two or more elements. From this it is evident how the relationships between the clusters have emerged in that 'private rented' and 'affordable housing' tenants have a very distinct opposite relationship. Whilst the first time buyer, shared owners, sheltered accommodation, and the leaseholders have a lot in common and share a similar 'profile'. This appears to be true on the surface however, further detailed analysis of the clusters discussed later in this Chapter – section 7.3 shows a different pattern.

### **7.3 Cluster Analysis**

This section examines the contents of each cluster. Its clear from Chapter 2 that social housing providers, provide housing a different range of customers (tenants) and Section 7.1 highlighted 6 types of customers / tenants and hence all asset managers working in the social housing sector are in charge of the 'up keep' of the properties which these customers are housed in, as well as service delivery. The constructs identified by the asset managers gave some indication of factors perceived to be of particular significance in relation to the 6 elements, which have also been selected by the asset managers to best describe the tenant type described in detail in Section 7.1. However, an important part of the analysis is the bipolar, these are the opposite ends of the poles each having a directly opposite descriptor to the construct.

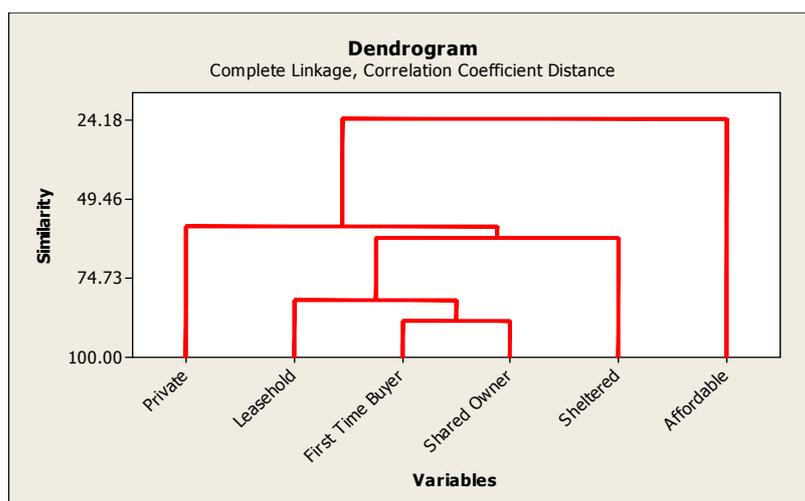


Figure 7.2: Average Combined Distance Cluster

### 7.3.1 Customer Factor Cluster Analysis

The constructs grouped within this cluster is comprised of all factors that are associated with the customer. The failure to comply with the performance requirements within each of the factors will drastically affect the viability of the RSLs and contribute failure to delivery services to customers. The previous auditors (Audit Commissions, Housing Corporation and TSA) as well the present coalition Government via Home and Community Agency continues to use this cluster as one of key benchmarking factors comparing different RSLs. The results are tabulated below in Table 7.2.

Table 7.2: Customer Factors – Data

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Total	Bi-Polar
<b>Customer Factors</b>								
1 High customer care provision levels	3.0	3.0	2.8	3.3	3.7	4.0	<b>19.8</b>	Low customer care provision levels
2 Excellent communication with tenants	2.5	3.5	2.0	3.1	3.4	3.5	<b>18.0</b>	Poor communication with tenants
3 High customer satisfaction with service delivery	3.0	2.5	2.1	3.0	4.0	3.5	<b>18.1</b>	Poor customer satisfaction with service delivery
4 High opportunities for tenant participation	2.5	3.2	2.6	3.5	4.0	4.0	<b>19.8</b>	Poor opportunities for tenant participation
5 Excellent equality policy	2.5	3.7	3.5	3.5	3.5	4.0	<b>20.7</b>	Poor equality policy
6 High customer satisfaction with their housing quality	2.5	2.6	3.5	4.0	4.0	4.0	<b>20.6</b>	Poor customer satisfaction with their housing equality
7 Good accessibility of services	2.5	3.4	2.0	3.5	3.5	4.5	<b>19.4</b>	Poor accessibility of services
8 High service level agreement (SLA)	3.0	3.5	2.5	3.5	3.0	4.1	<b>19.6</b>	Poor service level agreement (SLA)
<b>Total average</b>	<b>2.7</b>	<b>3.2</b>	<b>2.6</b>	<b>3.4</b>	<b>3.6</b>	<b>4.0</b>		

### 7.3.1.1 Descriptive Analysis for Elements - Customer

The dendrogram for the customer risk cluster analysis derived from using RG analysis is shown in Figure 7.3. The columns form the elements, the row identifies the constructs which are shown on the right hand side, and the bi-polars are displayed on the left hand side of the Figure.

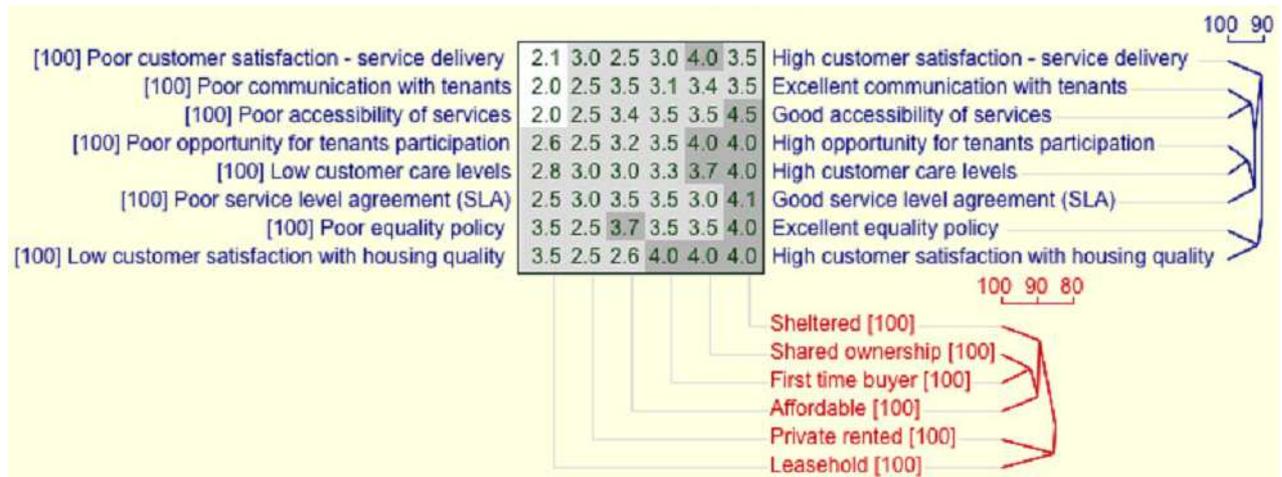


Figure 7.3: Dendrogram - Customer Factors

The link shown on the dendrogram indicates the strength of relationship measured between two or more elements / constructs. From this, it is apparent that there are three elements that share a similar profile namely First time buyers, Shared owners and Sheltered. Whilst the Leasehold and Private rented share a similar profile (linkages) which demonstrates the least level of interaction between the RSL and the tenants.

### 7.3.1.2 Descriptive Analysis of Constructs - Customer

General 'eye ball' inspections of the data shown in Table 7.2, reveals that the lowest scores given by the asset manager were constructs 2 and 3 (Excellent communication with tenants and High Customer service delivery) and construct 3 showed most of the variation between 2.1 and 4.0. Whilst the highest scores were assigned to constructs 5, 6 and followed by constructs 1, 4 and 7.

On the right hand side of the dendrogram (Figure 7.3) shows the relationship between the constructs that is to say that Excellent equality policy and High customer satisfaction with

housing quality are paired up together; similarly excellent communications and Good access to services; and High opportunity for tenants participation, High customer care levels and Good service level agreements are clustered together and these all finally linked together with High Customer service delivery. The constructs are directly related to the tenant type (i.e. the elements) and each tenant type require different level of care, support and services to reflect their requirements and expectations.

### 7.3.1.3 Analysis of Component Space - Customer

#### 7.3.1.3.1 Relationship between elements - Customer

The correlation of the elements and Euclidean distances are displayed in Table 7.3. The value of 1.0 means a positive linear correlation when comparing like with like. However, the minus value such as private rented against first time buyer, shared owner and sheltered indicates a linear correlation similarly Affordable housing with first time buyer, shared owner and sheltered and further more a linear correlation exists with leaseholders and shared owner and sheltered.

Table 7.3: Customer Elements Correlation and Euclidean Distances

Elements	Private Correl ECdis		Afford Correl ECdis		Lease Correl ECdis		FTB Correl ECdis		Shared Correl ECdis		Sheltered Correl ECdis
Private rented	1.00										
Affordable rented	-0.33	2.06	1.00								
Leasehold	-0.21	1.90	-0.06	2.57	1.00						
First time buyer	-0.43	2.44	-0.05	1.61	0.70	2.57	1.00				
Shared ownership	-0.16	2.97	-0.76	2.38	0.21	3.33	0.11	1.32	1.00		
Sheltered	-0.21	3.77	0.32	2.50	0.18	4.11	0.60	1.66	-0.24	1.68	1.00

The spatial analysis between the elements is displayed in Table 7.4. Spatial relationship is also commonly known as Principal Component Analysis (PCA) and this enables the data to be further analysed to show the relationship between the elements and the constructs on the same diagram. The difference between the rating assigned to an element in terms of a construct and the mean rating of all the elements in terms of the respected construct is calculated, the result is positive if the rating for the element is above the mean and negative if below the mean (Jones 2002). Hence, this data provides a location of each of the elements and the constructs. Hence, when the data for each element is plotted along an axis for every constructs, a complete different dispersion of the elements as a scatter of points in the multi-dimensional construct space appears. If the procedures was to be repeated for the constructs

a similar 3 dimensional plot will emerge. However, spatial analysis or PCA integrates the two multi-dimensional models and produces a cognitive map (see section 7.3.1.4) which is useful to understand the underlying patterns of activity and any trends that may emerge. These trends are calculated and although there are no restrictions as to how many trends should be incorporated in the analysis but normally it is usual to consider only those with more than 10% of the variance which often limits the PAC to 2 or 3 trends.

From Table 7.4, it is evident that PCA1 and PCA2 are highly relevant and shows approximately 22.8% and 19.4% respective variances. Whereas, PCA 3, 4, 5 and 6 the percentage variance is insignificant and reduces from 8.8% to 0.2% and can be ignored.

It is clear from Table 7.4, that ‘Private rented’ tenants have a large negative contrast from the other customers and First time buyer; Sheltered and Leaseholds are having a positive relationship in relation to PCA1. Whilst Shared owner has a positive contrast, an opposite affordable tenant and similarly Sheltered opposite but a negative contrast with affordable customers.

Table 7.4 : Customer Principal Component Analysis – Elements

Variable	PCA1	PCA2	PCA3	PCA4	PCA5	PCA6
Private	-0.401	-0.021	-0.836	0.086	0.159	-0.328
Affordable	0.187	-0.642	0.237	0.229	0.382	-0.546
Leasehold	0.463	0.258	-0.207	0.692	0.335	0.290
First Time Buyer	0.601	0.190	-0.203	-0.056	-0.545	-0.511
Shared Owner	-0.029	0.622	0.237	-0.236	0.526	-0.416
Sheltered	0.476	-0.216	-0.325	-0.634	0.378	0.275
<b>Eigen analysis of the Correlation Matrix</b>						
Eigenvalue:	2.2787	1.9409	0.8874	0.6655	0.2054	0.0221
Proportion:	0.380	0.323	0.148	0.111	0.034	0.0004
Cumulative:	0.380	0.703	0.851	0.962	0.996	1.000

### 7.3.1.3.2 Relationship between constructs - Customer

The relationships between constructs demonstrates how the principal components have been formulated by asset managers. Table 7.5 indicates the correlations between the constructs and the Euclidean distances between the constructs. From these tables the following correlations are apparent:

- Excellent customer care provision has a very strong relationship with opportunity for tenant participation, customer service delivery, accessibility of services, communication with tenants, housing quality and service level agreements.
- Excellent customer service construct is strongly linked with accessibility of services, service level agreements, and opportunity for tenant participation.
- Excellent customer service delivery construct is linked with opportunity for tenant participation.
- Excellent opportunity for tenant participation construct likewise shows a strong linked with accessibility of services.
- Good accessibility of services construct is strongly associated with service level agreement.

Table 7.5: Customer Constructs Correlation and Euclidean Distances

Constructs	1	2	3	4	5	6	7	8
High customer care provision	1.00							
Excellent communication with tenants	0.70	1.00						
High customer satisfaction with service delivery	0.86	0.62	1.00					
High opportunity for tenant participation	0.91	0.83	0.77	1.00				
Excellent equality policy	0.50	0.54	0.09	0.68	1.00			
High customer satisfaction with housing quality	0.68	0.25	0.50	0.72	0.58	1.00		
Good accessibility of services	0.87	0.90	0.65	0.89	0.63	0.48	1.00	
High service level agreement	0.68	0.79	0.38	0.64	0.52	0.23	0.92	1.00
<b>Euclidean Distances</b>								
High customer care provision	0.00							
Excellent communication with Tenants	1.23	0.00						
High customer satisfaction on service delivery	1.08	1.28	0.00					
High opportunity for tenant participation	0.68	1.10	1.22	0.00				
Excellent equality policy	1.14	1.65	2.10	1.14	0.00			
High customer satisfaction with housing quality	1.22	2.12	1.86	1.19	1.31	0.00		
Good accessibility of services	1.17	1.09	1.60	0.95	1.61	1.91	0.00	
High service level agreement	0.94	1.09	1.66	1.17	1.24	1.82	0.96	0.00

Table 7.6 shows Principal component analysis (PCA) of constructs and from this table it is evident that PCA1 and PCA2 are highly relevant as they identify a combined total 82.8% of the trends in data within this cluster, however individual PCA1 and PCA2 shows approximate to 69.7% and 13.1% respective variances. Whereas, PCA 3, 4, 5 and 6 the percentage variance is insignificant and reduces from 12.5% to 0% and can be statistically ignored.

Table 7.6: Customer Principal Component Analysis – Constructs

Constructs	PCA1	PCA2	PCA3	PCA4	PCA5	PCA6	PCA7	PCA8
High customer care provision levels	0.398	0.162	0.177	0.232	0.683	-0.090	0.269	0.429
Excellent communication with tenants	0.372	-0.339	0.133	-0.534	-0.320	-0.042	0.558	0.167
High customer satisfaction on service delivery	0.321	0.306	0.568	-0.142	0.081	0.282	-0.049	-0.610
High opportunity for tenants participation	0.412	0.162	-0.013	-0.270	-0.189	0.189	-0.665	0.465
Excellent equality policy	0.280	-0.062	-0.722	-0.304	0.386	0.187	-0.004	-0.347
High customer satisfaction with their housing quality	0.267	0.658	-0.325	0.288	-0.450	-0.059	0.317	-0.013
Good accessibility of services	0.410	-0.229	0.006	0.168	-0.066	-0.774	-0.265	-0.278
High service level agreement (SLA)	0.336	-0.499	-0.032	0.603	-0.183	0.487	0.002	-0.043
<b>Eigen analysis of the Correlation Matrix (constructs)</b>								
Eigenvalue:	5.5782	1.0518	0.9965	0.2839	0.0895	0.0000	-0.0000	-0.0000
Proportion:	0.697	0.131	0.125	0.035	0.011	0.000	-0.000	-0.000
Cumulative:	0.697	0.829	0.953	0.989	1.000	1.000	1.000	1.000

PCA1 is actually a ‘line-of-best-fit’ and compares all the constructs relative to Good customer care provision and the variations on a spatial basis is positive i.e. all of the values lie in one plane and are significant, their variation across PCA1 accounts for 69.7%. Within this cluster a strong relationship exists between Good opportunity for tenant participation, Good accessibility of services; Good customer care provision; Excellent communication with tenants; Good service level agreement. However, the relationship is slightly different as the values are showing a slightly less strong contrast between the constructs in PCA2 where each construct was compared with Excellent communication with tenants. The most significant positive relationships exist with Good customer satisfaction, housing quality and a negative significant value is attained with High service level agreement. The implications of PCA1 when developing housing maintenance strategies in the UK, social housing providers need to carefully consider level customer engagement and adopt more transparent procedures and establish communicate links.

#### **7.3.1.4 The Cognitive Map - Customer**

The cognitive map displayed in Figure 7.4 has been produced using the PCA or the trends as axis and co-ordinates to locate the positions of the constructs - two points of each construct plotted with a line running through these positions represent the positive pole and negative pole i.e. the construct and the bi-polar. The position of each element is also shown on the cognitive map illustrating the relationship between each element and the constructs. This allows the data gathered from Table 7.4 and Table 7.6 to be translated and contextualise in a visual form and enable the cognitive map to be examined in more detail. For ease of interpretation, the researcher has drawn an imaginary circle to highlight the significance of the constructs and elements.

From Figure 7.4, shows the cognitive relationship within the customer factor cluster. There are 3 elements which are broadly grouped together (Sheltered, Shared ownership and First time buyers) and are in close proximity to the constructs that share positivity. The Leaseholds and Private rented are completely the opposite side and while the affordable tenants are on their own and are associated with significant negativity. This grouping also suggests that the customer factors will vary from tenant to tenant and generally these are governed by customer expectations, their financial standing, and their personal background. RSLs and asset managers need to fully understand their customer expectations - which varies between customer types. Any maintenance strategies development and service delivery must be put together and sensitive to the varying requirements of the customers.

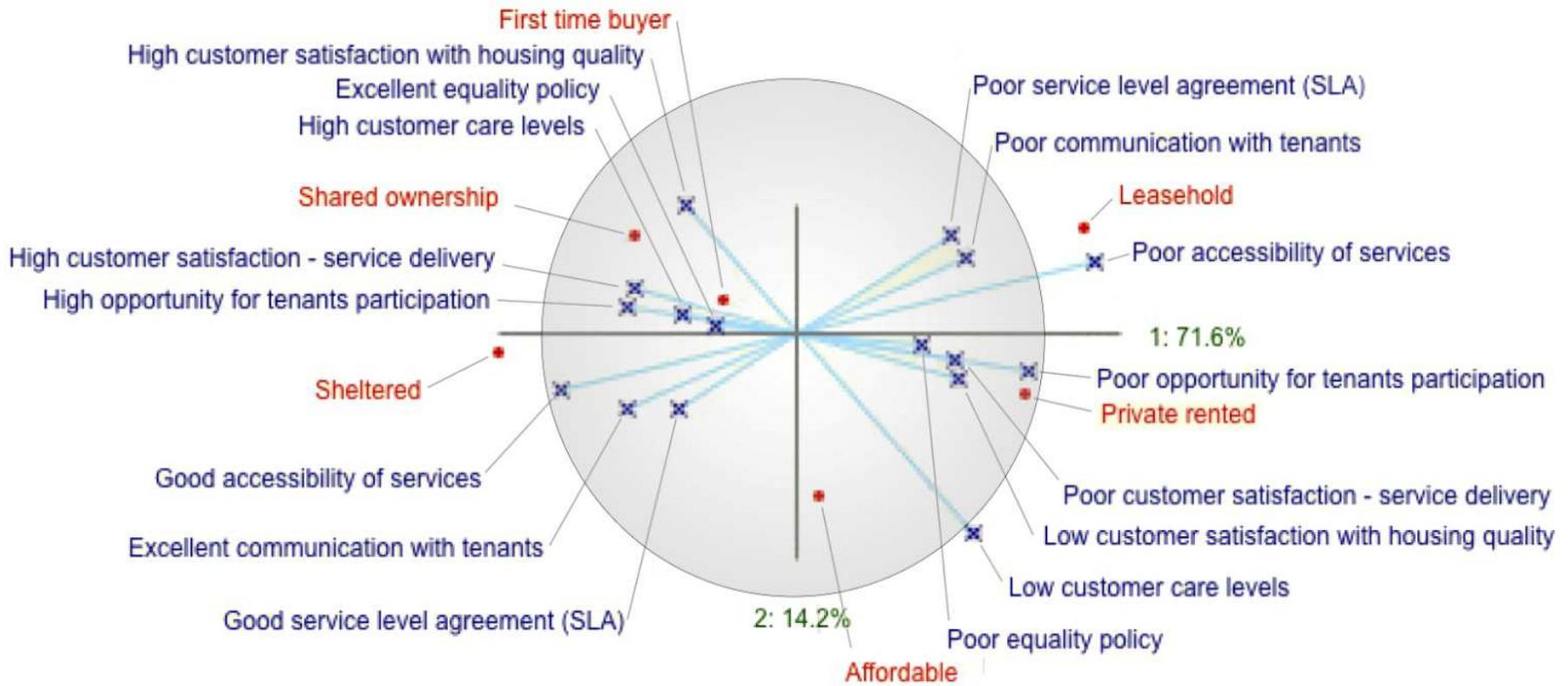


Figure 7.4: The Cognitive Map – Customer Factors

### 7.3.1.5 Relationship between constructs and elements - Customer

The data from Table 7.2 has been converted to illustrate a visual relationship between elements and constructs. Figure 7.5 shows the relationship in the form of a scatter diagram where PCA1 is plotted on the X axis and PCA2 on the Y axis. PCA1 is most important as it illustrates the distance between the elements according to the ratings assigned to the constructs by the asset managers.

- For the ‘Sheltered customers’ maintenance service provision is strongly linked to the following key constructs such as housing quality, equality policy, service level agreement, customer care, tenants/residents participation and accessibility of services constructs.
- The ‘Shared ownership’ customer interact strongly with housing quality, tenant participation, customer satisfaction and customer care constructs.
- First time buyer elements have strong links with customer satisfaction construct.
- The least important of the elements is the leaseholders and their display weak links with service delivery, communications with tenants and accessibility of services.

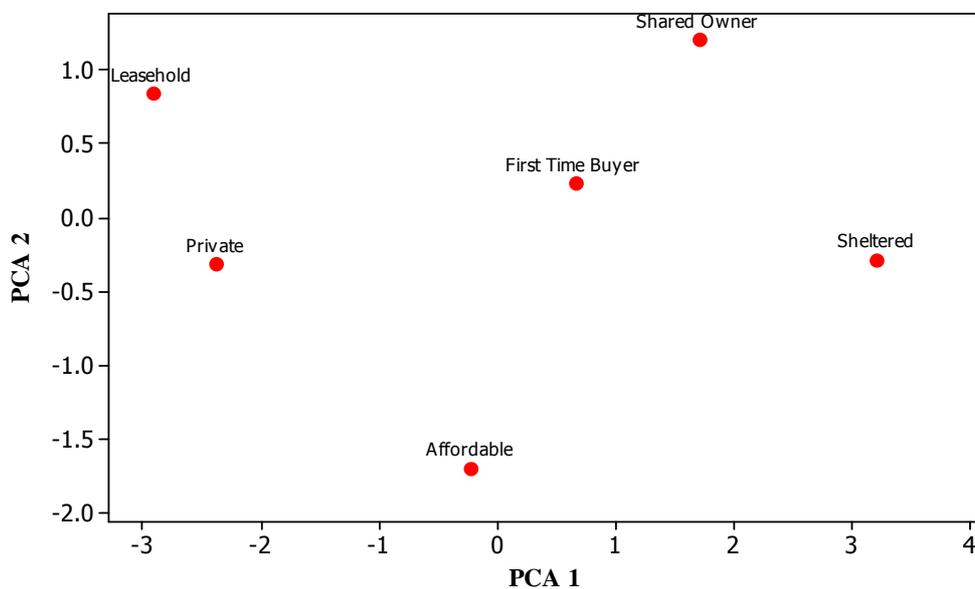


Figure 7.5: Relationship Between Elements and Constructs – Customer Factors

### **7.3.1.6 An overview of the customer care service delivery as a key factor**

In order to understand the unique relationship and cognitive links between the elements and the constructs it is extremely important to understand different types of social housing tenant background as shown in Figure 7.5 above, and as part of the reflective analysis, its worthy of mentioning as this appears to be a common theme across the other clusters. Firstly, the reasons as to why the Leaseholders and Private rented share a similar 'profile' is due to their financial circumstances, in that, Leaseholders are tenants who have purchased their properties outright from the RSLs and continue to pay a nominal ground rents per annum. Their needs are slightly more sophisticated to that of other tenants as they are not in regular contact with the RSL and distancing themselves from using affordable housing services of the landlord. In addition, these tenants are normally tenants who have a much higher level of disposal income and do not rely on social housing benefits or government support to pay their rent. Whereas the Private rented tenants are tenants who pay the going market rent and RSLs have to ensure that these properties are of a very good quality standard and the interaction with the RSLs may not be that strong compared to rest of the other tenants.

Secondly, Sheltered, Shared ownership and First time buyer are slightly different tenant types. Sheltered tenants are residence in social housing because of their special needs and live in an adapted environment which provides support to their physical disability. RSLs have obligations to provide the level of support to meet the tenants' individual requirements. This may be in the form of medical care, warden control and provide general assisted living. RSLs are very active to ensure that their legal obligations and duty of care is met. Should there be any shortfalls in the service provision they could run themselves at risk through independent 3<sup>rd</sup> party audits (social services and HCS agency) and perhaps, even legal law suites. Since the 'Shared' and the 'First time buyer' tenants partly share the equity (or about to share equity) with the RSLs and generally there appears to be a sense of belonging and ownership of the properties which are occupied by them. Hence this group of tenants has been always very able to liaise and co-ordinate and relate extremely well with the RSLs.

Affordable tenants are generally dissatisfied customers mostly living on housing benefit and tend to have negative views about service levels of provision, and this may be associated with their financial standing in the community and social circumstances (Gibb & Leishman 2011). Often tenants falling in this category are associated with unemployment, low disposal

income, social deprivation, high criminal activity (theft, drugs, anti-social behaviour, and vandalism). In a wider context, most insurance companies tend to classify the postal codes associated with these types of tenants as some of the highest risk areas due to the above activities. This view also appears to be shared by the asset managers regarding the customer factors.

The key customer factors having an impact on asset maintenance strategy are:

- Equality policy
- Customer satisfaction with their housing quality
- Customer care provision levels
- Opportunity for tenants participation
- Service level agreement
- Accessibility of services

### **7.3.2 Effective Asset Management Factor Cluster Analysis**

The constructs developed within this cluster centres around all factors that have an impact on asset management these factors have been fully detailed in Chapters 2, 3 and 4. The data collected from in-depth interviews with asset managers are populated in Table 7.7.

#### **7.3.2.1 Descriptive analysis for Elements - Asset Management**

The data displayed in Table 7.7 was entered into the RG software package and the corresponding results are shown in Figure 7.6. Interestingly the dendrogram diagram of the elements regarding the asset management risk cluster shows a completely different grouping of the elements (tenant profile) when compared to the Customer risk cluster Figure 6.3. Essentially, Shared ownership and First time buyers have a very strong relationship and share similar 'foot print'; similarly Private rented and the tenants living in Sheltered accommodation. The least similarity is with the Affordable and Leaseholds. There are several reasons which can be advanced for these changes, leaseholds have little interaction with the RSL as they own the asset but make an annual contribution to the leasing arrangement.

Table 7.7 Asset Management Cluster – Data

Constructs								Bi-Polar
	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Total	
<b>Asset Management Factors</b>								
1 Good condition property versus high demand	3.0	4.0	4.5	4.0	4.0	4.6	24.1	Poor condition property Versus less demand
2 Excellent housing provision DHS	3.1	2.4	3.5	4.0	4.5	4.0	21.5	Poor Housing provision DHS
3 Good accurate database of type and condition of properties	2.5	2.8	1.0	3.0	3.5	4.0	16.8	Weak database of type and condition of properties
4 Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	18.0	Poorly developed planned maintenance programmes
5 Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.0	3.0	4.5	19.0	Weak service cost certainty and investment property
6 High response time to Emergency Repairs and Urgent Repairs	3.0	3.5	1.0	3.0	3.5	4.5	18.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
7 Well planned routine repairs and completion targets met	2.5	3.6	1.0	3.0	3.0	4.5	17.6	Poorly planned routine repairs and completion targets met
8 High quality of repairs and performance	3.0	3.5	2.0	3.5	3.5	4.0	19.5	Poor quality of repairs and performances
9 High quality of renovations	3.5	3.0	1.0	3.5	3.5	4.0	18.5	Poor quality of renovations
10 Easy-to-manage properties/estates in deprived and stress areas	2.5	2.0	3.0	2.5	3.0	3.5	16.5	Difficult-to-manage properties/estates in deprived and stress areas
11 Excellent sustainability policy	2.5	3.5	2.0	3.0	3.0	2.5	16.5	Poor sustainability policy
12 Reduced level of voids vacant	4.0	2.0	5.0	4.0	4.5	5.0	24.5	High level of vacant void
13 A few properties abandoned by tenants	3.0	2.0	5.0	4.5	5.0	5.0	24.5	High level of properties abandoned by tenants
<b>Total average</b>	<b>2.9</b>	<b>3.0</b>	<b>2.5</b>	<b>3.4</b>	<b>3.6</b>	<b>4.2</b>		

RSLs have a tendency of making sure that Sheltered accommodation / assets are kept updated with maximum due care and attention that is required due to the implications of any breaches that may arise from neglect. First time buyer and Shared ownership have been grouped together on the basis of joint ownership of the assets as these are asset, which is normally easier to maintain, as these would have been bought by customers with a much larger disposable income. In addition, these types of tenants do require much higher services from their landlord as they tend to pay higher rent and service charge to service the landlord’s capital debt and therefore have to be listened to and also looked after well.

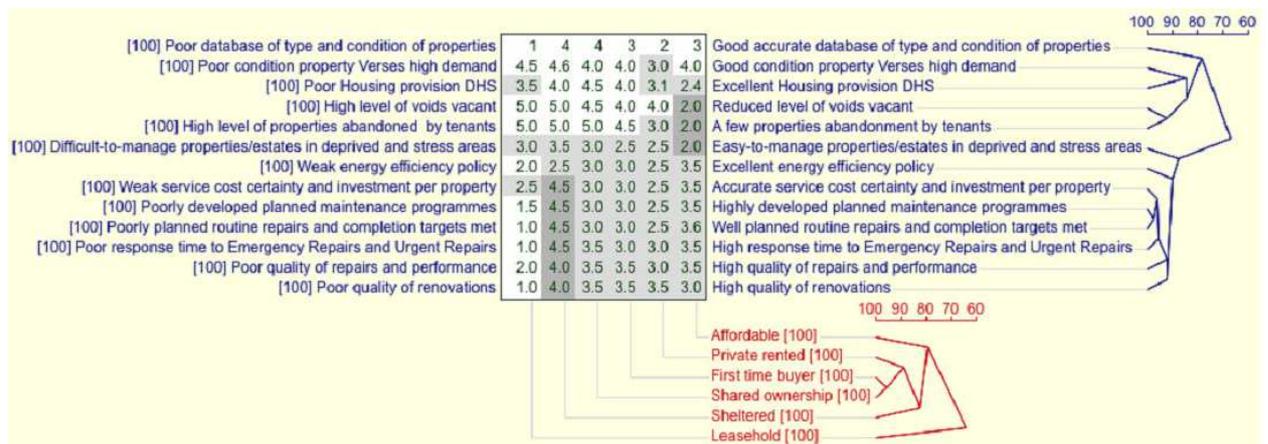


Figure 7.6: Dendrogram – Asset Management Factors

### **7.3.2.2 Descriptive Analysis of Constructs - Asset Management**

The dendrogram of the constructs (Figure 7.6) 3 distinct grouping are shown within this cluster for asset management, these are as follows:

- A strong relationship between Accurate service cost certainty; Well developed planned maintenance programmes; Well planned routine repairs and completion targets met; Excellent response time to Emergency and urgent repairs; Excellent quality of repairs and performance and Excellent quality of the renovations.
- Easy-to-manage properties / estates in deprived stress areas and Excellent energy efficiency policy.
- An accurate database on the type and condition of properties; Good condition property versus high demand; Excellent Housing provision DHS; Reduced level of voids vacant and A few abandonment of properties by residents.

### **7.3.2.3 Analysis of Component Space - Asset Management**

#### **7.3.2.3.1 Relationship between elements - Asset Management**

The component space between the elements is shown in Table 7.8. It is clear from these tables that the correlation between each element is not evidently defined as score barely reach beyond 0.75 apart from one instance that is in the case of 'Full time buyer' and 'Shared owner'. However, in closer examination of the tables Private rented element has a stronger relationship with 'First time buyers' and the 'Shared owners'. Whilst affordable has strong negative and opposite contrasting relationships with all tenants and is more significant Shared ownership and Leasehold. The Leasehold shares similarity with First time buyer and Shared owner. First buyers and Shared ownership have a similar 'profile', whereas the relationship between Sheltered and Affordable are distinctly different. This pattern and profile of the elements are also evident in the dendrogram.

Table 7.8: Asset Management Elements Correlation and Euclidean Distances

Elements	Private		Afford		Lease		FTB		Shared		Sheltered
	Correl	ECdis	Correl	ECdis	Correl	ECdis	Correl	ECdis	Correl	ECdis	Correl ECdis
Private rented	1.00										
Affordable rented	-0.37	3.43	1.00								
Leasehold	0.45	4.97	-0.50	7.09	1.00						
First time buyer	0.66	2.36	-0.30	3.84	0.73	5.10	1.00				
Shared ownership	0.66	3.16	-0.55	4.74	0.75	5.48	0.93	1.22	1.00		
Sheltered	0.41	5.21	-0.12	5.54	0.37	7.76	0.50	3.66	0.50	3.14	1.00

From Table 7.9, PCA1 and PCA2 captures 61.9% and 15.5% respective variances. Private and affordable tenants have a large negative contrast and at the opposite side of the positive scale lies Shared ownership and First time buyer in PCA1 trends. Whereas, Affordable housing tenants and Sheltered showed a strong relationship in PCA2 setting.

Table 7.9: Asset Management Principal Component Analysis – Elements

Variable	PCA1	PCA2	PCA3	PCA4
Private	-0.396	0.088	-0.739	0.385
Affordable	-0.300	0.734	0.261	0.474
Leasehold	0.430	-0.177	0.557	-0.003
First Time Buyer	0.473	0.180	0.228	0.344
Shared Owner	0.497	-0.038	0.111	0.099
Sheltered	0.313	0.623	-0.103	-0.707
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	3.7119	0.9302	0.5448	0.5393
Proportion:	0.619	0.155	0.091	0.090
Cumulative:	0.619	0.774	0.864	0.954

### 7.3.2.3.2 Relationship between constructs - Asset Management

The relationships between constructs also demonstrate how the principal components have been formulated by the asset managers. Table 7.10 displays the correlations between the constructs and the Euclidean distances between the constructs. From these tables the following correlations are apparent:

- Good condition property verses high demand has a very strong relationship with Excellent Housing provision Decent Home Standards; and Good accurate database of type and condition of properties

- Excellent Housing provision Decent Home Standards is strongly linked to Reduced level of voids vacant.
- Well developed planned maintenance programme construct is strongly linked with Accurate service cost certainty and investment per property and Well planned routine repairs and completion targets met.
- Excellent response time for Emergency Repairs and Urgent Repairs construct is linked with Well planned routine repairs and completion targets met; and High quality of repairs and performance.
- Good quality of repairs and performance is directly linked with Good quality of renovations
- Reduced level of voids vacant construct has a strong link with Few properties abandoned by tenants
- Easy-to-manage properties/estates in deprived and stress areas construct is linked with Few properties abandoned by tenants
- Accurate service cost certainty and investment per property construct is highly associated with an Excellent energy efficiency policy

Table 7.10: Asset Management Constructs Correlation Matrix and Euclidean Distances

Constructs	1	2	3	4	5	6	7	8	9	10	11	12	13
Good condition property versus high demand	1.00												
Excellent housing provision DHS	0.32	1.00											
Good accurate database of type and condition of properties	0.04	0.39	1.00										
Highly developed planned maintenance programmes	0.23	0.11	0.90	1.00									
Accurate service cost certainty and investment per property	0.53	0.11	0.74	0.93	1.00								
High response time to Emergency Repairs and Urgent Repairs	-0.03	0.15	0.96	0.95	0.78	1.00							
Well planned routine repairs and completion targets met	0.12	0.07	0.92	0.99	0.88	0.97	1.00						
High quality of repairs and performance	0.04	0.22	0.97	0.94	0.77	0.97	0.97	1.00					
High quality of renovations	-0.30	0.25	0.93	0.80	0.54	0.92	0.85	0.92	1.00				
Easy-to-manage properties/estates in deprived and stress areas	0.55	0.72	0.24	0.19	0.38	0.12	0.10	0.07	0.04	1.00			
Excellent sustainability policy	-0.18	-0.24	0.50	0.48	0.25	0.54	0.55	0.62	0.49	-0.64	1.00		
Reduced level of voids vacant	0.35	0.75	-0.04	-0.18	-0.02	-0.20	-0.26	-0.23	-0.13	0.90	-0.81	1.00	
A few properties abandoned by tenants	0.58	0.89	0.08	-0.08	0.09	-0.14	-0.16	-0.08	-0.12	0.86	-0.56	0.90	1.00
<b>Euclidean Distances</b>													
Constructs	1	2	3	4	5	6	7	8	9	10	11	12	13
Good condition property versus high demand	0.00												
Excellent housing provision DHS	2.04	0.00											
Good accurate database of type and condition of properties	3.94	2.96	0.00										
Highly developed planned maintenance programmes	3.39	3.01	1.11	0.00									
Accurate service cost certainty and investment per property	2.55	2.46	1.80	1.00	0.00								
High response time to Emergency Repairs and Urgent Repairs	3.71	3.12	0.99	0.87	1.66	0.00							
Well planned routine repairs and completion targets met	3.83	3.40	1.07	0.51	1.50	0.71	0.00						
High quality of repairs and performance	2.71	2.17	1.41	1.12	1.12	1.22	1.42	0.00					
High quality of renovations	3.79	2.83	1.14	1.50	2.06	1.00	1.45	1.22	0.00				
Easy-to-manage properties/estates in deprived and stress areas	3.31	2.35	2.32	2.40	1.94	2.83	2.79	2.24	2.74	0.00			
Excellent sustainability policy	3.63	3.05	2.00	2.06	2.06	2.35	2.24	1.73	2.24	2.12	0.00		
Reduced level of voids vacant	2.38	2.05	4.68	4.50	3.77	4.64	4.93	3.81	4.42	3.61	4.80	0.00	
A few properties abandoned by tenants	2.38	1.98	4.73	4.61	3.91	4.80	5.03	3.94	4.64	3.81	4.90	1.22	0.00

Table 7.11 shows the PCA relative to the constructs and show PCA1 shows variance 51.9% and PCA2 calculations show 32.8% variance in the trend. PCA1 compares all the constructs against the first construct namely; Good condition property Verses high demand the values suggest as a very commonality between the constructs but close match between this shows a strong shared relationship between exists with the excellent ‘quality of repairs and performance; and well planned routine repairs and completion targets met. The second strongest link has with excellent response time for Emergency Repairs and well developed plan maintenance programs followed by the need to have Good accurate database of type and condition of properties. The third link is formed between Good quality of renovations and Accurate service cost certainty and investment per property. Meanwhile, PCA2 shows slightly different trend when comparing the constructs against Excellent Housing provision DHS. A strong negative correlation existing with Easy-to-manage properties/estates in deprived and stress areas construct followed by Few properties abandoned by tenants; Reduced level of voids vacant; and Excellent Housing provision DHS.

Table 7.11: Asset Management Principal Component Analysis – Constructs

Constructs	PCA1	PCA2	PCA3	PCA4
Good condition property versus high demand	0.026	-0.292	-0.664	0.327
Excellent housing provision DHS	0.059	-0.401	0.340	0.465
Good accurate database of type and condition of properties	0.370	-0.085	0.174	0.083
Highly developed planned maintenance programmes	0.374	-0.041	-0.166	-0.133
Accurate service cost certainty and investment per property	0.317	-0.132	-0.417	-0.195
High response time to Emergency Repairs and Urgent Repairs	0.379	-0.003	0.086	-0.135
Well planned routine repairs and completion targets met	0.381	0.002	-0.095	-0.103
High quality of repairs and performance	0.383	-0.006	0.065	0.084
High quality of renovations	0.343	0.011	0.387	-0.104
Easy-to-manage properties/estates in deprived and stress areas	0.034	-0.467	-0.030	-0.250
Excellent sustainability policy	0.231	0.300	-0.019	0.618
Reduced level of voids vacant	-0.095	-0.451	0.187	-0.201
A few properties abandoned by tenants	-0.048	-0.465	0.069	0.287
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	6.7526	4.2663	1.2686	0.6606
Proportion:	0.519	0.328	0.098	0.051
Cumulative:	0.519	0.848	0.945	0.996

#### **7.3.2.4 The Cognitive Map - Asset Management**

Figure 7.7 displays the cognitive relationship within the asset management risk cluster. The 3 elements broadly have a similar 'profile' and can be grouped together (Sheltered, Shared ownership and First time buyers) are in close proximity to the constructs that share positivity. Whilst Leaseholds have an opposite relationship of the Affordable tenants and Private also are isolated by themselves.

The overall pattern that emerges from Figure 7.7 suggests that the most significant constructs are as follows:

- Reduced vacant voids;
- Condition of property Verses high demand;
- Properties abandoned by tenants
- Housing provision DHS
- Quality of repairs and performance
- Accurate service cost certainty and investment per property

The least important or insignificant constructs are:

- Sustainability and energy efficiency policy;
- Manage properties in deprived neighbourhood
- Accurate database of type and condition of properties

#### **7.3.2.5 Relationship between constructs and elements - Asset Management**

Figure 7.8 shows the relationship in the form of a scatter diagram where PCA 1 is plotted on the X axis and PCA2 on the Y axis. PCA1 is most important as it illustrates the distance between the elements according to the ratings assigned to the constructs by the asset managers.

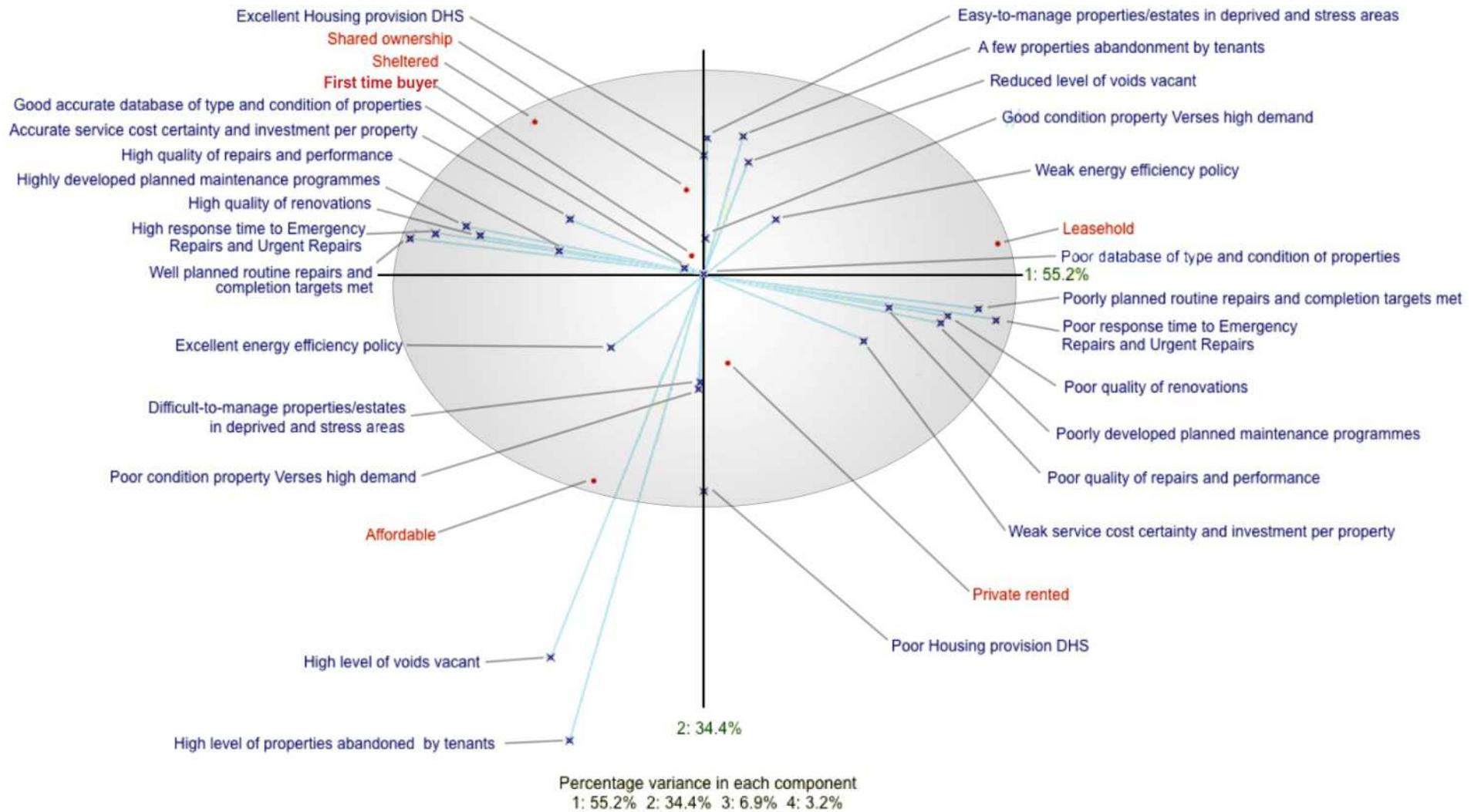


Figure 7.7: The Cognitive Map - Asset Management Factors

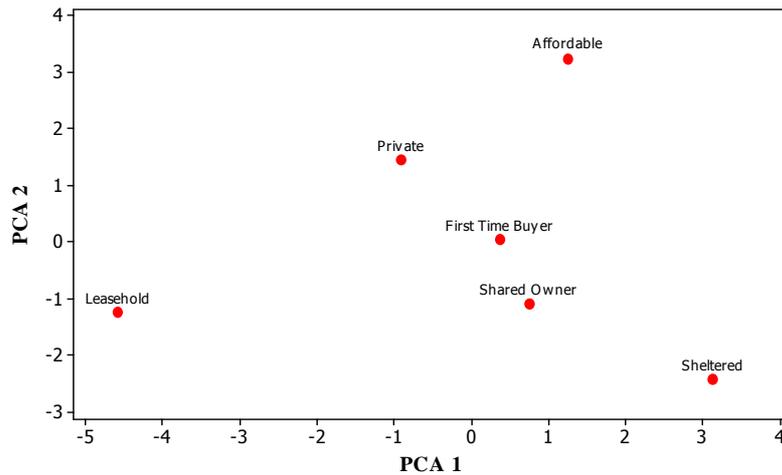


Figure 7.8: Relationship Between Elements and Constructs - Asset Management Factors

### 7.3.2.6 An overview of the Asset Management Factors

Notwithstanding the discussions in section 7.3.1.6, asset managers regard the most significant constructs impacting in asset management are highlighted in section 7.3.2.5. The RG analysis shows that there is a fairly low dependency when developing strategic maintenance with property voids and energy efficiency issues. The PCA1 also confirms this view, however, there are several reasons for this, most asset managers are mainly concerned with occupied dwellings and the focus is solely on reactive or responsive maintenance and rarely consider voids. This is a strange omission on the part of the asset managers as void properties play a key role within the asset portfolio and an income source. Empty properties means the inability of the dwelling to generate income and will potentially be subject to neglect, vandalism and rapid deterioration due to in occupation. This also highlights the inability of the asset managers to embrace much wider issues of portfolio and estate management within the social housing sector as opposed to the private sector where a commercial landlord would be planning ahead of the void becoming available, in terms planning refurbishment, modernisation and extension of the dwelling and allocating the property well ahead to maximise income.

Furthermore, energy efficiency is also an oversight as it plays a key role in sustainability of assets (both old and new), during the interview it was clear that whilst asset managers

appreciated the importance they were constrained by the financial resources and funding related to this area of work.

The key asset management factors having an impact on asset maintenance strategy are:

- Well planned routine repairs and completion targets met
- Response time to Emergency Repairs and Urgent Repairs
- Accurate service cost certainty and investment per property
- Accurate database of type and condition of properties
- DHS Housing provision
- Quality of repairs and performance
- Well planned maintenance programmes

### 7.3.3 Tenancy Factors Cluster Analysis

The constructs developed within this cluster centres around all factors that have an impact on tenancy risk factors have been detailed in Chapter 2, 3 and 4. The data collected from in-depth interviews with asset managers are populated in Table 7.12.

Table 7.12 Tenancy Cluster – Data

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Total	Bi-Polar
<b>Tenancy Factors</b>								
<b>1</b> Good tenant selection criteria	3.0	2.6	4.0	4.0	4.0	4.0	<b>21.6</b>	Weak tenant selection criteria
<b>2</b> Reduced waiting list	3.0	4.5	1.0	3.0	3.5	4.0	<b>19.0</b>	High waiting list
<b>3</b> Low level of tenancy offers that are frequently refused	4.0	4.5	1.0	2.0	3.0	3.0	<b>17.5</b>	High level of tenancy offers that are frequently refused
<b>4</b> Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	<b>24.0</b>	High overcrowded buildings
<b>5</b> Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	<b>22.5</b>	Weak homelessness provision in the area
<b>6</b> Easy to buy or shared ownership	2.0	3.1	4.5	3.5	3.5	2.0	<b>19.6</b>	Weak right buy or shared ownership
<b>Total average</b>	<b>3.0</b>	<b>3.4</b>	<b>3.3</b>	<b>3.3</b>	<b>3.7</b>	<b>3.8</b>		

#### 7.3.3.1 Descriptive Analysis for Elements - Tenancy

The data displayed in Table 7.12 was entered into the RG software package and the corresponding results are shown in Figure 7.9. The dendrogram diagram of the elements regarding the tenancy risk cluster share some similarity with Asset management risk cluster (Figure 7.6). Shared ownership and First time buyers have a very strong relationship attached

this is Sheltered, Private and Affordable tenants. The least similar is the Leaseholds the reason for this trend has provided in the section 7.3.2.1.

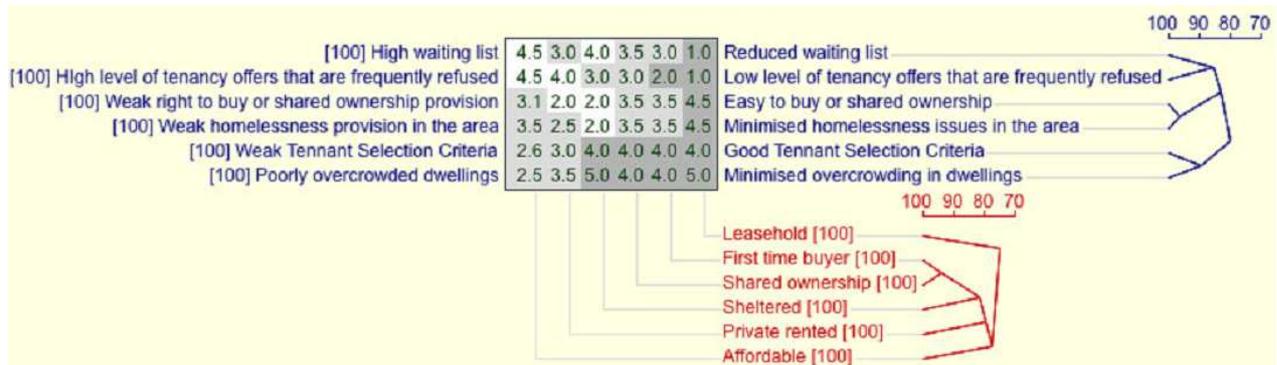


Figure 7.9: Dendrogram – Tenancy Factors

### 7.3.3.2 Descriptive Analysis of Constructs - Tenancy

The dendrogram of the constructs (see Figure 7.9) 3 distinct grouping are shown within this cluster for asset management, these are as follows:

- A strong relationship between Reduced waiting list and Tenancy offers frequently refused.
- Ease of buying shared equity / ownership and minimised homelessness in the area.
- Tenant selection criteria and overcrowding.

### 7.3.3.3 Analysis of Component Space - Tenancy

#### 7.3.3.3.1 Relationship between elements - Tenancy

The component space between the elements is shown in Table 7.13. It is clear from these tables that the strongest correlation value is 0.92 this is associated between First time buyer and Shared owner. Furthermore, Shared owner is also closely linked to Sheltered having a 0.86 correlation value; likewise Private is jointly closely linked with Sheltered (0.33) together with Affordable (0.29) and an opposite negative value interaction with leaseholders (-0.50). Leaseholders have a stronger relationship with First time buyer (0.84) and the Shared owner (0.78). Whilst affordable has strong negative and opposite contrasting relationships with all tenants and is more significant Leasehold (-0.91) and First time buyer (-0.90). The Leasehold shares similarity with First time buyer and Shared owner. This pattern and profile of the elements are also evident in the dendrogram.

Table 7.13: Tenancy Elements Correlation and Euclidean Distances

Elements	Private Correl ECdis		Afford Correl ECdis		Lease Correl ECdis		FTB Correl ECdis		Shared Correl ECdis		Sheltered Correl ECdis
Private rented	1.00										
Affordable rented	0.29	2.42	1.00								
Leasehold	-0.50	5.15	-0.91	5.97	1.00						
First time buyer	-0.47	2.92	-0.90	3.59	0.84	2.83	1.00				
Shared ownership	-0.35	2.65	-0.77	2.81	0.78	3.54	0.92	1.22	1.00		
Sheltered	0.33	3.04	-0.26	3.59	0.23	4.39	0.43	2.50	0.86	1.94	1.00

From Table 7.14, PCA1 and PCA2 captures 65.8% and 23.5% respective variances. PCA1 illustrates the largest negative contrast occurs with Affordable whilst on an opposite and a positive scale lies First time buyer, Shared owner and leasehold. Whereas, in PCA2 Affordable tenants have a stronger relationship with Sheltered, and Private tenants.

Table 7.14: Tenancy Principal Component Analysis – Elements

Variable	PCA1	PCA2	PCA3	PCA4
Private	-0.234	0.649	-0.615	0.058
Affordable	-0.458	0.057	0.566	-0.224
Leasehold	0.465	-0.163	-0.275	-0.750
First Time Buyer	0.491	-0.008	0.037	0.580
Shared Owner	0.475	0.199	0.296	0.049
Sheltered	0.228	0.714	0.370	-0.213
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	3.9489	1.4100	0.4981	0.1269
Proportion:	0.658	0.235	0.083	0.021
Cumulative:	0.658	0.893	0.976	0.997

### 7.3.3.3.2 Relationship between constructs - Tenancy

The relationships between constructs also demonstrate how the principal components have been formulated by the asset managers. Table 7.15 displays the correlations between the constructs and the Euclidean distances between the constructs. From these tables the following correlations are apparent:

- Minimised homelessness issues in the area have a very strong relationship jointly with Easy to buy or share ownership and minimised homelessness issues in the area.

- Good Tenant Selection Criteria are strongly linked with minimised overcrowding in dwellings.
- Reduced waiting list construct is strongly linked with Low level of tenancy offers that are frequently refused.
- Easy to buy or shared ownership with Low level of tenancy offers that are frequently refused.

Table 7.15: Tenancy Constructs Correlation Matrix and Euclidean Distances

<b>Financial + Economic Construct Factors</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
Excellent Fair rents	1.00								
High level of affordable housing provision	0.28	1.00							
Good rent collection and arrears management	0.86	0.53	1.00						
Good financial stability	0.79	-0.19	0.70	1.00					
Good solvency – ability to pay rents	0.83	0.16	0.90	0.93	1.00				
Minimise Costs Associated with evictions and court actions	0.90	-0.02	0.77	0.93	0.89	1.00			
Good return on investment	0.90	-0.02	0.77	0.93	0.89	0.96	1.00		
Good refurbishment and redevelopment opportunity	0.53	-0.26	0.57	0.93	0.86	0.80	0.76	1.00	
Excellent disposal of property	0.64	-0.19	0.61	0.90	0.85	0.82	0.71	0.90	1.00
<b>Euclidean Distances</b>									
Excellent Fair rents									
High level of affordable housing provision	2.05								
Good rent collection and arrears management	1.26	1.74							
Minimised overcrowding in dwellings	1.07	2.84	1.66						
Minimised homelessness issues in the area	1.35	3.77	4.58	1.66	0.00				
Easy to buy or shared ownership	2.45	4.41	4.66	3.52	2.63	0.00			

Table 7.16 shows the PCA relative to the constructs and show PCA1 shows variance 66.6% and PCA2 being 18.2% and PCA3 having 10.7% variance in the trend.

Table 7.16: Tenancy Principal Component Analysis – Constructs

<b>Constructs</b>	<b>PCA1</b>	<b>PCA2</b>	<b>PCA3</b>	<b>PCA4</b>
Good Tennant Selection Criteria	0.436	0.327	-0.090	0.690
Reduced waiting list	-0.376	0.493	0.447	0.398
Low level of tenancy offers	-0.485	0.151	0.104	-0.167
Minimum overcrowding in dwell	0.432	0.385	-0.341	-0.275
Minimised homelessness issues in	0.369	0.383	0.614	-0.477
Easy to buy or shared ownership	0.332	-0.576	0.537	0.188
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	3.9958	1.0950	0.6408	0.2369
Proportion:	0.666	0.182	0.107	0.039
Cumulative:	0.666	0.848	0.955	0.995

PCA1 trend compares Good tenant selection criteria against the remaining constructs within overcrowding in dwelling and followed by Minimum homelessness issues in the area and Easy to buy or shared ownership. Furthermore, Low level tenancy offers and reduced waiting list has a string but the opposed and negative relationship between Good tenant selection criteria and reduced waiting list.

While PCA2, shows a more even spread of links between Reduced waiting list and the remaining constructs. Minimum overcrowding and Minimised homelessness in the area both have similar relationship values. A strong negative correlation existing with Easy to buy or shared ownership. Whereas PCA3 displays a strong link between Low level tenancy offers and homelessness, Easy to buy or shared ownership and Reduced waiting list.

#### **7.3.3.4 The Cognitive Map - Tenancy**

Figure 7.10 displays the cognitive relationship within the tenancy risk cluster. Two elements broadly share a similar 'profile' namely the Shared ownership and First time buyers, these are consistently within close proximity to each other and share similar positivity. Whilst Private rented is much closer to the axis but in the opposite quartile. Leaseholds is positioned towards the outer imaginary eclipse illustrating the variance in the trend. Similarly on the other extreme top left quartile is Sheltered which shows very strong relationship the constructs. However, Affordable are on the extreme bottle left this shows the negativity and the contrast between other elements.

#### **7.3.3.5 Relationship between constructs and elements - Tenancy**

Figure 6.11 shows the relationship in the form of a scatter diagram where PCA1 is plotted on the X axis and PCA2 on the Y axis. PCA1 is most important as it illustrates the distance between the elements according to the ratings assigned to the constructs by the asset managers.

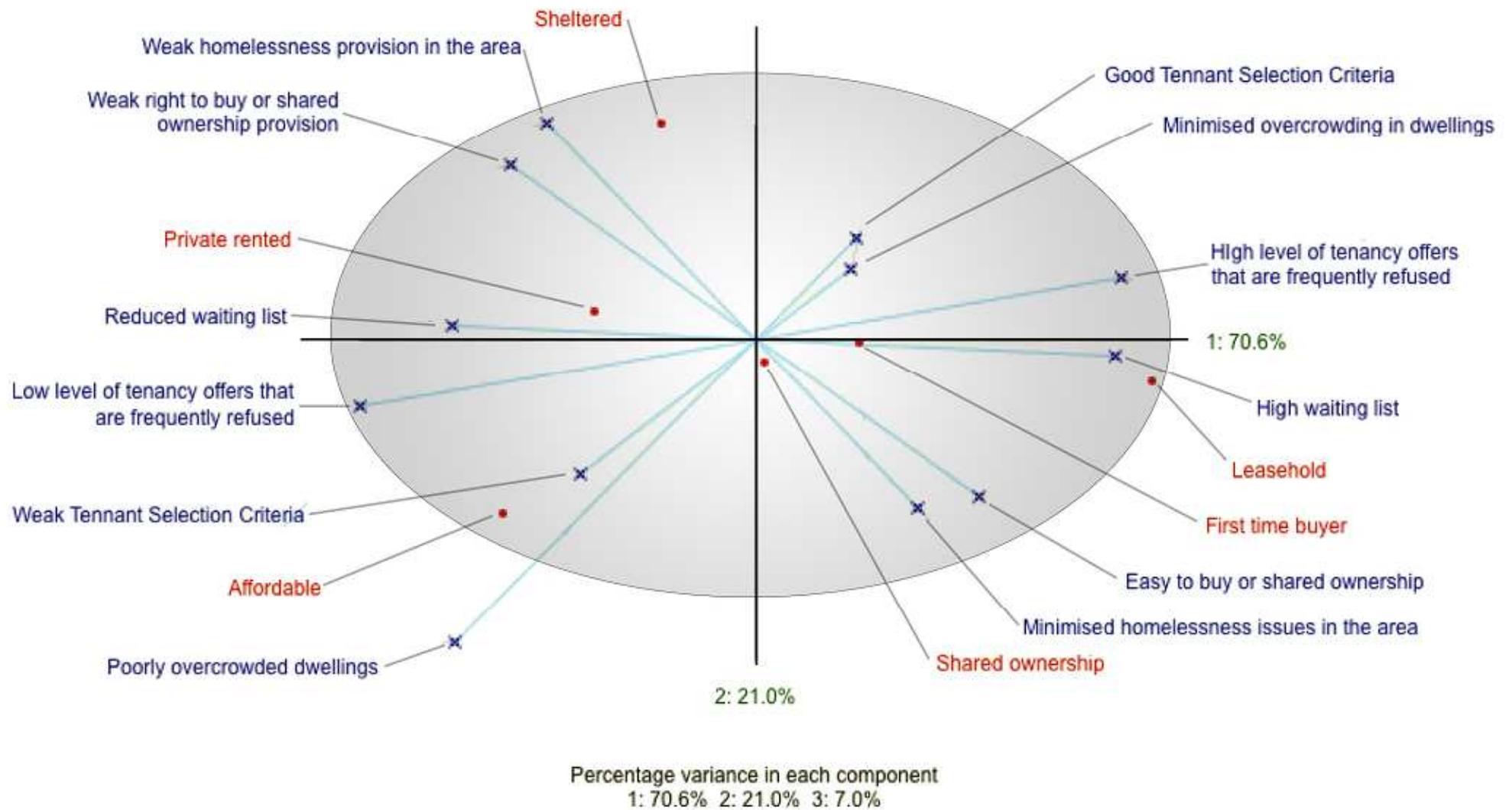


Figure 7.10: The Cognitive Map – Tenancy Factors

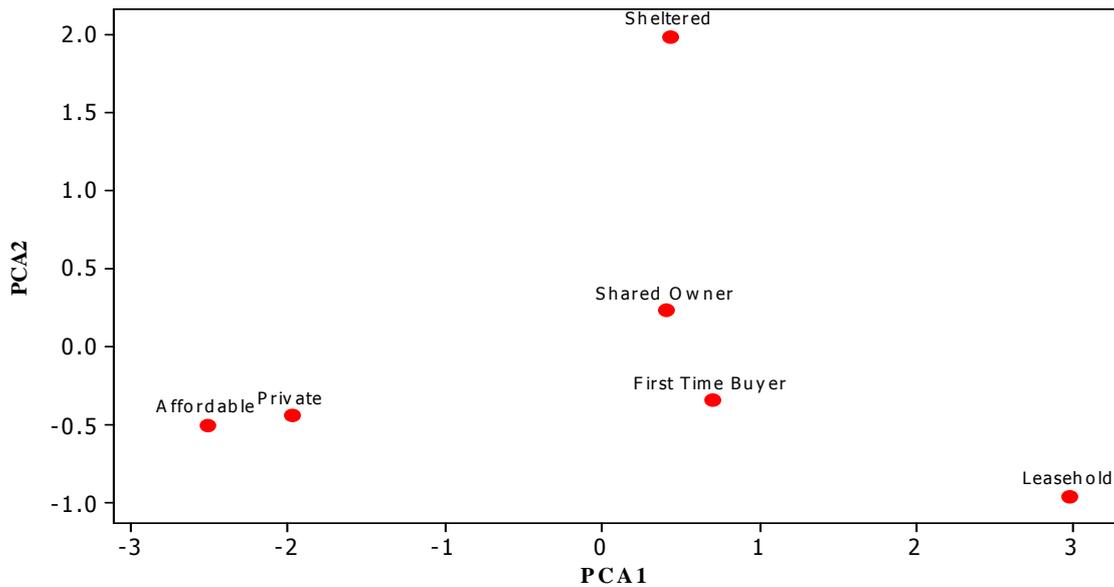


Figure 7.11: Relationship Between Elements and Constructs – Tenancy Factors

The overall pattern that emerges from Figure 7.11 suggests that the most significant constructs are as follows:

- Private and Affordable tenants have broadly similar grouping of constructs and in particular they agree with Low level of tenancy offers that are frequently refused. However disagreement between these elements is more noticeable on Easy to buy and Homelessness.
- The leaseholds constructs show the interaction with the RSL and tended to be isolated or cut off because ownership status. However, overcrowding, Homelessness and Ease of buying are highly significant.

The least important or insignificant constructs is Low level of tenancy offers that are frequently refused.

### 7.3.3.6 Summary of the Tenancy factors

All constructs within the tenancy risks have been highlighted as being highly influential in developing the strategic maintenance planning for social housing apart from tenancy offers being refused has a fairly low dependency when compared to other constructs within this cluster.

The asset managers have provided higher ratings for Affordable tenants for the length of the waiting list in which to obtain a property. During the interviews it was clear that asset managers believed demand outstripped supply significantly and this placed extra pressure upon the turnaround time for void properties. Across all customer types there was a clear variety in the ratings given when discussing the ability to purchase their homes, the asset managers explained that they believed Affordable customers are less likely to buy outright or share equity in their home due to financial constraints.

Asset managers believed that to reduce the waiting list for tenants' new properties need to be constructed and the tenancy of existing properties managed effectively. However, Gibb (2011) suggested that providing new homes is fraught with problems relating to a significant reduction in subsidies, rental values inappropriate for affordable customers and now the housing benefit reform. This therefore means it is now even more crucial to manage the tenancy to maximise its potential income and provide suitable accommodation for households in need.

The key tenancy factors having an impact on asset maintenance strategy are:

- Over crowding
- Homelessness issues in the area
- Tenant selection criteria and choice based lettings
- Easy to buy or shared ownership
- Reduced waiting list

#### **7.3.4 Neighbourhood and Community Factor Cluster Analysis**

The constructs developed within this cluster centres around all factors that have an impact on asset management these factors have been detailed in Chapters 2, 3 and 4. The data collected from in-depth interviews with asset managers are populated in Table 7.17.

Table 7.17: Neighbourhood and Community Factors – Data

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Total	Bi-Polar
<b>Neighbourhood and Community Factors</b>								
1 Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	22.0	Weak quality trends
2 High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	20.0	Poor tenant satisfaction with local environment
3 Excellent neighbourhood improvements	3.0	2.8	3.4	3.0	3.5	4.0	17.7	Poor neighbourhood improvements
4 Excellent outsourcing services and partnering	3.1	3.0	4.0	4.0	4.5	4.1	22.7	Poor outsourcing services and partnering
5 Reduced level of Anti-Social Behaviour	3.5	2.6	3.6	3.6	4.5	4.5	22.3	High level of Anti-Social Behaviour
<b>Total average</b>	<b>3.0</b>	<b>2.7</b>	<b>3.4</b>	<b>3.7</b>	<b>4.1</b>	<b>4.2</b>		

### 7.3.4.1 Descriptive analysis for Elements - Neighbourhood and Community

The data displayed in Table 7.17 was entered into the RG software package and the corresponding results are shown in Figure 7.12. The dendrogram diagram of the elements regarding the neighbourhood and community factor cluster shows a completely different grouping of the elements (tenant profile) when compared to the other cluster shown in Figure's 7.3, 7.6 and 7.9. Essentially, Sheltered and Shared ownership has a very strong relationship and at the opposite end of the scale is the Private and Affordable who share a similar 'profile'. In between the two extremes lies the First time buyer and leaseholders both are sharing an average view.



Figure 7.12: Dendrogram – Neighbourhood and Community

### 7.3.4.2 Descriptive Analysis of Constructs - Neighbourhood and Community

The dendrogram of the constructs (Figure 7.12) shows 3 distinct grouping within this cluster for Neighbourhood and Community Risk, these are as follows:

- A strong relationship between Good quality tenants and High tenant satisfaction with local Environment.
- Reduced level of Anti-social behaviour and Excellent outsourcing services and partnership.
- Easy-to-manage properties /estates in deprived stress areas and Excellent energy efficiency policy.
- Excellent neighbourhood improvement.

### 7.3.4.3 Analysis of Component Space - Neighbourhood and Community

#### 7.3.4.3.1 Relationship between elements - Neighbourhood and Community

Component space between elements is displayed in Table 7.18, apart from Affordable having a stronger relationship with Leaseholds (0.87) the remaining value is much lower. Private is closely linked with Leasehold (0.60) and Shared ownership (0.49); Affordable tenants have opposite (negative) correlation with Sheltered (-0.44). The leaseholder has a positive relationship with Shared owner (0.56); and First time buyer is moderately linked with Shared owner. However, the Euclidean distances show the distance between the elements and the above data strongly bears similarities with the dendrogram e.g., Private is close to Affordable (1.05) and Sheltered is the most furthest distant away (2.83); Affordable is closely associated with Leasehold etc.

Table 7.18: Neighbourhood and Community Elements Correlation and Euclidean Distances

Elements	Private Correl ECdis		Afford Correl ECdis		Lease Correl ECdis		FTB Correl ECdis		Shared Correl ECdis		Sheltered Correl ECdis
Private rented	1.00										
Affordable rented	0.27	1.05	1.00								
Leasehold	0.60	1.11	0.87	1.69	1.00						
First time buyer	0.10	2.02	-0.18	2.65	-0.08	1.63	1.00				
Shared ownership	0.49	2.54	0.17	3.29	0.56	1.75	0.47	1.35	1.00		
Sheltered	-0.03	2.83	-0.44	3.54	-0.09	2.10	-0.24	1.75	0.44	0.81	1.00

Table 7.19 shows the PCA trends for the elements within this cluster, PCA1 and PCA2 captures 40.6% and 27.5% respective variances. PCA1 shows that the Private has a large positive contrast with Leasehold, Affordable and opposite negative relationship with Sheltered. While PCA2 shows large negative values associated with Shared owner, Sheltered, First time buyer and Private tenants.

Table 7.19: Neighbourhood and Community Principal Component Analysis – Elements

Variable	PCA1	PCA2	PCA3	PCA4
Private	0.421	-0.261	-0.024	-0.826
Affordable	0.516	0.401	-0.050	0.351
Leasehold	0.618	0.007	-0.204	0.165
First Time Buyer	0.027	-0.373	0.773	0.192
Shared Owner	0.334	-0.633	-0.026	0.314
Sheltered	-0.250	-0.480	-0.598	0.182
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	2.4369	1.6483	1.2466	0.6682
Proportion:	0.406	0.275	0.208	0.111
Cumulative:	0.406	0.681	0.889	1.000

#### 7.3.4.3.2 Relationship between constructs - Neighbourhood and Community

The relationships between constructs also demonstrates how the principal components have been formulated by the asset managers. Table 7.20 displays the correlations between the constructs and the Euclidean distances between the constructs. From Table 7.20 the following correlations are apparent:

- Good quality tenants have a very strong relationship with High tenant satisfaction with local environment and Outsourcing services and Reduced anti-social behaviour.
- High tenant satisfaction with local Environment shares a similar relationship with Reduced anti-social behaviour, Neighbourhood improvements and Outsourcing services.
- NeighbourHood improvements are very closely linked with Reduced anti-social behaviour and Outsourcing services.

Table 7.20: Neighbourhood and Community Constructs Correlation Matrix and Euclidean Distances

<b>Tenancy Constructs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Good quality tenants	1.00				
High tenant satisfaction with local environment	0.79	1.00			
Excellent neighbourhood improvements	0.44	0.85	1.00		
Excellent outsourcing services + partnering	0.76	0.83	0.70	1.00	
Reduced level of ASB	0.71	0.88	0.86	0.83	1.00
<b>Euclidean Distances</b>					
<b>Constructs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Good quality tenants	0.00				
High tenant satisfaction with local environment	1.22	0.00			
Excellent neighbourhood improvements	1.66	1.12	0.00		
Excellent outsourcing services + partnering	1.33	1.51	1.56	0.00	
Reduced level of ASB	1.39	1.28	1.39	0.89	0.00

Table 7.21 shows the PCA relative to the constructs and show PCA1 shows variance 85.1% and PCA2 calculations show 11.7% variance in the trends. PCA1 compares all the constructs against Good quality tenants and indicates that there is a positive close relationship exists between the constructs within this trend. In particular, Tenant satisfaction with the environment and Reduced anti-social behaviour are the most strongest of the constructs. Mean while PCA2 shows different trend, the gap between the constructs widens and its clear that Neighbourhood improvements is positively linked with tenant satisfaction with local environment and attracts a value of 0.647, whilst on the other end of the negative scale Good quality tenant shows a value of -0.724.

Table 7.21: Neighbourhood and Community Principal Component Analysis – Constructs

<b>Constructs</b>	<b>PCA1</b>	<b>PCA2</b>	<b>PCA3</b>	<b>PCA4</b>
Good quality tenants	0.403	-0.724	-0.359	-0.094
High tenant satisfaction with local environment	0.479	0.029	-0.388	0.459
Excellent Neighbourhood improvements	0.425	0.647	-0.194	0.160
Excellent outsourcing services + partnering	0.453	-0.167	0.822	0.298
Reduced level of Anti-Social Behaviour	0.472	0.166	0.086	-0.816
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	4.0727	0.5832	0.2050	0.1124
Proportion:	0.815	0.117	0.041	0.022
Cumulative:	0.815	0.931	0.972	0.995

#### **7.3.4.4 The Cognitive Map - Neighbourhood and Community**

Figure 7.13 displays the cognitive relationship within the Neighbourhood and Community risk cluster. There are 2 distinct patterns emerging from, firstly Leaseholds, Private rented and Affordable are positioned on the left hand side and Sheltered, Shared owners and First time buyers on the right hand side.

#### **7.3.4.5 Relationship with constructs and elements - Neighbourhood and Community**

Figure 7.14 shows the relationship of the constructs and elements in the form of a scatter diagram. The emerging pattern trend from this diagram suggests that the most significant constructs are as follows:

- Excellent outsourcing services + partnering
- Reduced level of Anti-Social Behaviour
- Good quality tenants
- High tenant satisfaction with local Environment

The least significant is excellent Neighbourhood improvements.

#### **7.3.4.6 An overview of the Neighbour Hood and Community risk**

The RG analysis in this section it is clear that Neighbourhood and community risk plays an important role when developing strategic maintenance plans and that the least significant construct is associated with neighbourhood improvements. The PCA1 confirms that there is a strong bond between Sheltered, Shared ownership, and First time buyers and Leaseholder sit on the borderline. Whereas Affordable and Private share different a similar 'foot print' and this may be due to several reasons. Firstly, the asset managers appear generally to problems with tenants living in Affordable housing due the financial base and general outlook on life and associated negativity that comes along with tenants living in stress neighbour hoods and hostile environment. Whereas the Private rented are not so concerned by the neighbourhood but more with the quality of tenants and anti-social behaviour.

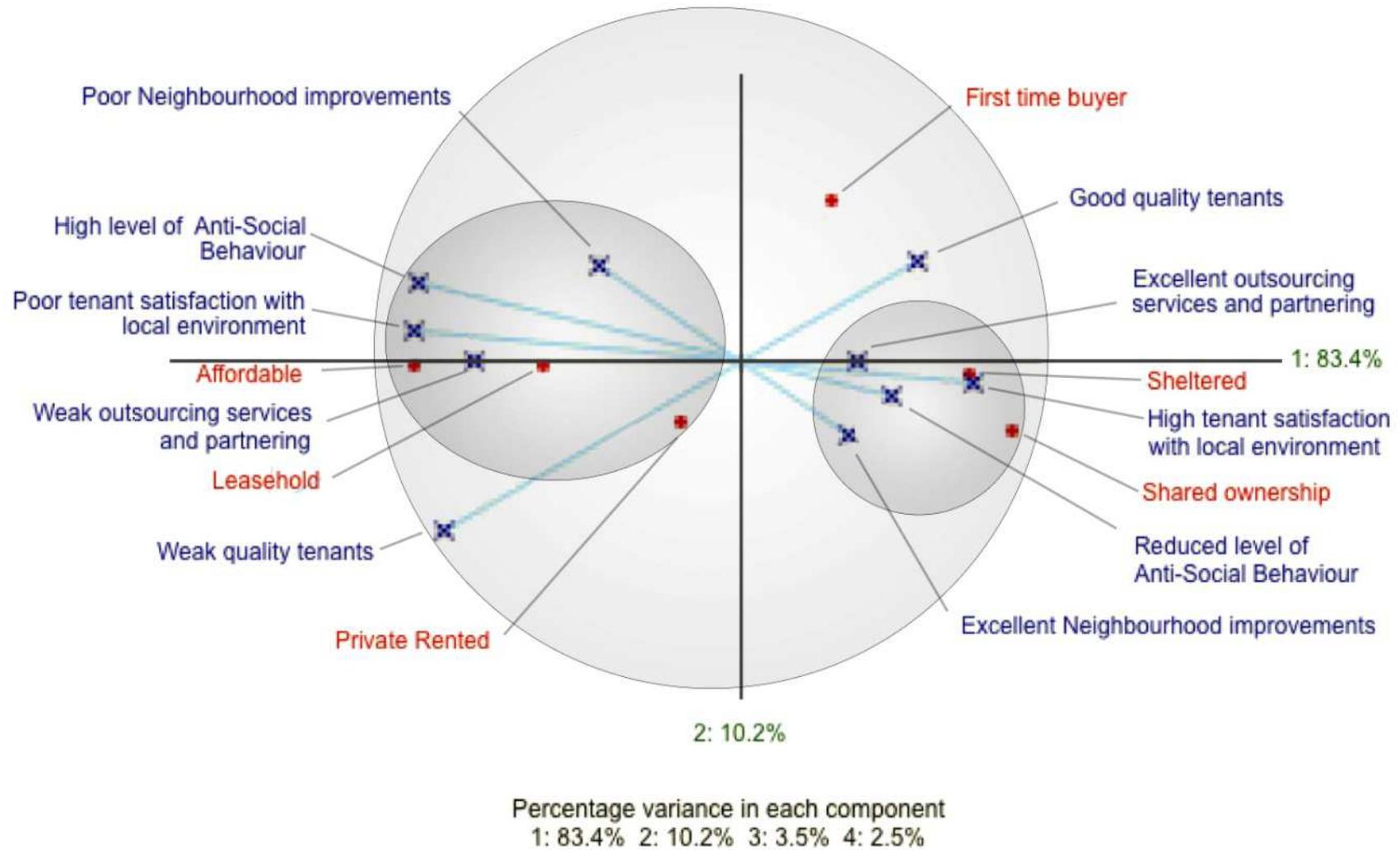


Figure 7.13: The Cognitive Map - Neighbourhood and Community Factors

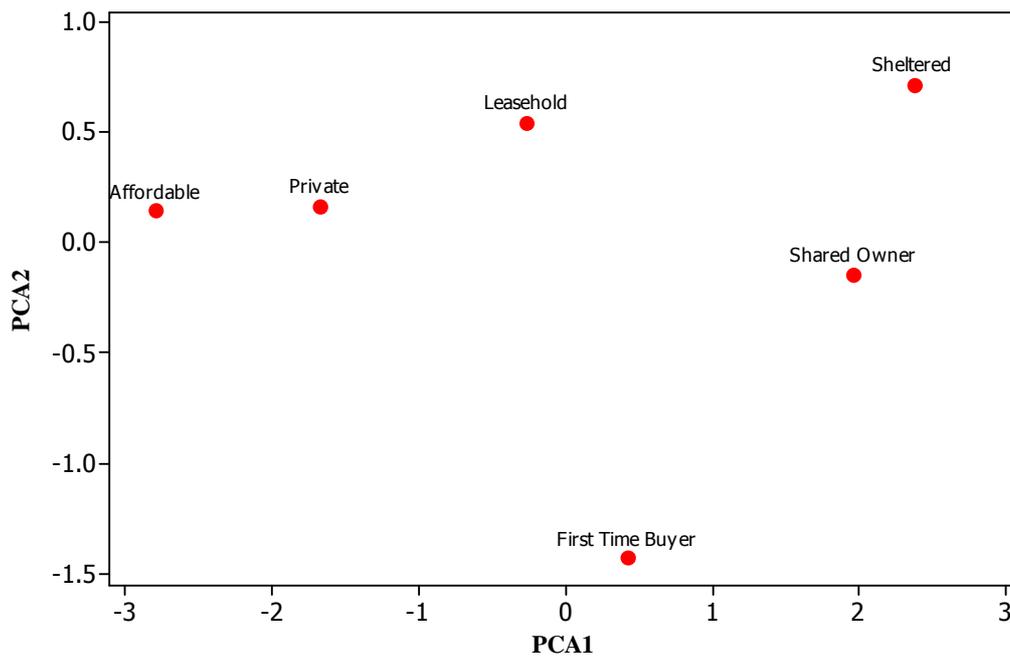


Figure 7.14: Relationship Between Elements and Constructs - Neighbourhood and Community Factors

The key neighbourhood factors having an impact on asset maintenance strategy are:

- Outsourcing services and partnering
- Anti-social behaviour
- Good quality tenants

### 7.3.5. Financial and Economic Factors Cluster Analysis

Table 7.22 shows the populated loading of the constructs which forms the cluster to the Financial and Economic Risk Cluster.

Table 7.22: Financial and Economic Factors – Data

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Total	Bi-Polar
<b>Financial and Economic Factors</b>								
1 Excellent Fair rents	3.9	3.0	3.0	3.9	4.1	4.0	<b>21.9</b>	Poor rents
2 High level of affordable housing provision	2.1	3.9	3.9	4.0	4.0	4.5	<b>22.4</b>	Poor level of affordable housing provision
3 Good rent collection and arrears management	3.0	2.5	4.0	3.5	4.0	4.5	<b>21.5</b>	Poor rent collection and arrears management
4 Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	<b>24.0</b>	Weak financial stability
5 Good solvency – tenants ability to pay rents	4.0	2.0	5.0	4.0	4.5	5.0	<b>24.5</b>	High level of insolvent tenants
6 Minimise costs associated with evictions and court actions	3.5	1.5	4.0	3.5	3.5	4.6	<b>20.6</b>	Poorly managed evictions and court actions
7 Good return on investment	4.0	2.5	4.0	3.5	3.5	4.6	<b>22.1</b>	Poor return on investment
8 Good refurbishment and redevelopment opportunity	3.5	1.5	4.0	3.0	3.0	3.0	<b>18.0</b>	Poor refurbishment and redevelopment opportunity
9 Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.5	<b>21.0</b>	Poor disposal of property
<b>Total average</b>	<b>3.6</b>	<b>2.3</b>	<b>4.1</b>	<b>3.7</b>	<b>3.8</b>	<b>4.3</b>		

### 7.3.5.1 Descriptive analysis for Elements - Financial and Economic

The data displayed in Table 7.22 was entered into the RG software package and the corresponding results are shown in Figure 7.15. The dendrogram diagram of the elements regarding the financial and economic risk cluster shows a slightly different grouping of the elements, essentially, Affordable tenants are isolated and are least similar to other tenants. Meanwhile Shared ownership, First time buyers, Leaseholders and Private have a very strong relationship and share similar profile and the Sheltered tenants consistency attained higher scores and remain on the positive side of the scale. From this there are several reasons for this emerging profile, firstly the asset managers have indicated that Affordable tenants due to their financial standing and their life style, tended to be very demanding, unable to cope with the social pressures, and are inclined to be less appreciative of the effort and the investment that has been spent on to bring the property to decent home standards. Furthermore, most asset managers indicated that regardless of all the attempts by RSL to refurbish and update buildings there is still a huge element within the Affordable housing tenants on the lack of appreciation and a sense of pride and ownership which then leads to neglect in safe occupation of the dwellings.



Figure 7.15: Dendrogram - Financial and Economic Factors

### 7.3.5.2 Descriptive Analysis of Constructs - Financial and Economic

The dendrogram of the constructs (Figure 7.15) shows several grouping within this cluster for Financial and Economic risk, these are as follows:

- A strong relationship between Excellent fair rents and Good financial stability.
- Similarly eviction and court costs; return on investment; rent collection and arrears management share a similar profile.
- While affordable housing provision; property disposal; and redevelopment have a mixed and variable relationship. Whereas the ability to pay rents sits on the opposite scale within the Dendrogram.

### 7.3.5.3 Analysis of Component Space - Financial and Economic

#### 7.3.5.3.1 Relationship between elements - Financial and Economic

The component space between the elements is shown in Table 7.23. It is clear from these tables that correlation between each element does exist, in that Private is strongly related to Leaseholds and a contrasting negative relationship exists with Affordable tenants. A correlation exists between Affordable and Sheltered (0.50) and First time buyer (0.47); leaseholders with Shared owners (0.56) and Sheltered (0.54). First time buyers have a very strong grouping with Shared owners. This pattern and profile of the elements are also evident in the dendrogram.

Table 7.23: Financial and Economic Elements Correlation and Euclidean Distances

Elements	Private Correl ECdis		Afford Correl ECdis		Lease Correl ECdis		FTB Correl ECdis		Shared Correl ECdis		Sheltered Correl ECdis
Private rented	1.00										
Affordable rented	-0.51	5.37	1.00								
Leasehold	0.46	2.40	-0.19	6.09	1.00						
First time buyer	0.14	2.16	0.47	4.69	0.31	1.75	1.00				
Shared ownership	0.07	2.37	0.35	5.03	0.56	1.42	0.85	0.71	1.00		
Sheltered	0.03	3.48	0.50	6.42	0.54	1.89	0.54	2.41	0.62	2.12	1.00

From Table 7.24, PCA1 and PCA2 captures 48.79% and 29.9% respective variances. Private tenants share similarities with Shared owner, First time buyer and Sheltered in PCA1 trend. Whereas, Affordable tenant show a contrasting relationship with Private in PCA2 trend.

Table 7.24: Finance and Economics Principal Component Analysis – Elements

Variable	PCA1	PCA2	PCA3	PCA4
Private	0.096	0.642	-0.397	-0.514
Affordable	0.282	-0.594	0.003	-0.199
Leasehold	0.338	0.468	0.621	0.261
First Time Buyer	0.519	-0.018	-0.580	0.204
Shared Owner	0.549	0.029	-0.061	0.403
Sheltered	0.475	-0.124	0.341	-0.652
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	2.9195	1.7967	0.5236	0.4855
Proportion:	0.487	0.299	0.087	0.081
Cumulative:	0.487	0.786	0.873	0.954

### 7.3.5.3.2 Relationship between constructs - Financial and Economic

The relationships between constructs also demonstrate how the principal components have been formulated by the asset managers. Table 7.25 displays the correlations between the constructs and the Euclidean distances between the constructs. From these tables the following correlations are apparent:

- Fair rents have a very strong relationship with Minimum cost associated with eviction and court action, Good return on investment; Good solvency; Good rent collection and rent arrears management and Good financial standing.

- High level of affordable housing provision has least correlation.
- Good rent collection and rent arrear management has strong relationships with Good solvency; Minimum cost of eviction and court actions.
- Good financial stability is highly associated with Good solvency - tenants ability to pay rent; Minimise Costs Associated with evictions and court actions; Good return on investment; Good refurbishment and redevelopment opportunity; Excellent disposal of property
- Good solvency shares a similarity with Minimise Costs Associated with evictions and court actions; Good return on investment; Good refurbishment and redevelopment opportunity; Excellent disposal of property
- Minimise Costs Associated with evictions and court actions; Good return on investment; Good refurbishment and redevelopment opportunity; Excellent disposal of property
- Good return on investment is closely associated with Good refurbishment and redevelopment opportunity; Excellent disposal of property

Table 7.25: Financial and Economic Constructs Correlation Matrix and Euclidean distances

<b>Financial + Economic Construct</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
Excellent fair rents	1.00								
High level of affordable housing provision	0.28	1.00							
Good rent collection and arrears management	0.86	0.53	1.00						
Good financial stability	0.79	-0.19	0.70	1.00					
Good solvency – ability to pay rents	0.83	0.16	0.90	0.93	1.00				
Minimise costs evictions and court actions	0.93	0.14	0.88	0.94	0.97	1.00			
Good return on investment	0.90	-0.02	0.77	0.93	0.89	0.96	1.00		
Good refurbishment and redevelopment opportunity	0.53	-0.26	0.57	0.93	0.86	0.80	0.76	1.00	
Excellent property disposal	0.64	-0.19	0.61	0.90	0.85	0.82	0.71	0.90	1.00
<b>Euclidean Distances</b>									
<b>Constructs</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
Excellent fair rents									
High level of affordable housing provision	2.05								
Good rent collection and arrears management	1.26	1.74							
Good financial stability	1.07	2.84	1.66						
Good solvency – ability to pay rents	1.53	2.99	1.73	1.12					
Minimise costs evictions and court actions	1.77	2.87	1.23	1.66	1.71				
Good return on investment	0.98	2.47	1.12	1.00	1.63	1.12			
Good refurbishment and redevelopment opportunity	2.87	3.46	2.18	2.55	2.96	1.75	2.08		
Excellent property disposal	2.06	3.22	1.80	1.58	1.94	1.40	1.65	1.58	

Table 7.26 shows the PCA relative to the constructs and show PCA1 shows variance 76% and PCA2 calculations show 17.3% variance in the trends. PCA1 indicates that the Fair rents have a balanced and positive relationship with all constructs in this trend, apart from

High level affordable housing provision. Whereas PCA2 shows a different trend, the gap High affordable housing provision is not so well positioned amongst the construct and has only one positive link with rent collective and rent arrears management which attracts a value of 0.382, as opposed to a contrasting relationship with Refurbishment and redevelopment opportunity.

Table 7.26: Finance and Economic Principal Component Analysis – Constructs

Constructs	PCA1	PCA2	PCA3	PCA4
Excellent fair rents	0.341	0.218	0.501	-0.410
High level of affordable housing provision	0.035	0.777	-0.327	0.055
Good rent collection and arrears management	0.331	0.382	-0.133	0.056
Good financial stability	0.369	-0.205	0.067	0.064
Good solvency – ability to pay rents	0.377	0.057	-0.197	0.134
Minimise costs evictions and court actions	0.380	0.057	0.112	0.010
Good return on investment	0.360	-0.034	0.468	0.355
Good refurbishment and redevelopment opportunity	0.331	-0.300	-0.435	0.441
Excellent property disposal	0.334	-0.250	-0.399	-0.695
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	6.8438	1.5576	0.4100	0.1550
Proportion:	0.760	0.173	0.046	0.017
Cumulative:	0.760	0.933	0.979	0.996

### 7.3.5.4 The Cognitive Map - Financial and Economic

Figure 7.16 displays the cognitive relationship within the finance and the economic risk cluster. The 4 elements broadly have a similar profile and can be grouped together (Sheltered, Shared ownership, First time buyers and Leaseholders) though First buyer and sheltered are much closer to each other. Whereas Sheltered tenants are positioned further away due to commitments and obligations of the RSL and asset managers to attend to the particular sensitivity associated with the accommodation. Although leaseholders have less contact with RSLs however the asset managers felt that leaseholders do not impose any undue pressures and any fairly comfortable with the financial standing and this is also true in the case of Private rents. However, the greatest problems are associated with Affordable tenants in terms of their satisfaction and ability to survive within the financial and economic constraints.

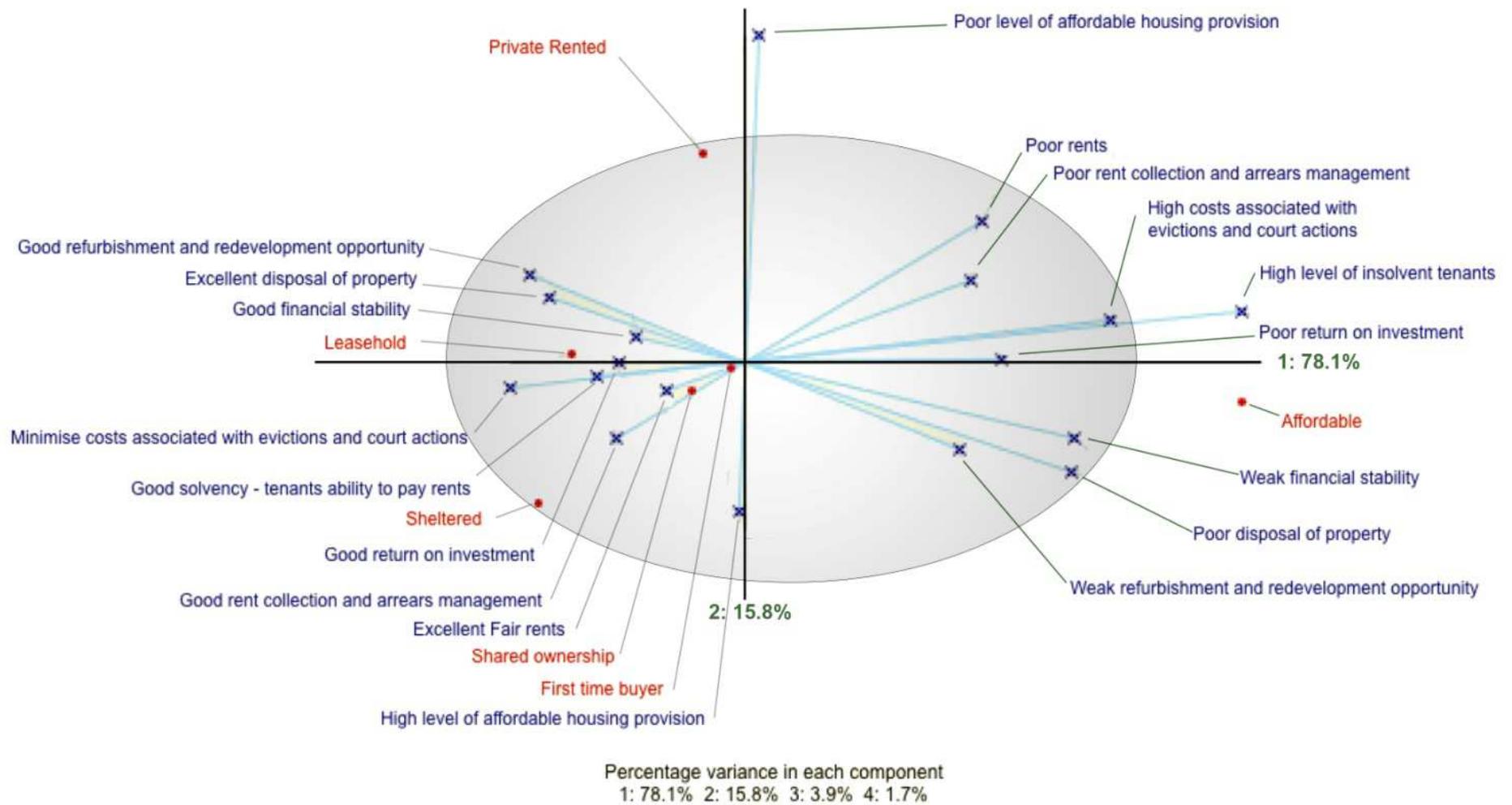


Figure 7.16: The Cognitive Map - Financial and Economic Factors

### **7.3.5.5 Relationship between constructs and elements - Financial and Economic**

Figure 7.17 shows the relationship in the form of a scatter diagram where PCA 1 is plotted on the X axis and PCA2 on the Y axis. PCA1 is most important as it illustrates the distance between the elements according to the ratings assigned to the constructs by the asset managers.

The overall pattern that emerges from Figure 7.16 suggests that the most significant constructs are as follows:

- High level of affordable housing provision
- High of property disposal
- Good Refurbishment and development opportunity
- Fair rents
- Good financial standing
- Good solvency

The least important or insignificant constructs are:

- Minimum costs associated with evictions and court actions
- Good return on investment
- Good Refurbishment and redevelopment opportunity

The lower scores attained from asset managers have clearly highlighted problems with Affordable housing.

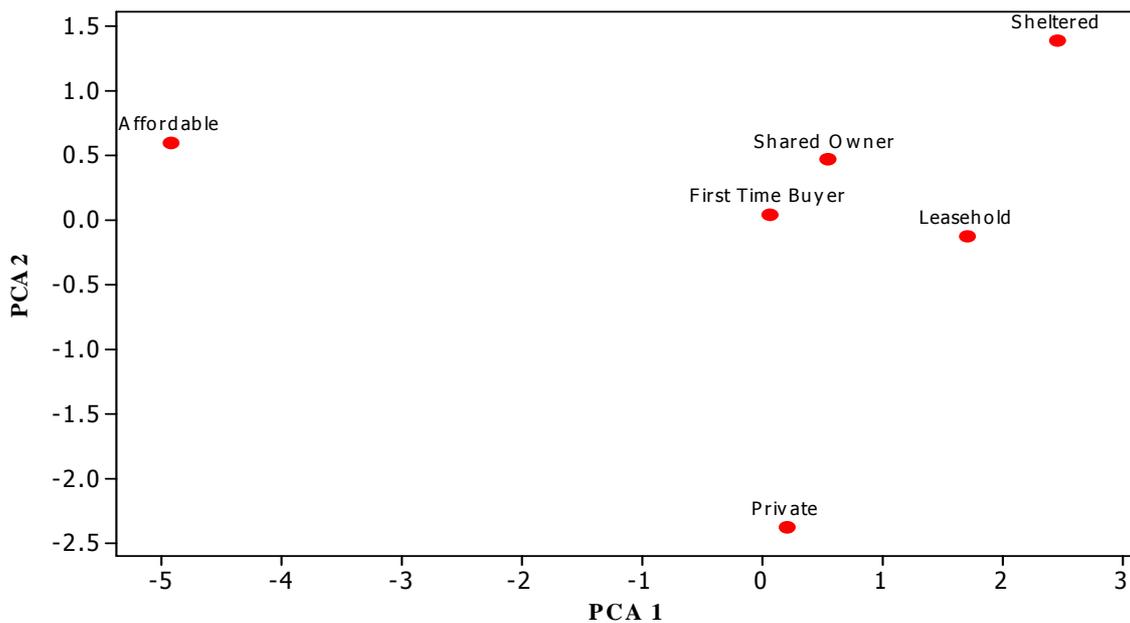


Figure 7.17: Relationship Between Elements and Constructs - Financial and Economic Factors

### 7.3.5.6 An overview of the Financial and Economic risk

Financial and Economic risks play a pivotal role in any business organisation and this is also true in the case of RSLs. This section highlights several problems with tenant type and their associated factors that make up this cluster. Firstly whilst affordability, fair rents, value for money and consumer choice are a common theme in today's society together with economic pressures, however, from above analysis it is clear that Affordable rental sector presents the higher risks to the finances of the RSLs. The problems relate to inability to pay rents, tenants' expectations and also the ability of the RSL to deliver their services where tenants are unappreciative of the efforts and investment that are being ploughed into to improve social housing portfolio. Concerns were raised regarding the impact of the universal credit and bedroom tax being introduced by the Government. Affordable tenancy plays a key role when developing strategic maintenance of assets.

The key financial and economical factors having an impact on asset maintenance strategy are:

- Good solvency
- Good financial standing
- Level of affordable housing provision

- Return on investment
- Fair rents
- Rent collection and arrears management

### 7.3.6. Continuous Service (Business) Improvement Factors Cluster Analysis

Table 7.27 shows the populated loading of the constructs which forms the cluster for the Continuous service improvement factor cluster.

Table 7.27: Continuous Service (Business) Improvement Factors – Data

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Total	Bi-Polar
<b>Service Improvement Factors</b>								
1 Excellent tenant participation	3.0	3.0	2.6	3.5	3.5	2.5	18.1	Weak tenant participation
2 High level of stakeholder involvement and partnering	2.6	3.0	3.5	4.0	4.0	4.0	21.1	Poor stakeholder involvement and partnering
3 Good security provision	3.0	3.0	3.0	3.5	3.5	5.0	21.0	Weak security provision
4 Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	19.5	Poor strategic partnerships
5 Good market intelligence – future supply and demand trends	2.0	3.0	5.0	3.5	4.0	4.5	22.0	Weak market intelligence
<b>Total average</b>	<b>2.7</b>	<b>3.1</b>	<b>3.3</b>	<b>3.5</b>	<b>3.6</b>	<b>4.1</b>		

#### 7.3.6.1 Descriptive analysis for Elements - Continuous Service Improvement

The data displayed in Table 7.27 was entered into the RG software package and the corresponding results are shown in Figure 7.18. The dendrogram diagram of the elements shows a different grouping of the elements when compared to all other previous risk clusters. Shared owners and First time buyer share a similar ‘profile’ and likewise Affordable and Private can be grouped together. The least similar is Sheltered which has attracted much higher scores and has a distinct separate profile compared to other elements, similarly Leasehold have a varied profile and cannot be grouped with any other elements.

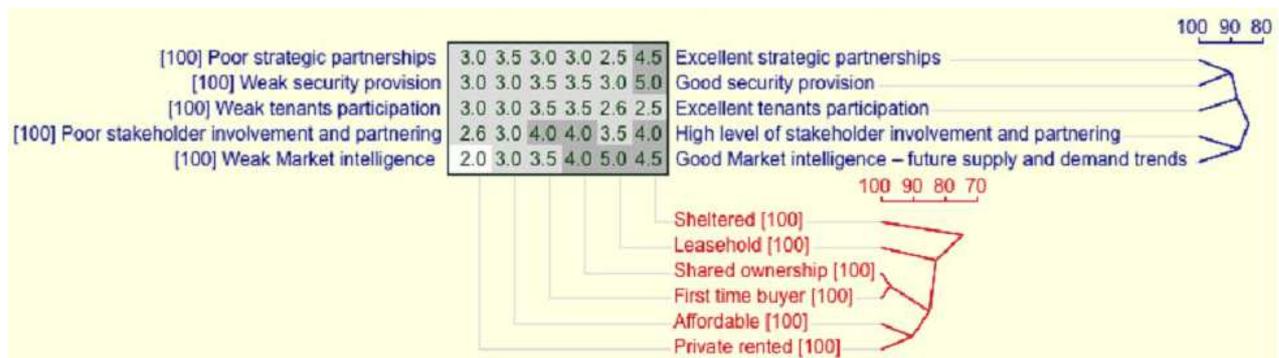


Figure 7.18: Dendrogram - Continuous Service (Business) Improvement

### 7.3.6.2 Descriptive Analysis of Constructs - Continuous Service Improvement

The dendrogram of the constructs (Figure 7.17) shows several grouping within this cluster for Continuous Service Improvement risk, these are as follows:

- A strong relationship between Excellent strategic partnership and Good security.
- Similarly High level stakeholder involvement and partnering with Good market intelligence.
- Excellent tenant partnership resides between the two groups.

### 7.3.6.3 Analysis of Component Space - Continuous Service Improvement

#### 7.3.6.3.1 Relationship between elements - Continuous Service Improvement

The component space between the elements is shown in Table 7.28. From Table 7.28 Private rented has a strong contrasting relationship with Leaseholds and Shared ownership with minus readings -0.98 and -0.76 respectively and shares similar profiles with Affordable rented. Affordable also displays a strong negative relationship with Shared ownership and First time buyer. The leaseholder is strongly linked with Shared ownership. Similarly, Shared ownership shares the similar foot print with First time buyer. This pattern and profile of the elements are also evident in the dendrogram.

From Table 7.29, PCA1 and PCA2 captures 60.2% and 26.3% respective variances. Private tenants share similarities with Sheltered, Shared owner, Leasehold, First time buyer and Sheltered in PCA1 trend and a contrasting negative value with Affordable. Whereas, Affordable tenant shows a contrasting negative links with Sheltered and Leasehold in PCA2 trend.

Table 7.28: Continuous Service Improvement Elements Correlation and Euclidean Distances

Elements	Private		Afford		Lease		FTB		Shared		Sheltered	
	Correl	ECdis	Correl	ECdis	Correl	ECdis	Correl	ECdis	Correl	ECdis	Correl	ECdis
Private rented	1.00											
Affordable rented	0.36	1.19	1.00									
Leasehold	-0.98	3.20	-0.45	2.33	1.00							
First time buyer	-0.32	2.17	-0.79	1.41	0.35	1.95	1.00					
Shared ownership	-0.76	2.54	-0.80	1.66	0.79	1.60	0.85	0.50	1.00			
Sheltered	-0.21	3.84	0.23	2.92	0.30	2.92	-0.18	2.55	-0.03	2.40		1.00

Table 7.29: Continuous Service Improvement Principal Component Analysis – Elements

Variable	PCA1	PCA2	PCA3	PCA4
Private	-0.433	0.368	-0.430	0.124
Affordable	-0.415	-0.360	0.243	-0.764
Leasehold	0.447	-0.390	0.244	0.145
First Time Buyer	0.410	0.379	-0.379	-0.593
Shared Owner	0.522	0.075	-0.053	-0.164
Sheltered	0.015	-0.658	-0.742	0.040
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	3.6096	1.5807	0.5694	0.2402
Proportion:	0.602	0.263	0.095	0.040
Cumulative:	0.602	0.865	0.960	1.000

### 7.3.6.3.2 Relationship between constructs - Continuous Service Improvement

The relationships between constructs also demonstrate how the principal components have been formulated by the asset managers. Table 7.30 displays the correlations between the constructs and the Euclidean distances between the constructs. From these tables the following correlations are apparent:

- Excellent tenants' participation has a contrasting relationship with Good security, Excellent strategic partnerships and Market intelligence.
- Stakeholders' involvement is closely linked to Market intelligence and Good security.
- Good security has a correlation with Strategic partnerships.

Table 7.30: Continuous Service (Business) Improvement Constructs  
Correlation Matrix and Euclidean distances

<b>Continuous Service Improvement Factors</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Excellent tenants participation	1.00				
High level of stakeholder	0.19	1.00			
Good security provision	-0.33	0.62	1.00		
Excellent strategic partnerships	-0.39	0.23	0.84	1.00	
Good market intelligence	-0.38	0.72	0.42	0.07	1.00
<b>Euclidean Distances</b>					
Excellent tenants participation					
High level of stakeholder	1.93				
Good security provision	2.53	1.38			
Excellent strategic partnerships	2.18	1.91	1.12		
Good market intelligence	3.32	1.76	2.35	2.96	

Table 7.31 shows the PCA relative to the constructs, PCA1 shows variance 52.1%, PCA2 show 26.3% variance and PCA3 displays 20.2% variance in the trends. In PCA1 trend Excellent Tenants participation is closely linked with Good security, Strategic partnership and Market Intelligence. PCA2 shows a strong relationship with Stakeholders involvement and tenant participation negative; and a contrasting link with Stakeholder involvement with Strategic partnership. Whilst PCA3 shows a contrasting negative link between Good security and all constructs (apart from Market intelligence) and the highest contrast relates to Tenant participations and Strategic partnership.

Table 7.31: Continuous Service Improvement Principal Component Analysis – Constructs

<b>Constructs</b>	<b>PCA1</b>	<b>PCA2</b>	<b>PCA3</b>	<b>PCA4</b>
Excellent tenants participation	-0.269	0.535	-0.653	-0.196
High level of stakeholder	0.450	0.583	-0.147	0.059
Good security provision	0.577	-0.134	-0.285	0.640
Excellent strategic partnerships	0.447	-0.462	-0.414	-0.641
Good market intelligence	0.438	0.377	0.547	-0.371
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	2.6037	1.3158	1.0096	0.0645
Proportion:	0.521	0.263	0.202	0.013
Cumulative:	0.521	0.784	0.986	0.999

#### **7.3.6.4 The Cognitive Map - Continuous Service Improvement**

Figure 7.18 displays the cognitive relationship within the continuous services improvement factor cluster. The grouping of the elements is clearly visible, it can be seen that shared owner and First time buyer are very close, similarly Affordable and the Private, whilst Leasehold and Sheltered are at the opposite ends.

#### **7.3.6.5 Relationship between constructs and elements - Continuous Service Improvement**

Figure 7.19, shows the relationship in the form of a scatter diagram where PCA1 is plotted on the X axis and PCA2 on the Y axis. PCA1 is most important as it illustrates the distance between the elements according to the ratings assigned to the constructs by the asset managers. The overall grouping of the elements is evident and the grouping is influenced the most significant constructs and these are as follows:

- All constructs are closely linked to Sheltered part from tenants participate
- All constructs have a strong influence of the elements and there a strong correlation

The least important or insignificant constructs are:

- Market intelligence and Stakeholder involvement with Private rented
- Strategic partnership and tenants participation with Leaseholds
- Tenants participation with Sheltered

These lower scores have accordingly influenced their respective positions in the scatter diagram.

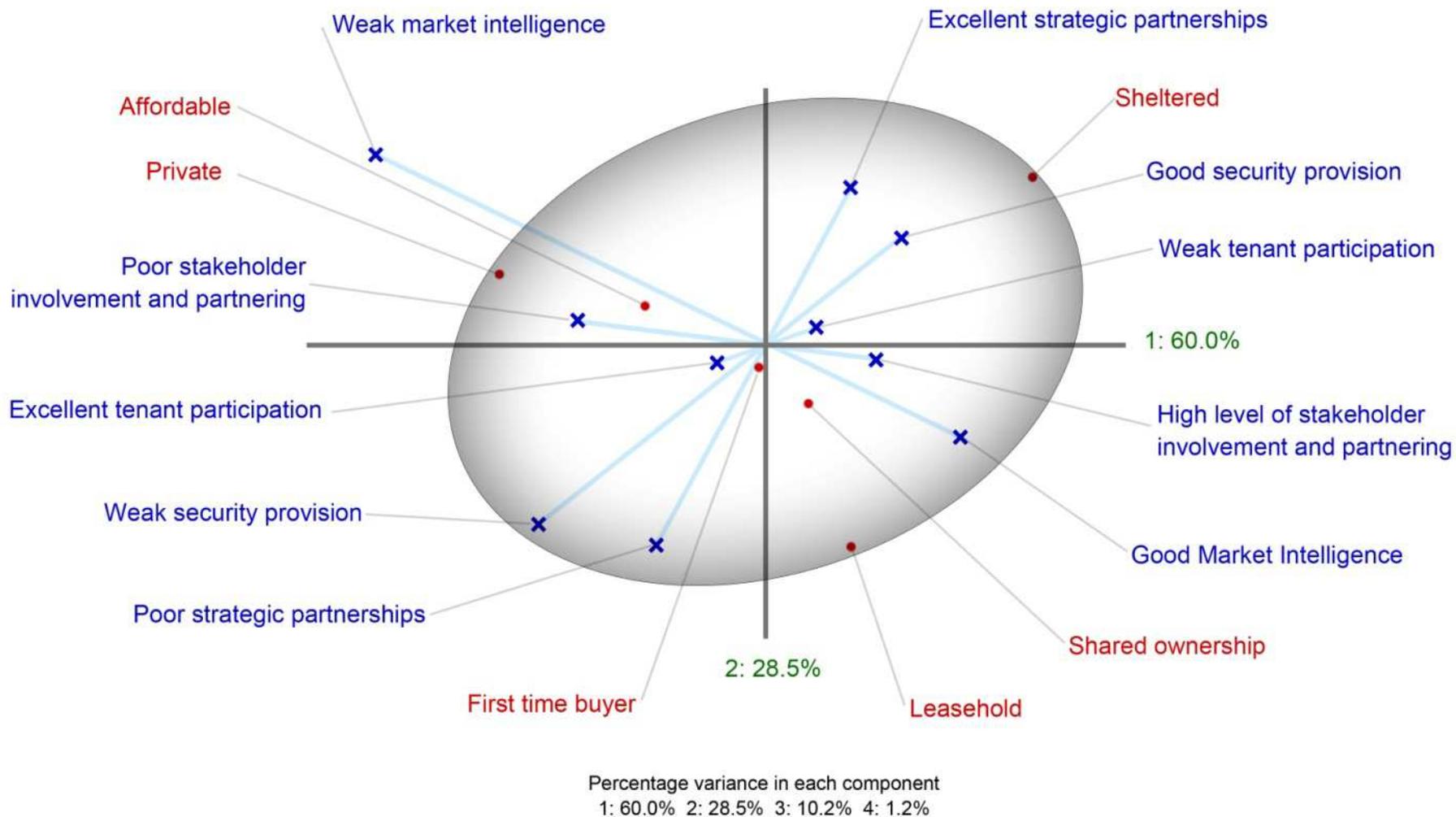


Figure 7.19: The Cognitive Map - Continuous Service (Business) Improvement Factors

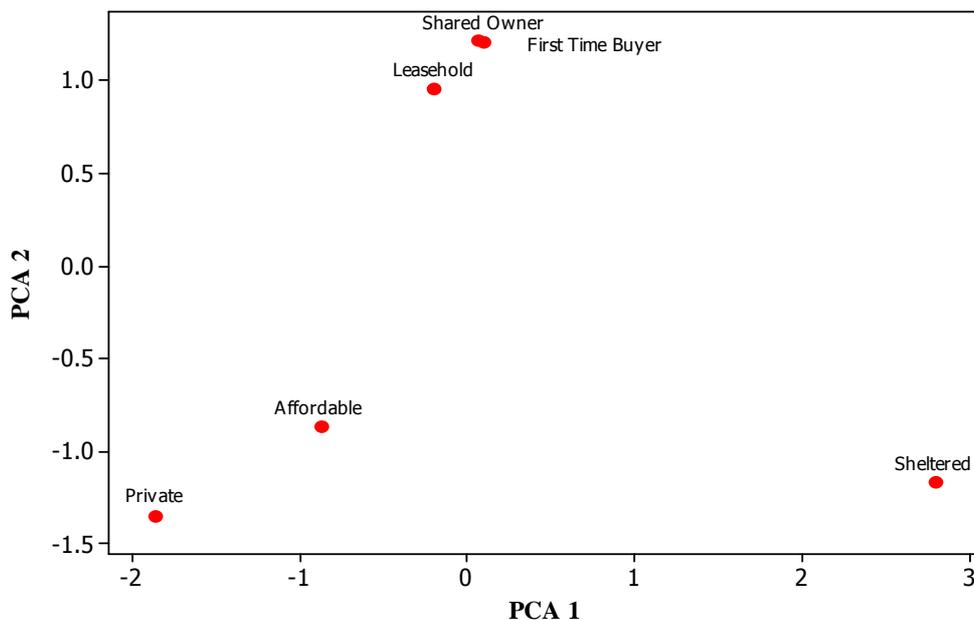


Figure 7.20: Relationship Between Elements and Constructs - Continuous Service (Business) Improvement Factors

### 7.3.6.6 An overview of the Continuous Service Improvement factor

Continuous (business) service improvement play a pivotal role in any business organisation and this is also true in the case of RSLs. This section highlighted that the continuous business improvement within social housing providers need to focus on all areas of the business and not specific areas. There are huge problems with tenant type and their associated factors that make up this cluster. The ratings provided by asset managers highlight that the biggest risk to continuous business improvement relates to Private rented who were rated particularly low. The interview emphasised that Private rented tenants are not sufficiently involved within the operations and improvement of social housing. The highest ratings are given to Sheltered, FTBs and Shared owners signifying that asset managers believe these customers are the least risk to the continuous business improvement of the organisation.

The key continuous service improvement factors having on impact on asset maintenance strategy are:

- Market intelligence
- Stakeholder involvement and partnering

- Security provision
- Strategic partnerships

### 7.3.7 Corporate Factor Cluster Analysis

The constructs developed within this cluster centres around the RSL and the corporate risk factors which have been detailed in Chapters 2, 3 and 4. The data collected from in-depth interviews with asset managers are populated in Table 7.32.

Table 7.32: Corporate Factor Cluster – Data

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Total	Bi-Polar
<b>Corporate Factors</b>								
1 High understanding and compliance of legislation	3.0	4.0	3.5	4.0	4.0	3.5	<b>22.0</b>	Poor understanding and weak directives
2 Strong corporate governance	3.5	4.5	2.5	3.6	3.6	4.0	<b>21.7</b>	Weak corporate governance
3 Sound Health and Safety policy and security	3.0	3.5	1.7	3.0	3.0	4.0	<b>19.2</b>	Weak Health and Safety policy and security
4 Excellent bench marking	3.7	4.0	3.0	3.5	3.5	4.5	<b>22.2</b>	Poor bench marking
5 High social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	<b>24.5</b>	Weak social corporate responsibility
6 Well managed organisation – management and cultural and style	3.2	3.4	3.2	4.0	4.0	5.0	<b>22.8</b>	Poorly managed organisation – management cultural and style
7 High staff participation	2.4	4.0	1.7	3.3	3.3	5.0	<b>19.7</b>	Poor staff participation
<b>Total average</b>	<b>3.3</b>	<b>3.9</b>	<b>2.7</b>	<b>3.6</b>	<b>3.6</b>	<b>4.6</b>		

#### 7.3.7.1 Descriptive analysis for Elements - Corporate

The data displayed in Table 7.32 was entered into the RG software package and the corresponding results are shown in Figure 7.20. With regards to the element shown on the dendrogram diagram, the corporate risk cluster shows a slightly different profile on grouping of the elements when compared to other clusters. Essentially, Sheltered and Leaseholds appear on the opposite scales. Surprisingly the Affordable seemed to have higher scores compared with all other previous cluster profiles. This trend suggests that RSLs are playing a very active role in attempting to resolve all the social housing service issues for all tenants falling within this category. Shared ownership and First time buyers share an identical profile; Private rented is very closely linked with shared and first time buyers. The least similar is Leaseholds.



Figure 7.21: Dendrogram - Corporate Factors

### 7.3.7.2 Descriptive Analysis of Constructs - Corporate

The dendrogram related to the constructs as shown in Figure 7.20 illustrates the following patterns:

- A strong relationship between High staff participation and Sound health and safety policy and security. These two constructs are very closely attached to Well managed organisation in terms of the organisations culture and management style.
- Strong corporate governance and benchmarking have attracted similar scores and hence share a similar profile.
- Social corporate responsibility, compliance with, and understanding of legislation are grouped together.

### 7.3.7.3 Analysis of Component Space - Corporate

#### 7.3.7.3.1 Relationship between elements - Corporate

The component space between the elements is shown in Table 7.33. It is evident from these tables that the correlation between each element is very clearly defined. However, in closer examination of the Table 7.33 Private rented element has a much stronger relationship with Leasehold (0.80) and a contrasting negative relationship with Sheltered with a corresponding euclidean distance of 3.99. The Affordable elements have very little or limited correlations with other elements. Leaseholders on the other hand have a much stronger link with First time buyers and Shared owners and a negative contrasting link with sheltered. First time

buyers and Shared owners share an identical ‘profile’ and a contrasting negative link with Sheltered. This pattern and profile of the elements are also evident in the dendrogram.

Table 7.33: Corporate Elements Correlation and Euclidean distances

Elements	Private Correl ECdis		Afford Correl ECdis		Lease Correl ECdis		FTB Correl ECdis		Shared Correl ECdis		Sheltered Correl ECdis
Private rented	1.00										
Affordable rented	0.28	2.05	1.00								
Leasehold	0.80	1.98	0.07	3.75	1.00						
First time buyer	0.59	1.32	0.09	1.47	0.92	2.62	1.00				
Shared ownership	0.59	1.32	0.09	1.47	0.92	2.62	1.00	0.00	1.00		
Sheltered	-0.32	3.99	-0.57	2.75	-0.37	5.64	-0.50	3.21	-0.32	3.21	1.00

From Table 7.34, PCA1 and PCA2 captures 60.8% and 24.1% respective variances. Private and Leasehold tenants share a closer link followed by First time buyer and Shared owner and a negative relationship with Sheltered in PCA1 trends. Whereas, Affordable tenants and Sheltered show strong relationship with PCA2 setting.

Table 7.34: Corporate Principal Component Analysis – Elements

Variable	PCA1	PCA2	PCA3	PCA4
Private	0.417	-0.080	-0.751	-0.376
Affordable	0.123	-0.739	-0.215	0.615
Leasehold	0.511	0.141	-0.052	-0.112
First Time Buyer	0.493	0.209	0.218	0.259
Shared Owner	0.488	0.211	0.244	0.317
Sheltered	-0.263	0.583	-0.530	0.547
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	3.6477	1.4465	0.5442	0.3432
Proportion:	0.608	0.241	0.091	0.057
Cumulative:	0.608	0.849	0.940	0.997

### 7.3.7.3.2 Relationship between constructs - Corporate

Table 7.35 shows the correlations between the constructs and the Euclidean distances between the constructs. From these tables the following correlations are apparent:

- High understanding and compliance of legislation is strongly linked with corporate governance; and no correlation exists with Well management organisation.
- Strong corporate governance is strongly linked with Excellent benchmarking, Sound health and safety policy and security; and High social corporate responsibility.

- Sound health and safety and security is strongly with Excellent benchmarking, High social corporate responsibility, High staff participation and Well managed organization.
- Excellent benchmarking is highly linked with High Social corporate responsibility, Well managed organisational and style and High staff participation
- High social corporate responsibility is in turn linked with Well managed organisation and High staff participation

Table 7.36 shows the PCA relative to the constructs associated with corporate risk, PCA1 shows variance 72.2%, PCA2 show 19.2% variance in the trends. In PCA1 trend shows close bonding and interaction with all constructs, whilst PCA2 shows contrasting relationship High understanding / legislation and High staff participation.

Table 7.35: Corporate Constructs Correlation Matrix and Euclidean Distances

<b>Corporate Factors</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>
High understanding of legislation	1.00						
Strong corporate governance	0.47	1.00					
Sound Health and Safety policy and security	-0.03	0.75	1.00				
Excellent bench marking	-0.07	0.81	0.98	1.00			
High social corporate responsibility	-0.19	0.58	0.97	0.92	1.00		
Well managed organisation - management and cultural and style	0.00	0.37	0.81	0.67	0.88	1.00	
High staff participation	0.24	0.82	0.94	0.91	0.88	0.81	1.00
<b>Euclidean Distances</b>							
High understanding of legislation							
Strong corporate governance	1.35						
Sound Health and Safety policy and security	2.83	1.90					
Excellent bench marking	1.34	0.90	1.78				
High social corporate responsibility	1.58	1.68	2.55	1.04			
Well managed organisation - management and cultural and style	1.67	1.76	2.07	1.18	1.04		
High staff participation	2.77	1.81	0.89	1.93	2.60	2.60	

Table 7.36: Corporate Principal Component Analysis – Constructs

<b>Constructs</b>	<b>PCA1</b>	<b>PCA2</b>	<b>PCA3</b>	<b>PCA4</b>
High understanding of legislation	0.032	-0.819	-0.402	-0.237
Strong corporate governance	0.351	-0.443	0.445	-0.091
Sound Health and Safety policy and security	0.442	0.072	0.082	-0.310
Excellent bench marking	0.428	0.054	0.350	0.020
High social corporate responsibility	0.423	0.251	-0.082	-0.428
Well managed organisation - management and cultural and style	0.360	0.212	-0.704	-0.006
High staff participation	0.434	-0.129	-0.094	0.810
<b>Eigen analysis of the Correlation Matrix</b>				
Eigenvalue:	5.0565	1.3413	0.5724	0.0299
Proportion:	0.722	0.192	0.082	0.004
Cumulative:	0.722	0.914	0.996	1.000

#### **7.3.7.4 The Cognitive Map - Corporate**

Figure 7.21 displays the cognitive relationship within the corporate risk cluster, from this map the relationship between elements is highlighted, in that First time buyers and Shared owners occupy the same position. Sheltered and Leaseholds are positioned at opposite ends this illustrates the level of importance and interaction that is perceived by the asset managers. Leaseholds have little involvement in the services provided by the RSL, whereas in the case of the Sheltered tenants priority is given and the legal obligations to ensure that the environment provided by the RSL is maintained to a reasonable level of care and attention. Grouped in the middle are Private rented and the Affordable.

#### **7.3.7.5 Relationship between constructs and elements - Corporate**

Figure 7.22 shows the relationship in the form of a scatter diagram where PCA1 is plotted on the X axis and PCA2 on the Y axis. PCA1 is most important as it illustrates the distance between the elements according to the ratings assigned to the constructs by the asset managers. The overall grouping of the elements is influenced by the importance attached to the scoring by the asset managers. Within this cluster the most significant constructs are:

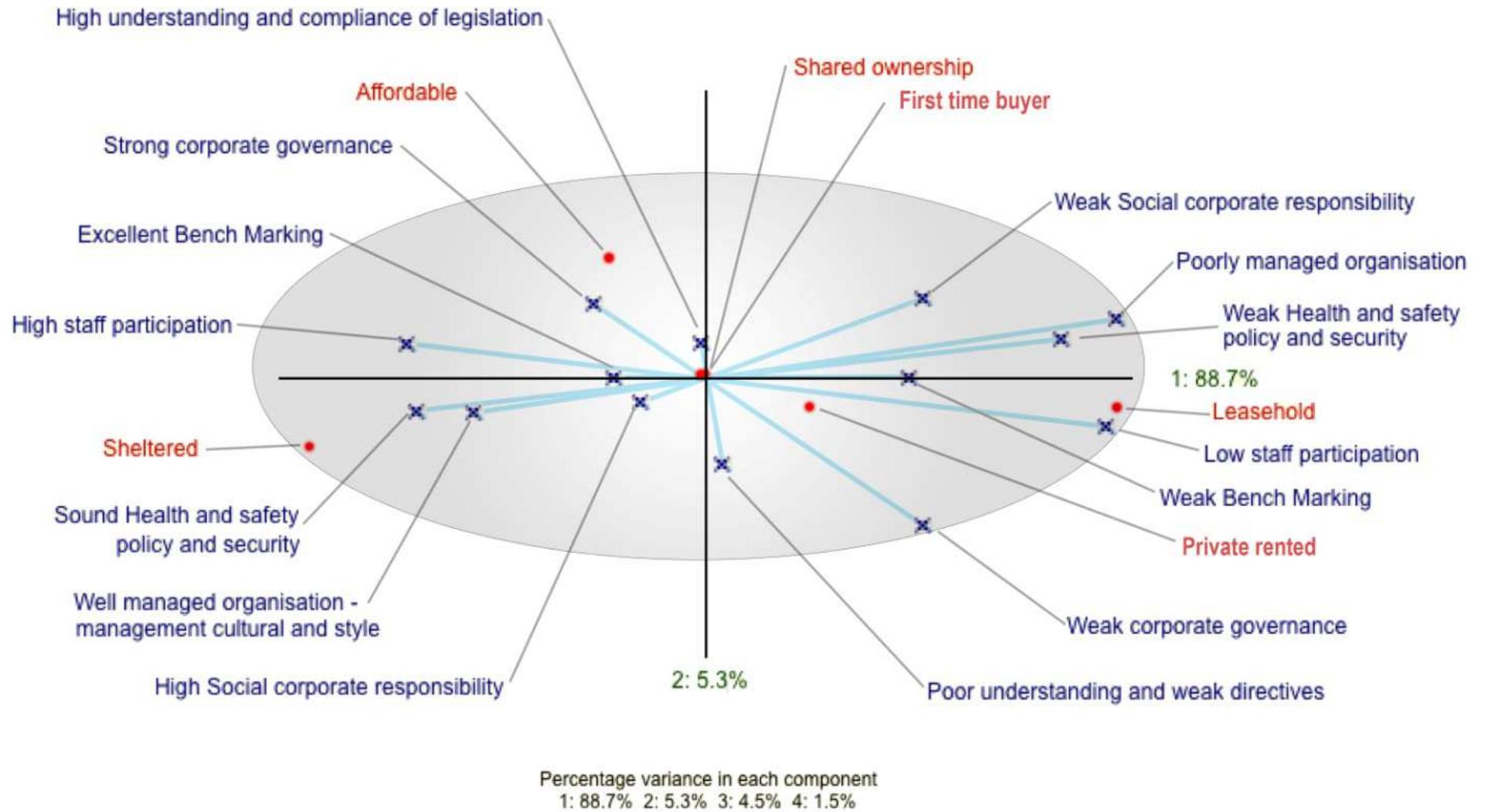


Figure 7.22: The Cognitive Map – Corporate Factors

- High Social corporate responsibility
- Well managed organisation - management cultural and style
- Excellent Bench Marking
- High understanding and compliance of legislation
- Strong corporate governance

The least important or insignificant constructs are:

- High staff participation
- Sound Health and safety policy and security

These lower scores have accordingly influenced their respective positions within the scatter diagram and influenced the positioning of the elements.

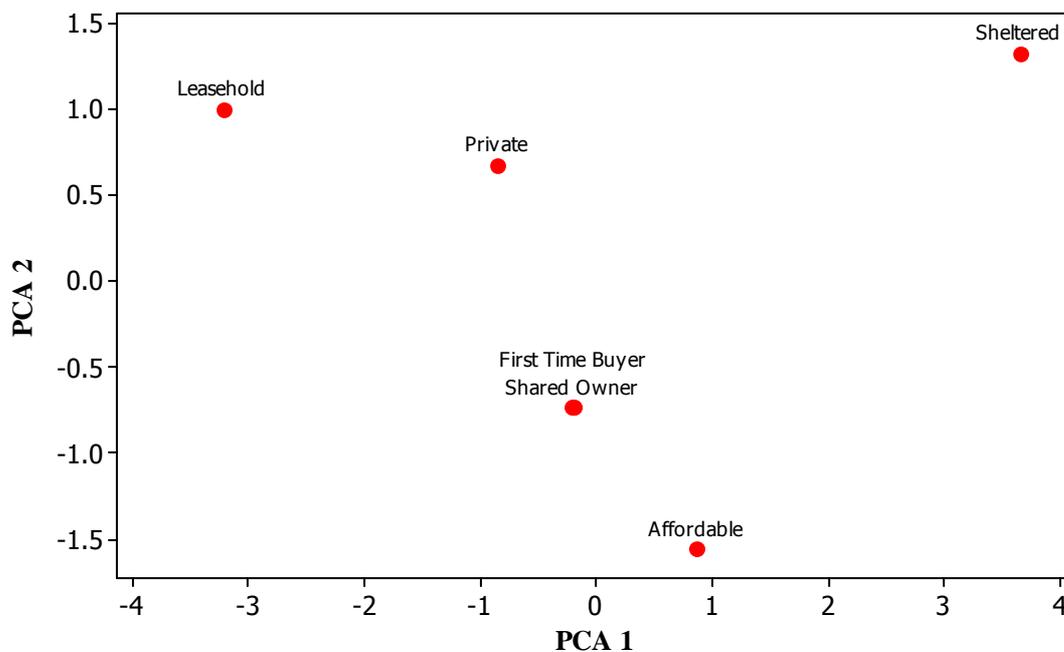


Figure 7.23: Relationship Between Elements and Constructs – Corporate Factors

### 7.3.7.6 Summary of the Corporate Risk

All the constructs contained within this cluster were highly appropriate and showed a strong correlation between them exists. The asset managers considered that this cluster is highly relevant to commercial and business risk management in today's business environment, where a good organisational image and the ability to manage resources effectively is of

paramount importance in maintaining service delivery levels that all stakeholders can be proud of, in terms of being associated with that particular RSL organisation. Generally, the leaseholders and private rented customers present the least danger to the success of the organisation's risk.

Affordable customers and Sheltered customers have the greatest interaction with the organisation and therefore present a higher risk in all areas and the RSLs is minimising the risk with its service provision and compliance under the required 'Governance Standard' from the HCA.

The key corporate factors having an impact on asset maintenance strategy are:

- Social corporate responsibility
- Management style and culture of the RSL
- Bench marking
- Understanding and compliance of legislation
- Staff participation

#### **7.4 The Tenants Grid**

The researcher also conducted in-depth interviews with 60 tenants; this was considered necessary to confirm the relevance and appropriateness of the constructs and the importance attached to customers' perception regarding the levels of satisfaction of services being delivered by their Landlord(s) i.e. the RSL. The tenants' data is shown on Table 7.37. The constructs identified by tenants bear some similarity to the asset managers'. In the main out of the 53 constructs identified by asset managers, only 21 constructs were considered to be identical matches. There were further two constructs identified by the tenants as being different such as Excellent reporting ABS, response and victim support, and Overall good value for money service, these two constructs could easily be combined with other constructs identified by the asset managers. However, the above constructs were identified by the tenants to be important and highly relevant and sensitive to their experiences in receiving the services from their RSL(s). Although the scores do vary from one construct to another, the tenants' expectations against each of the construct in an ideal world, they would have liked to score 5. This is far from the truth as RSL need to work very closely with their stakeholders to ensure that all customers are content with the services provided.

Table 7.37: Summary of Tenants RG Data

Constructs							Bi-Polar
	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	
<b>Customer Factors</b>							<b>Customer Factors</b>
1 High customer care levels	2.5	2.0	2.0	4.0	4.0	4.0	Low customer care levels
2 Excellent communication with tenants	2.5	3.0	1.5	3.5	4.0	4.0	Poor communication with tenants
3 High customer satisfaction – service delivery	2.5	2.5	2.0	3.5	4.0	4.5	Poor customer satisfaction – service delivery
4 High opportunity for tenants participation	1.0	2.5	1.0	3.0	3.5	4.0	Poor opportunity for tenants to scrutinise service
5 Excellent equality policy	1.0	2.5	2.5	3.5	3.5	4.0	Poor equality policy
6 High customer satisfaction with housing quality	3.0	2.5	4.0	3.5	4.0	4.5	Poor customer satisfaction with housing quality
<b>Asset Management Factors</b>							<b>Asset Management Factors</b>
7 High response time to Emergency Repairs and Urgent Repairs	2.5	3.0	1.5	3.0	3.5	4.0	Poor response time to Emergency Repairs and Urgent Repairs
8 Well planned routine repairs and completion targets met	3.0	3.5	1.5	3.5	4.0	4.5	Poorly planned routine repairs and completion targets met
9 High quality of repairs and performance	3.5	2.5	1.0	4.0	4.0	4.0	Poor quality of repairs and performance
10 High quality of renovations	4.0	3.5	2.0	3.5	3.5	4.0	Poor quality of renovations
<b>Tenancy Factors</b>							<b>Tenancy Factors</b>
11 Good Tennant Selection Criteria	2.5	2.0	4.0	4.0	4.5	4.5	Weak Tennant Selection Criteria
12 Reduced waiting list	1.0	1.0	3.0	2.0	2.0	1.0	High waiting list
13 Low level of tenancy offers that are frequently refused	2.0	1.5	1.0	2.5	3.0	2.5	High level of tenancy offers that are frequently refused
<b>Neighbourhood and community Factors</b>							<b>Neighbourhood and community Factors</b>
14 Good quality tenants	2.5	2.0	1.5	4.0	4.0	5.0	Weak quality tenants
15 High tenant satisfaction with local environment	2.0	1.0	4.0	2.5	3.5	4.5	Poor tenant satisfaction with local environment
16 Excellent Neighbourhood improvements	2.0	3.0	4.0	4.0	4.0	4.5	Poor neighbourhood improvements
17 Reduced level of Anti-Social Behaviour	3.0	2.5	4.0	4.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic Factors</b>							<b>Financial and economic Factors</b>
18 Excellent Fair rents	4.0	1.5	4.0	4.0	4.0	3.5	Poor rents
<b>(Business) Continuous Service improvement Factors</b>							<b>(Business) Continuous Service improvement risks</b>
19 Good security provision	2.0	1.5	4.0	3.5	4.0	4.5	Weak security provision
<b>Corporate Factors</b>							<b>Corporate Factors</b>
20 Sound Health and Safety policy and security	3.5	3.0	2.5	3.5	4.0	5.0	Weak Health and Safety policy and security
21 High social corporate responsibility	3.5	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
22 Good Value for Money Service	3.5	2.5	4.5	3.5	3.5	4.0	Poor value for Money Service
23 Excellent reporting ASB, response and good victim support	2.0	2.5	3.5	3.5	3.5	4.0	Weak reporting ASB, response and good victim support

Rather than considering individual constructs and clusters as with asset managers, it is more prudent to show where there are key differences between the elements and the constructs when comparing the asset managers and tenants RG data.

## 7.5 Comparison between Asset Managers and Customers data

### 7.5.1 Comparison between Elements and Constructs

Table 7.38 shows the comparison of the data with Asset managers and Customers. For ease of comparison and highlight the differences in the variation, this data was transposed into a graphical form see Figure 7.23. Figure 7.23 compares the Customer score on the ‘Y’ axis and Asset Managers on the ‘X’ axis for each of the elements. The constructs position is represented by a dot and a diagonal dotted line was superimposed on the graph to highlight instances where the constructs lie outside the straight trend line.

Table 7.38: Comparison Data between Asset Managers and Customers

Constructs	Asset Managers Data						Customers Data					
	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered
1 High customer care levels	3.0	3.0	2.8	3.3	3.7	4.0	2.5	2.0	2.0	4.0	4.0	4.0
2 Excellent communication with tenants	2.5	3.5	2.0	3.1	3.4	3.5	2.0	3.0	1.5	3.5	4.0	4.0
3 High customer satisfaction – service delivery	3.0	2.5	2.1	3.0	4.0	3.5	2.5	2.5	2.0	3.5	4.0	4.5
4 High opportunity for tenants participation	2.5	3.2	2.6	3.5	4.0	4.0	1.0	2.5	1.0	3.0	3.5	4.0
5 Excellent equality policy	2.5	3.7	3.5	3.5	3.5	4.0	1.0	2.5	2.5	3.5	3.5	4.0
6 High customer satisfaction with housing quality	2.5	2.6	3.5	4.0	4.0	4.0	3.0	2.5	4.0	3.5	4.0	4.5
7 High response time to Emergency Repairs and Urgent Repairs	3.0	3.5	1.0	3.0	3.5	4.5	2.5	3.0	1.5	3.0	3.5	4.0
8 Well planned routine repairs and completion targets met	2.5	3.6	1.0	3.0	3.0	4.5	3.0	3.5	1.5	3.5	4.0	4.5
9 High quality of repairs and performance	3.0	3.5	2.0	3.5	3.5	4.0	3.5	2.5	1.0	4.0	4.0	4.0
10 High quality of renovations	3.5	3.0	1.0	3.5	3.5	4.0	4.0	3.5	2.0	3.5	3.5	4.0
11 Good Tennant Selection Criteria	3.0	2.6	4.0	4.0	4.0	4.0	2.5	2.0	4.0	4.0	4.5	4.5
12 Reduced waiting list	3.0	4.5	1.0	3.0	3.5	4.0	1.0	1.0	3.0	2.0	2.0	1.0
13 High level of tenancy offers that are frequently refused	4.0	4.5	1.0	2.0	3.0	3.0	2.0	1.5	1.0	2.5	3.0	2.5
14 Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	2.5	2.0	1.5	4.0	4.0	5.0
15 High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	2.0	1.0	4.0	2.5	3.5	4.5
16 Excellent neighbourhood improvements	3.0	2.8	3.4	3.0	3.5	4.0	2.0	3.0	4.0	4.0	4.0	4.5
17 Reduced level of Anti-Social Behaviour	3.5	2.6	3.6	3.6	4.5	4.5	3.0	2.5	4.0	4.5	4.5	4.5
18 Excellent fair rents	3.9	3.0	3.9	4.1	4.0	4.9	4.0	1.5	4.0	4.0	4.0	3.5
19 Good security provision	3.0	3.0	3.0	3.5	3.5	5.0	2.0	1.5	4.0	3.5	4.0	4.5
20 Sound Health and Safety policy and security	3.0	3.5	1.7	3.0	3.0	5.0	3.5	3.0	2.5	3.5	4.0	5.0
21 High social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	3.5	4.0	3.5	4.0	4.0	5.0

At quick eyeball inspection of Figure 7.23 shows that there is a number of variances within each of the elements and these are listed as follows:

Private Rented:

- Reduced waiting list
- equal opportunities policy
- tenants opportunities for participation.

Affordable:

- Reduced waiting list
- equal opportunities policy
- tenants opportunities for participation.
- General community and neighbourhood spirit
- Competitive rents

Leaseholds:

- Tenants opportunities for participation.
- Quality of repairs and performance
- Quality of tenants and choice based lettings
- Reduced waiting list

Shared Owner:

- Reduced waiting list

Sheltered:

- Reduced waiting list
- Fair rents

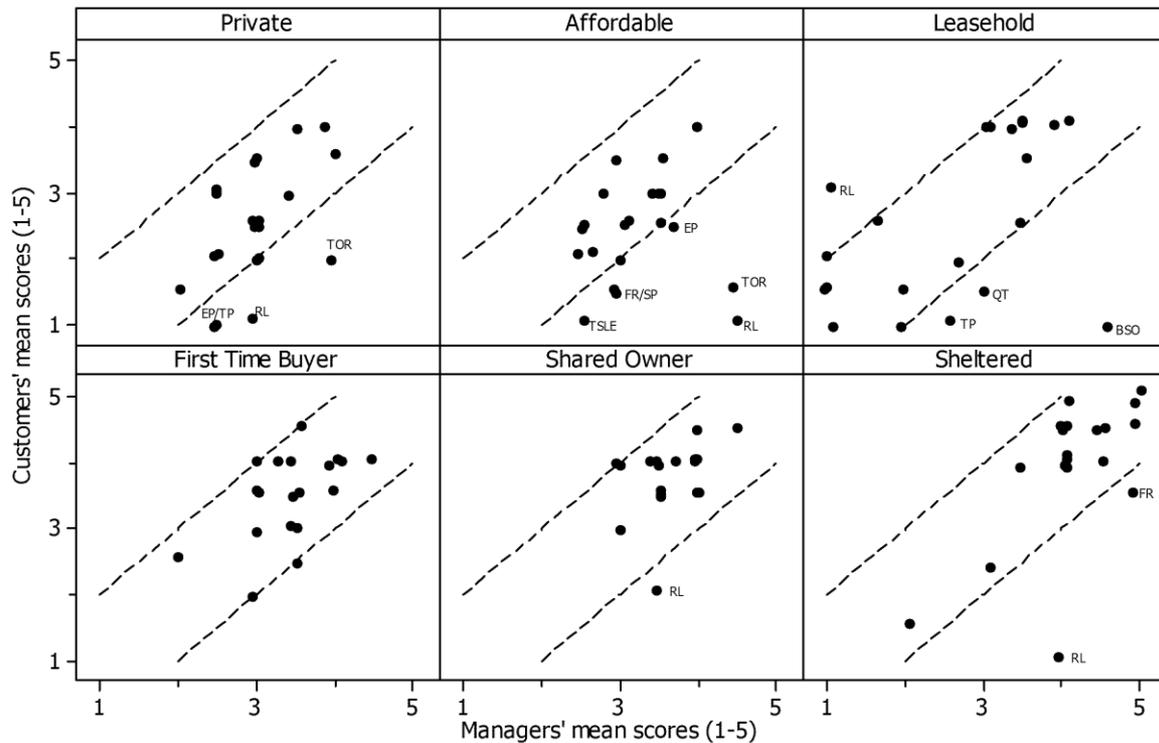


Figure 7.24: Comparison of scores between Asset Managers and Customers

### 7.5.2 Comparison between Principal Components

Figure 7.24 shows the graphical presentation of the Principal components between the Asset Managers and the Customers.

On the whole, both the asset managers and customers show similar patterns and general position/ profile of the elements that are consistent, this is particularly reassuring given that only 21 out of the 53 constructs form the basis of this comparison in so far as the customers are concerned.

The Leaseholds maintain their position at the top left of the graph. This is primarily due to the fact that leaseholds are largely independent and do not rely on the RSLs for their core services other than general interaction regarding ground rents.

First Time Buyer, Shared Owners and Sheltered have shown main commonalities between them that exists throughout all clusters. This is partly due to the fact that these tenants have a vested interest in the services delivery of the RSLs, and these tenants have a stable financial standing and are able to relate their needs clearly to the RSLs; these tenants have a sense of belonging and are a part of the home ownership and they generally appear to adopt a mature outlook on life and are responsible for their actions. Likewise, the Asset managers (RSLs) are able to deliver responsive services with ease.

Affordable tenants occupy the bottom left hand side position of Figure 7.24, and generally there appears to be huge problems and issues that need to be resolved by the asset managers and the RSLs. The problems with this tenant type stems from the financial base and affordability of the housing provision, this has been highlighted in chapter 2.

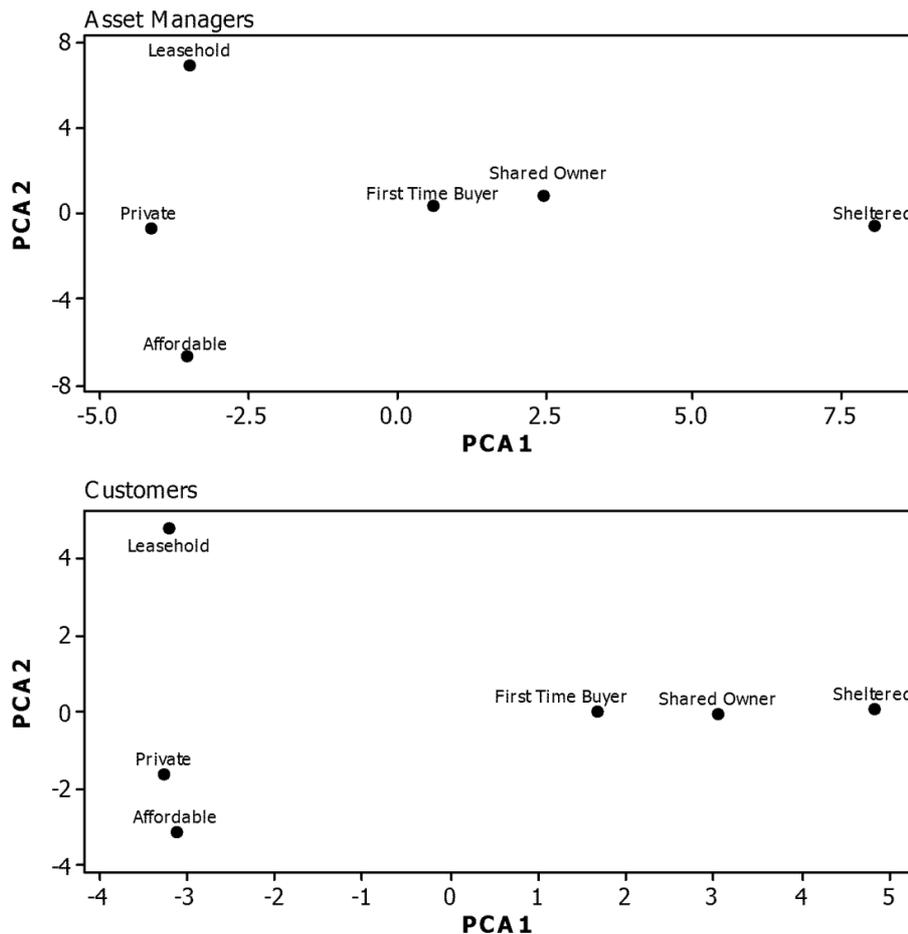


Figure 7.25: Comparison of Principal Components

## 7.6 Analysis of Asset Managers Clusters.

Table 7.39 shows the summary data of the Asset Managers cluster that will form the basis of the decision support model in the next chapter. The data shown in Table 7.39 was entered into the RG software and the corresponding output is shown in Figure 7.25.

The cluster grouping of the elements shows a similar pattern that emerges in that Sheltered, Shared owner and First time buyer are grouped together; and on the opposite scale lies the affordable tenants. All constructs are interlaced with each other and this is evident from the dendrogram of the constructs.

Table 7.39: Summary of Asset Managers Risk Clusters

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Total	Bi-Polar
1 High Customer Factors	2.7	3.2	2.6	3.4	3.6	4.0	19.5	Weak customer Risks
2 High Asset Management Factors	2.9	3.0	2.5	3.4	3.6	4.2	19.6	Weak Asset Management Risks
3 High Tenancy Factors	3.0	3.4	3.3	3.3	3.7	3.8	20.5	Weak Tenancy Risks
4 High Neighbourhood and community Factors	3.0	2.7	3.4	3.7	4.1	4.2	21.1	Weak Neighbourhood and community risks
5 High Financial and economic Factors	3.6	2.3	4.1	3.7	3.8	4.3	21.8	Weak Financial and economic risks
6 High Continuous Service improvement Factors	2.7	3.1	3.3	3.5	3.6	4.1	20.2	Weak continuous service improvement risks
7 High Corporate Factors	3.3	3.9	2.7	3.6	3.6	4.6	21.7	Weak corporate risks
<b>Total average</b>	<b>21.2</b>	<b>21.6</b>	<b>21.9</b>	<b>24.6</b>	<b>26.0</b>	<b>29.2</b>		

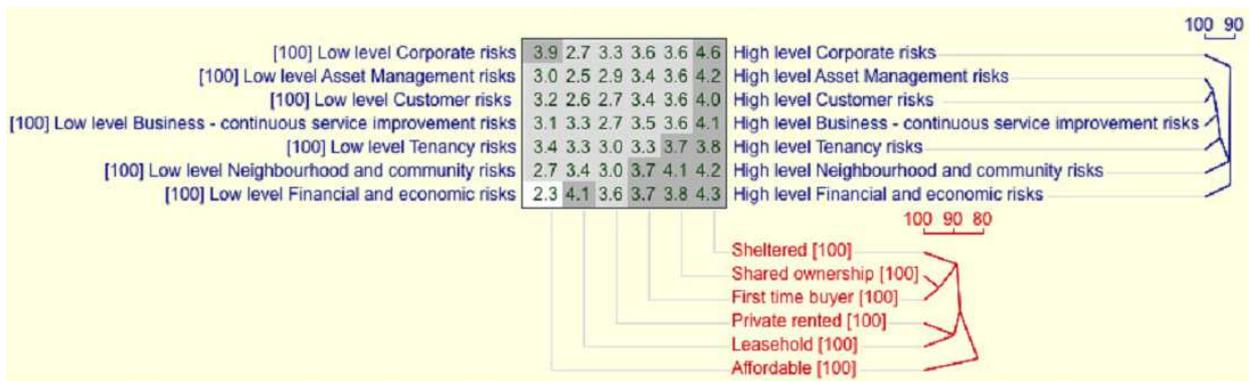


Figure 7.26: Dendrogram – Asset Managers

The cognitive map is shown in Figure 7.26 which illustrates the positioning of the elements with corresponding constructs. The general profile of the elements is similar,

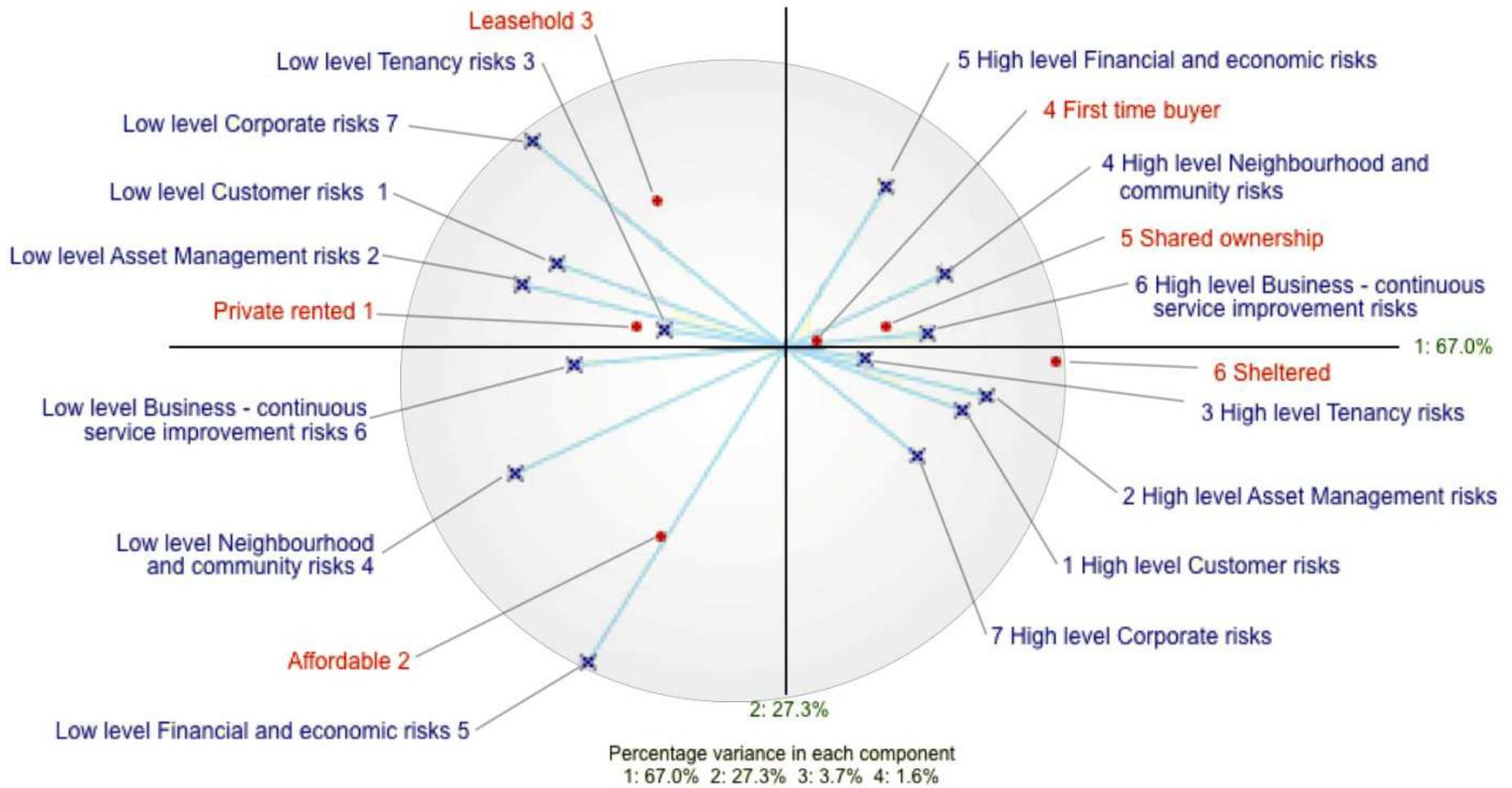


Figure 7.27: The Cognitive Map – Asset Managers

## 7.7 Summary

The main purpose of the in-depth interviews with asset managers was to undertake a detailed analysis to better understand the key factors they valued in the decision making process of developing housing maintenance strategies. This chapter also highlighted the key factors that contribute in developing affective asset maintenance strategy(ies) to effectively deliver seamless services to their valued customers.

The in-depth interviews were designed to elicit business management knowledge used by asset management using the Kellys Personal Construct Theory in particular the Repertory Grid technique. The interviews highlighted key business issues or factors that are considered by asset managers as highly sensitive to the decision making process. The RG data was split into various groups or clusters which enable the data to be analysed and confirm any underlying trends and patterns within the clusters. All constructs (factors) within each cluster were analysed to illustrate the varying influence over the elements and the relationship between each other. All 53 constructs (factors) influence the formulation of effective asset management strategy, and Table 7.40 shows ranking of the constructs and their magnitude of influence in order of their total score.

Furthermore, these key factors were cross checked with customers to better understand their perceptions of the service delivery and expectations of their social housing providers. The Repertory Grid is only as good as the respondents to the survey and in the case where the asset managers have a limited range of business experience or development or are unaware of the wider issues then the RG can become stagnated. However, the questions that were being posed during the in-depth interview allowed the asset managers to think outside their comfort zone.

Table 7.40: Top 35 Critical Constructs (factors) Contributing to Development of Asset Management Strategy

No	Critical Factors	Total score	Ranking
1	Social corporate responsibility	24.5	1
2	Solvency – tenants ability to pay rents	24.5	1
3	Voids vacant	24.5	1
4	Properties abandoned by tenants	24.5	1
5	Condition property versus high demand	24.1	2
6	Overcrowding in dwellings	24.0	3
7	Financial stability	24.0	3
8	RSL – management and cultural and style	22.8	4
9	Outsourcing services and partnering	22.7	5
10	Homelessness issues in the area	22.5	6
11	Affordable housing provision	22.4	7
12	Anti-Social Behaviour	22.3	8
13	Bench marking	22.2	9
14	Return on investment	22.1	10
15	Market intelligence – future supply and demand trends	22.0	11
16	Understanding and compliance of legislation	22.0	11
17	Quality tenants	22.0	11
18	Fair rents	21.9	12
19	Corporate governance	21.7	13
20	Tenant selection criteria	21.6	14
21	Rent collection and arrears management	21.5	15
22	Housing provision DHS	21.5	15
23	Stakeholder involvement and partnering	21.1	16
24	Disposal of property	21.0	17
25	Security provision	21.0	17
26	Equality policy	20.7	18
27	Customer satisfaction with their housing quality	20.6	19
28	Costs associated with evictions and court actions	20.6	19
29	Tenant satisfaction with local environment	20.0	20
30	Opportunity for tenants participation	19.8	21
31	Customer care provision levels	19.8	21
32	Staff participation	19.7	22
33	Service level agreement (SLA)	19.6	23
34	Buy or shared ownership	19.6	23
35	Strategic partnerships	19.5	24
36	Quality of repairs and performance	19.5	24
37	Accessibility of services	19.4	25
38	Health and Safety policy and security	19.2	26
39	Waiting list	19.0	27
40	Service cost certainty and investment per property	19.0	27
41	Response time to Emergency Repairs and Urgent Repairs	18.5	28
42	Quality of renovations	18.5	28
43	Tenant participation	18.1	29
44	Customer satisfaction on service delivery	18.1	29
45	Refurbishment and redevelopment opportunity	18.0	30
46	Planned maintenance programmes	18.0	30
47	Communication with tenants	18.0	30
48	Neighbourhood improvements	17.7	31
49	Routine repairs and completion targets met	17.6	32
50	Tenancy offers that are frequently refused	17.5	33
51	Accurate database of type and condition of properties	16.8	34
52	Manage properties/estates in deprived and stress areas	16.5	35
53	Sustainability policy	16.5	35

# **CHAPTER 8**

## **A MODEL FOR EVALUATING SOCIAL HOUSING MAINTENANCE STRATEGIES**

### **8.0 Introduction**

This chapter reviews RG factors which support, guide and strengthen the business case for developing an effective decision support model for future housing maintenance strategy. The decision support model will enable asset managers to make smart business management decisions related to the strategic housing maintenance function. The model formulated has been tested over a minimum period of six (6) months (as agreed with RSLs). This period was the minimum required to confirm its accuracy, effectiveness and also its usefulness in improving existing housing maintenance strategy together with continuous business improvement and customer service delivery.

### **8.1 Balanced Scorecard in social housing based on repertory grid data**

The RG data obtained from detailed interviews with asset managers indicated 53 key variables, detailed in Chapter 7, have an influence in developing a strategic housing maintenance management plan. The 53 factors were found to present a range of dynamics, synergies and interaction between these factors and the tenant type.

In considering the 53 factors in relation to the BSC framework / model for developing a decision support system as an aid for asset managers, the variables have been re-grouped and re-arranged into four key principal perspectives. These were:

- The financial perspective;
- The customer perspective;
- The learning and growth perspective;
- The internal business processes perspective.

This forms the basis of the BSC model – see Figure 8.1. All the 53 factors were identified by the domain experts as being key factors that impacted upon the development of a housing maintenance strategy. The holistic nature of these factors makes them more akin to business

success factors allowing them to be re-grouped with the four main principal perspectives of the BSC.

It is also evident from Section 2.9.2.2 of Chapter 2 that the present KPIs and KLOEs used by the social housing sector relates to the six standards. These, however these have become over time outdated, primarily due to changes in the economy, changes in the related legislation and the expectations of the government to be able to transform social housing providers into corporate social landlords. Hence, there are no '*real*' KPIs or indeed any active measures that can be used by RSL to measure the organisations performance across their entire range of service delivery provision. In the absence of the KPIs, the ratings obtained for each construct derived through the RG data formed a sound basis for providing a benchmark for assessing RSL performance. By utilising these values it allows the RSL to adopt a flexible approach in making changes that are best suited to the needs of their particular organisation.

Figure 8.1 shows the four principal components of the BSC as a '*best fit*' model and how the 53 constructs are fitted within the BSC in order to aid the decision making and the development of an effective housing maintenance management strategy for the social housing sector. The financial perspective incorporates 10 constructs; the Customer Perspective incorporates 14 constructs, the Internal Business Process Perspective includes 16 constructs and finally Learning and Growth Perspective has 13 constructs.

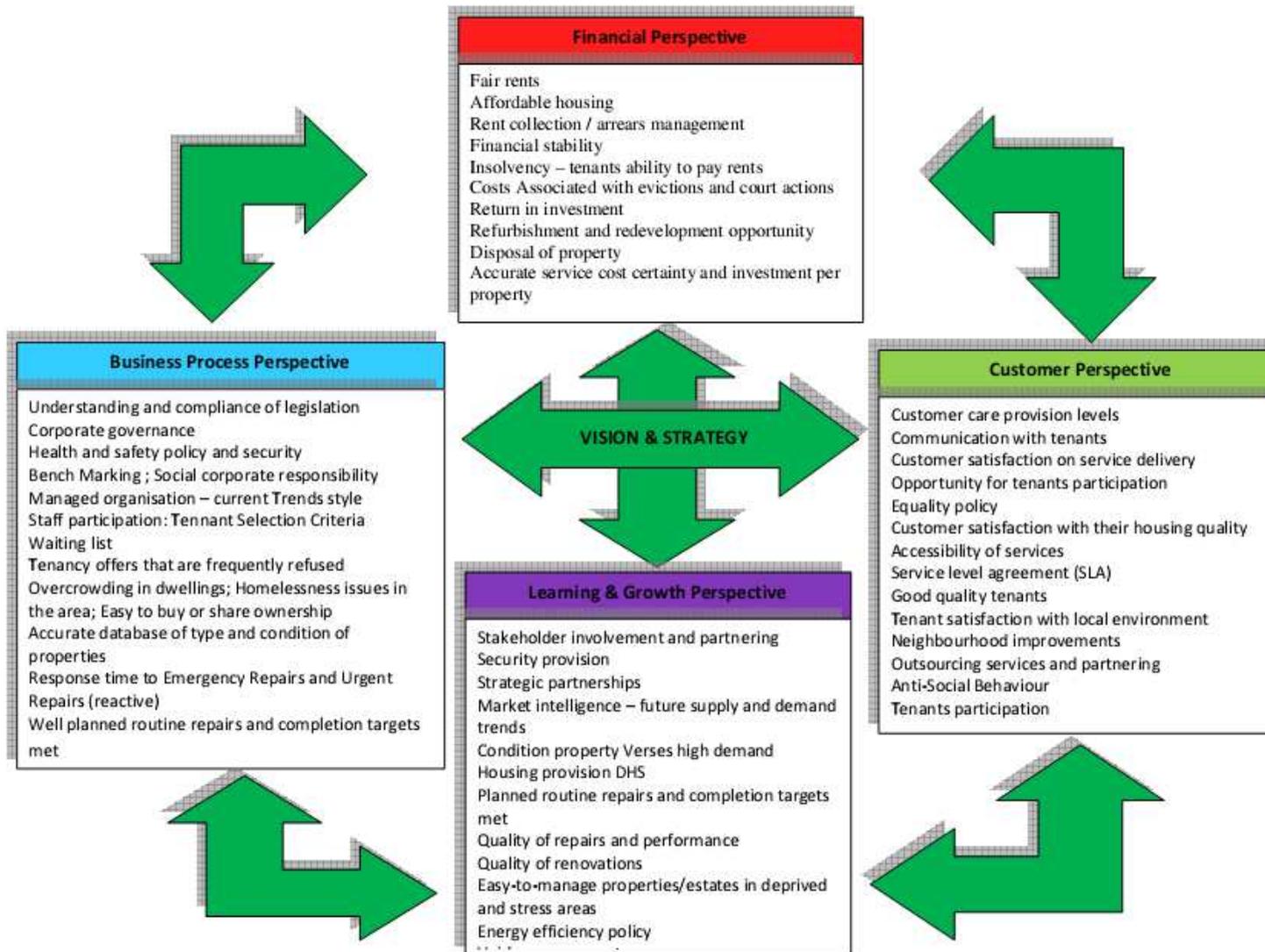


Figure 8.1: Balance Scorecard Model in Strategic Maintenance Management of Social Housing Assets

Source: Researcher

Table 8.1 illustrates how the 53 constructs are placed into the 4 perspectives of BSC together with their corresponding ratings. The ratings for each of the customer types have been totalled for example: Private rented tenants have a total of 161.4, Affordable tenants have 162.2 and so on. From this information, it is possible to convert the values assigned to each construct and express this as a percentage. For example, the Private rented tenants have a BSC which comprises a Financial perspective (and all the factors contained in this perspective) which contributes 21.6%, the Customer perspective contributes 24.5% in the BSC, Internal Business Process attracts 30.5% and lastly Learning and Growth perspective contributes a further 23.4% towards the total BSC. When the foregoing percentages are added together their total percentages would equate to 100% (i.e. 21.6% + 24.5% + 30.5% + 23.4% = 100%).

Table 8.1: Balanced Scorecard Data

BSC Perspectives	Private Owner		Affordable		Leasehold		First Time Buyer		Shared Owner		Sheltered	
<b>Financial Perspective Factors</b>												
Fair rents	3.9	2.4%	3.0	1.8%	4.1	2.5%	4.0	2.1%	4.0	2.0%	4.9	2.2%
Affordable housing	2.1	1.3%	3.9	2.4%	4.0	2.5%	4.0	2.1%	4.0	2.0%	4.5	2.0%
Rent collection and arrears management	3.0	1.9%	2.5	1.5%	3.5	2.2%	4.0	2.1%	4.0	2.0%	4.5	2.0%
Financial stability	4.5	2.8%	2.5	1.5%	4.0	2.5%	4.0	2.1%	4.0	2.0%	4.5	2.0%
Insolvency – tenants ability to pay rents	4.0	2.5%	2.0	1.2%	4.0	2.5%	4.5	2.4%	4.5	2.3%	5.0	2.3%
Costs Associated with evictions and court actions	3.5	2.2%	1.5	0.9%	3.5	2.2%	3.5	1.9%	3.5	1.8%	4.6	2.1%
Return in investment	4.0	2.5%	2.5	1.5%	3.5	2.2%	3.5	1.9%	3.5	1.8%	4.6	2.1%
Refurbishment and redevelopment opportunity	3.5	2.1%	1.5	0.9%	3.0	1.9%	3.0	1.6%	3.0	1.5%	3.0	1.4%
Disposal of property	4.0	2.5%	1.5	0.9%	4.0	2.5%	4.0	2.1%	4.0	2.0%	3.5	1.6%
Accurate service cost certainty and investment per property	2.5	1.5%	3.5	2.2%	2.5	1.6%	3.0	1.6%	3.0	1.5%	4.5	2.0%
<b>Sub Totals</b>	<b>34.9</b>	<b>21.6%</b>	<b>24.3</b>	<b>15.0%</b>	<b>36.0</b>	<b>22.6%</b>	<b>37.5</b>	<b>20.0%</b>	<b>37.5</b>	<b>19.1%</b>	<b>43.5</b>	<b>19.7%</b>
<b>Customer Perspective Factors</b>												
Customer care provision levels	3.0	1.9%	3.0	1.8%	2.8	1.7%	3.3	1.7%	3.7	1.9%	4.0	1.8%
Communication with tenants	2.5	1.5%	3.5	2.1%	2.0	1.3%	3.1	1.6%	3.4	1.7%	3.5	1.6%
Customer satisfaction on service delivery	3.0	1.9%	2.5	1.5%	2.1	1.3%	3.0	1.6%	4.0	2.0%	3.5	1.6%
Opportunity for tenants participation	2.5	1.5%	3.2	1.9%	2.6	1.6%	3.5	1.9%	4.0	2.0%	4.0	1.8%
Equality policy	2.5	1.5%	3.7	2.3%	3.5	2.2%	3.5	1.9%	3.5	1.8%	4.0	1.8%
Customer satisfaction with their housing quality	2.5	1.5%	2.6	1.6%	3.5	2.2%	4.0	2.1%	4.0	2.0%	4.0	1.8%
Accessibility of services	2.5	1.5%	3.4	2.1%	2.0	1.3%	3.5	1.9%	3.5	1.8%	4.5	2.0%
Service level agreement (SLA)	3.0	1.9%	3.5	2.2%	2.5	1.6%	3.5	1.9%	3.0	1.5%	4.1	1.9%
Good quality tenants	3.0	1.9%	2.5	1.5%	3.0	1.9%	4.5	2.4%	4.0	2.0%	4.0	1.8%
Tenant satisfaction with local environment	2.5	1.5%	2.5	1.5%	3.0	1.9%	3.5	1.9%	4.0	2.0%	4.5	2.0%
Neighbourhood improvements	3.0	1.9%	2.8	1.7%	3.4	2.1%	3.0	1.6%	3.5	1.8%	4.0	1.8%
Outsourcing services and partnering	3.1	1.9%	3.0	1.8%	4.0	2.5%	4.0	2.1%	4.5	2.3%	4.1	1.8%
Anti-Social Behaviour	3.5	2.1%	2.6	1.6%	3.6	2.2%	3.6	1.9%	4.5	2.3%	4.5	2.0%
Tenants participation	3.0	1.9%	3.0	1.8%	2.6	1.6%	3.5	1.9%	3.5	1.8%	2.5	1.1%
<b>Sub Totals</b>	<b>39.5</b>	<b>24.5%</b>	<b>41.5</b>	<b>25.6%</b>	<b>40.4</b>	<b>25.3%</b>	<b>49.3</b>	<b>26.4%</b>	<b>53.1</b>	<b>27.0%</b>	<b>55.1</b>	<b>24.9%</b>

Table 8.1: Continued

<b>Internal Business Perspective Factors</b>												
Understanding and compliance of legislation	3.5	2.2%	4.0	2.5%	3.5	2.2%	4.0	2.1%	4.0	2.0%	3.5	1.6%
Corporate governance	3.5	2.2%	4.5	2.8%	2.5	1.6%	3.6	1.9%	3.6	1.8%	4.0	1.8%
Health and safety policy and security	3.0	1.9%	3.5	2.2%	1.7	1.0%	3.0	1.6%	3.0	1.5%	5.0	2.3%
Bench Marking	3.7	2.3%	4.0	2.5%	3.0	1.9%	3.5	1.9%	3.5	1.8%	4.5	2.0%
Social corporate responsibility	4.0	2.5%	4.0	2.5%	3.5	2.2%	4.0	2.1%	4.0	2.0%	5.0	2.3%
Managed organisation - management cultural and style	3.2	2.0%	3.4	2.1%	3.2	2.0%	4.0	2.1%	4.0	2.0%	5.0	2.3%
Staff participation	2.4	1.5%	4.0	2.5%	1.7	1.1%	3.3	1.7%	3.3	1.7%	5.0	2.3%
Tenant Selection Criteria	3.0	1.9%	2.6	1.6%	4.0	2.5%	4.0	2.1%	4.0	2.0%	4.0	1.8%
Waiting list	3.0	1.9%	4.5	2.8%	1.0	0.6%	3.0	1.6%	3.5	1.8%	4.0	1.8%
Tenancy offers that are frequently refused	4.0	2.5%	4.5	2.8%	1.0	0.6%	2.0	1.1%	3.0	1.5%	3.0	1.4%
Overcrowding in dwellings	3.5	2.2%	2.5	1.5%	5.0	3.1%	4.0	2.1%	4.0	2.0%	5.0	2.3%
Homelessness issues in the area	2.5	1.5%	3.5	2.2%	4.5	2.8%	3.5	1.9%	4.0	2.0%	4.5	2.0%
Easy to buy or share ownership	2.0	1.2%	3.1	1.9%	4.5	2.8%	3.5	1.9%	3.5	1.8%	2.0	0.9%
Accurate database of type and condition of properties	2.5	1.5%	2.8	1.7%	1.0	0.6%	3.0	1.6%	3.5	1.8%	4.0	1.8%
Response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	1.9%	3.5	2.2%	1.0	0.6%	3.0	1.6%	3.5	1.8%	4.5	2.0%
Well planned routine repairs and completion targets met	2.5	1.5%	3.6	2.2%	1.0	0.6%	3.0	1.6%	3.0	1.5%	4.5	2.0%
<b>Sub Totals</b>	<b>49.3</b>	<b>30.5%</b>	<b>57.9</b>	<b>35.7%</b>	<b>42.1</b>	<b>26.4%</b>	<b>54.3</b>	<b>29.0%</b>	<b>57.4</b>	<b>29.2%</b>	<b>67.5</b>	<b>30.5%</b>
<b>Learning and Growth Perspective Factors</b>												
Stakeholder involvement and partnering	2.6	1.6%	3.0	1.8%	3.5	2.2%	4.0	2.1%	4.0	2.0%	4.0	1.8%
Security provision	3.0	1.9%	3.0	1.8%	3.0	1.9%	3.5	1.8%	3.5	1.8%	5.0	2.2%
Strategic partnerships	3.0	1.9%	3.5	2.2%	2.5	1.6%	3.0	1.6%	3.0	1.5%	4.5	2.0%
Market intelligence – future supply and demand trends	2.0	1.2%	3.0	1.8%	5.0	3.1%	3.5	1.9%	4.0	2.0%	4.5	2.0%
Condition property Verses high demand	3.0	1.9%	4.0	2.5%	4.5	2.8%	4.0	2.1%	4.0	2.0%	4.6	2.1%
Housing provision DHS	3.1	1.9%	2.4	1.5%	3.5	2.2%	4.0	2.1%	4.5	2.3%	4.0	1.8%
Planned routine repairs and completion targets met	2.5	1.5%	3.6	2.2%	1.0	0.6%	3.0	1.6%	3.0	1.5%	4.5	2.0%
Quality of repairs and performance	3.0	1.9%	3.5	2.2%	2.0	1.3%	3.5	1.8%	3.5	1.8%	4.0	1.8%
Quality of renovations	3.5	2.2%	3.0	1.8%	1.0	0.6%	3.5	1.9%	3.5	1.8%	4.0	1.8%
Easy-to-manage properties/estates in deprived and stress areas	2.5	1.5%	2.0	1.2%	3.0	1.9%	2.5	1.3%	3.0	1.5%	3.5	1.6%
Energy efficiency policy	2.5	1.5%	3.5	2.2%	2.0	1.3%	3.0	1.6%	3.0	1.5%	2.5	1.1%
Voids management	4.0	2.5%	2.0	1.2%	5.0	3.1%	4.0	2.1%	4.5	2.3%	5.0	2.3%
Abandonment of properties by residents	3.0	1.9%	2.0	1.2%	5.0	3.1%	4.5	2.4%	5.0	2.5%	5.0	2.3%
<b>Sub Totals</b>	<b>37.7</b>	<b>23.4%</b>	<b>38.5</b>	<b>23.7%</b>	<b>41.0</b>	<b>25.7%</b>	<b>45.9</b>	<b>24.6%</b>	<b>48.5</b>	<b>24.7%</b>	<b>55.1</b>	<b>24.9%</b>
<b>Total:</b>	<b>161.4</b>	<b>100%</b>	<b>162.2</b>	<b>100%</b>	<b>159.4</b>	<b>100%</b>	<b>187.0</b>	<b>100%</b>	<b>196.4</b>	<b>100%</b>	<b>221.1</b>	<b>100%</b>

It is also evident from Table 8.1 that when considering the Financial Perspective across the 6 tenant types (that is to say - Private owner, Affordable, Leasehold, First time buyer, Shared owner and Sheltered) that the percentage weighting ranges between 15% to 22.6%. Table 8.1 also shows that a grouping of customer type into Sheltered, Shared Ownership and First time buyer sharing a similar profile and attracting a value within the range of 19.1 – 20.0%. The Affordable customers show a much lower value (15%), generally the profile (trend) is consistent with the commentary contained in Chapter 7.

The average percentage for the Customer Perspective factors shows a variation ranging from 24.5% to 27%. Affordable and Leaseholds share a similar 'profile'. In the case of sheltered

and private customers, First time buyer and Shared owners, the cluster average makes a 25.6% contribution to the BSC.

Within the Internal Business Perspective Factors - Sheltered, Private, Shared and the First Time Buyer shows a similar percent range of values; whereas more emphasis is placed on Affordable Customers showing a percentage value of 35.5%. The higher value associated with Affordable Customers can be generally explained in terms of the level of sensitivity attached to Affordable Customers who require regular access to services and also a high level of resource allocation in order to provide the degree of support services to this group. The least emphasis is placed on Leaseholds due to the limited interaction required between them and their RSLs.

The Learning and Growth Perspective Factors sub-table demonstrates a very close relationship between the factors contributing to this perspective with percentages varying from 23.4% to 25.7%. The Private rented and Affordable tenants show a percentage ranging from 23.4% to 23.7%. Whilst Leaseholds, First time buyers, Shared owner and Sheltered tenants' columns show percentages within the range of 24.6% to 25.7%.

Table 8.2 provides a summary of the average percentages which make up the BSC framework and additionally shows how the percentages corresponding with the four perspectives vary according to the type of customer. This information can be useful in aiding asset managers as part of a decision support system in developing housing maintenance strategy as illustrated in the following section (Section 8.3).

Table 8.2: Summary of Balanced Scorecard Perspectives

BSC Perspectives	Private Owner	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Average
Financial Perspective Factors	21.6%	15.0%	22.6%	20.0%	19.1%	19.7%	19.7%
Customer Perspective Factors	24.5%	25.6%	25.3%	26.4%	27.0%	24.9%	25.6%
Internal Business Perspective Factors	30.5%	35.7%	26.4%	29.0%	29.2%	30.5%	30.2%
Learning and Growth Perspective Factors	23.4%	23.7%	25.7%	24.6%	24.7%	24.9%	24.5%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

However, a closer examination of the BSC factors displayed in Table 8.1, raises the question of which are the most significant factor(s) influencing the makeup of each of the BSC perspectives. Table 8.3 shows the overall values for each of the constructs per perspective. The value per construct have been totalled and ranked in a descending order whereby the highest value is rated as 1 and the next highest 2 etc. Within Table 8.3, the range of values for the financial perspective cluster varies from 17 to 24 with the majority of the factors (9 out of 10) lying between 24 and 19.5. These factors include:

- Insolvency – tenants ability to pay rents;
- Fair rents;
- Financial stability;
- Affordable housing;
- Return in investment;
- Rent collection and arrears management;
- Disposal of property;
- Costs Associated with evictions and court actions;
- Accurate service cost certainty and investment per property.

The least important construct having the lowest value (17.0) is Refurbishment and redevelopment opportunity. In the case of the customer perspective factors, the construct falls within the range of 22.7 to 18.0 with the lowest construct being communication with tenants, attracting a value of 18.0.

Table 8.3: Significance of the BSC factors

BSC Perspectives	Total Score	Ranking Order
<b>Financial Perspective Factors</b>		
Insolvency – tenants ability to pay rents	24.0	1
Fair rents	23.5	2
Financial stability	23.5	2
Affordable housing	22.5	3
Return in investment	21.6	4
Rent collection and arrears management	21.5	5
Disposal of property	21.0	6
Costs Associated with evictions and court actions	20.1	7
Accurate service cost certainty and investment per property	19.5	8
Refurbishment and redevelopment opportunity	17.0	9
<b>Customer Perspective Factors</b>		
Outsourcing services and partnering	22.7	1
Anti-Social Behaviour	22.3	2
Good quality tenants	21.0	3
Equality policy	20.7	4
Customer satisfaction with their housing quality	20.6	5
Tenant satisfaction with local environment	20.0	6
Customer care provision levels	19.8	7
Opportunity for tenants participation	19.8	7
Neighbourhood improvements	19.7	8
Service level agreement (SLA)	19.6	9
Accessibility of services	19.4	10
Customer satisfaction on service delivery	18.1	10
Tenants participation	18.1	10
Communication with tenants	18.0	11

Table 8.3: Significance of the BSC factors (continued)

BSC Perspectives	Total Score	Ranking Order
<b>Internal Business Perspective Factors</b>		
Social corporate responsibility	24.5	1
Overcrowding in dwellings	24.0	2
Managed organisation - management cultural and style	22.8	3
Homelessness issues in the area	22.5	4
Understanding and compliance of legislation	22.5	4
Bench Marking	22.2	5
Corporate governance	21.6	6
Tenant Selection Criteria	21.6	6
Staff participation	19.5	7
Health and safety policy and security	19.2	8
Waiting list	19.0	9
Easy to buy or share ownership	18.6	10
Response time to Emergency Repairs and Urgent Repairs (reactive)	18.5	11
Well planned routine repairs and completion targets met	18.0	12
Tenancy offers that are frequently refused	17.5	13
Accurate database of type and condition of properties	16.8	14
<b>Learning Growth Perspective Factors</b>		
Voids management	24.5	1
Abandonment of properties by residents	24.5	1
Condition property Verses high demand	24.1	2
Market intelligence – future supply and demand trends	22.0	3
Housing provision DHS	21.5	4
Stakeholder involvement and partnering	21.1	5
Security provision	20.9	6
Strategic partnerships	19.5	7
Quality of repairs and performance	19.5	7
Quality of renovations	18.5	8
Planned routine repairs and completion targets met	17.6	9
Easy-to-manage properties/estates in deprived and stress areas	16.5	10
Energy efficiency policy	16.5	10

Whereas Internal Business Perspective Factors derived from 16 constructs value range is between 25.4 and 16.8. The least significant construct is accurate database of type and condition of properties. Learning and Growth Perspective factors identify '*Easy to manage properties in deprived and stress areas*' together with '*Energy efficiency and sustainability policy*' as being the least significant.

Although the least significant factors may be omitted from the BSC, it must be appreciated that each factor independently could be ignored, nonetheless, when these factors are included within a group or cluster they represent a 'voice' which should not be ignored and thus the least significant factors should not be omitted from the BSC model.

## **8.2 How can Asset Manager use the BSC as a Decision Support System for Developing Housing Maintenance Strategy?**

Asset managers can use the BSC model as a decision support tool when developing housing maintenance strategies. It is clear from Table 8.2 that the percentages for the four perspectives vary according to tenant type and hence the housing maintenance strategy for each tenant (customer) type will be different from each other.

From the Table 8.2 it is apparent that the weakest BSC is the '*affordable tenants*' group where finance represents 15%, customer factors 25.6%, internal business processes 35.7% and learning and growth 23.7%. To change the strategy the RSL would first need to establish its priorities, and then calculate the '*trade off*' between the perspectives. If, for example, the emphasis is placed on finance for the affordable tenants then the percentage weighting must be increased on financial perspective. The challenges then becomes which of the other 3 perspectives must be '*traded off*' or '*compromised*' as a result of increasing the financial perspective. The trade off (comprise of the other 3 perspectives) can either affect perspective 1, perspective 2, perspective 3 or a combination.

If the decision is to increase the Finance Perspective by say 3% (giving an increase from 15% to 18%), the compromise could then become a combination of 2, or 3 perspectives or perhaps an alteration to a single perspective – see Table 8.4.

The consequences of introducing increasing or decreasing incremental changes is to initiate a chain reaction to the detailed BSC where each and every factor (construct) will have an impact on the value ratings across each of the perspectives. Table 8.5 shows the impact of these changes.

Table 8.4: Summary of Alternative Options – Changing the Affordable Tenants - BSC

<b>BSC Perspectives</b>	<b>Existing Affordable</b>	<b>Affordable Option 1</b>	<b>Affordable Options 2</b>	<b>Affordable Option 3</b>
<b>Financial Perspective Factors</b>	15.0%	18.0%	18.0%	18.0%
<b>Customer Perspective Factors</b>	25.6%	24.6%	24.6%	25.6%
<b>Internal Business Perspective Factors</b>	35.7%	34.7%	33.7%	30.7%
<b>Learning and Growth Perspective Factors</b>	23.7%	22.7%	23.7%	23.7%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Table 8.5: Adjusted Balanced Scorecard Data

BSC Perspectives	Original Affordable		Affordable Option 1		Affordable Option 2		Affordable Option 3	
<b>Financial Perspective Factors</b>								
Fair rents	3.0	1.8%	3.1	2.2%	3.1	2.2%	3.1	2.2%
Affordable housing	3.9	2.4%	4.0	2.9%	4.0	2.9%	4.0	2.9%
Rent collection and arrears management	2.5	1.5%	2.6	1.8%	2.6	1.8%	2.6	1.8%
Financial stability	2.5	1.5%	2.6	1.8%	2.6	1.8%	2.6	1.8%
Insolvency – tenants ability to pay rents	2.0	1.2%	2.1	1.5%	2.1	1.5%	2.1	1.5%
Costs Associated with evictions and court actions	1.5	0.9%	1.5	1.1%	1.5	1.1%	1.5	1.1%
Return in investment	2.5	1.5%	2.6	1.8%	2.6	1.8%	2.6	1.8%
Refurbishment and redevelopment opportunity	1.5	0.9%	1.5	1.1%	1.5	1.1%	1.5	1.1%
Disposal of property	1.5	0.9%	1.5	1.1%	1.5	1.1%	1.5	1.1%
Accurate service cost certainty and investment per property	3.5	2.2%	3.6	2.6%	3.6	2.6%	3.6	2.6%
Sub Totals	<b>24.3</b>	<b>15.0%</b>	<b>25.1</b>	<b>18.0%</b>	<b>25.1</b>	<b>18.0%</b>	<b>25.1</b>	<b>18.0%</b>
<b>Customer Perspective Factors</b>								
Customer care provision levels	3.0	1.8%	2.97	1.77%	2.97	1.77%	3.0	1.8%
Communication with tenants	3.5	2.1%	3.47	2.07%	3.47	2.07%	3.5	2.1%
Customer satisfaction on service delivery	2.5	1.5%	2.48	1.48%	2.48	1.48%	2.5	1.5%
Opportunity for tenants participation	3.2	1.9%	3.17	1.89%	3.17	1.89%	3.2	1.9%
Equality policy	3.7	2.3%	3.67	2.19%	3.67	2.19%	3.7	2.3%
Customer satisfaction with their housing quality	2.6	1.6%	2.57	1.54%	2.57	1.54%	2.6	1.6%
Accessibility of services	3.4	2.1%	3.37	2.01%	3.37	2.01%	3.4	2.1%
Service level agreement (SLA)	3.5	2.2%	3.47	2.07%	3.47	2.07%	3.5	2.2%
Good quality tenants	2.5	1.5%	2.47	1.48%	2.47	1.48%	2.5	1.5%
Tenant satisfaction with local environment	2.5	1.5%	2.47	1.48%	2.47	1.48%	2.5	1.5%
Neighbourhood improvements	2.8	1.7%	2.77	1.65%	2.77	1.65%	2.8	1.7%
Outsourcing services and partnering	3.0	1.8%	3.97	1.77%	3.97	1.77%	3.0	1.8%
Anti-Social Behaviour	2.6	1.6%	2.57	1.54%	2.57	1.54%	2.6	1.6%
Tenants participation	3.0	1.8%	2.97	1.77%	2.97	1.77%	3.0	1.8%
Sub Totals	<b>41.8</b>	<b>25.6%</b>	<b>38.12</b>	<b>24.6%</b>	<b>38.12</b>	<b>24.6%</b>	<b>41.5</b>	<b>25.6%</b>

Table 8.5: Adjusted Balanced Scorecard Data Continued

BSC Perspectives	Original Affordable	Affordable Option 1	Affordable Option 2	Affordable Option 3				
<b>Internal Business Processes Factors</b>								
Understanding and compliance of legislation	4.0	2.5%	3.96	2.39%	3.92	2.3%	3.80	2.11%
Corporate governance	4.5	2.8%	4.46	2.69%	4.41	2.6%	4.28	2.38%
Health and safety policy and security	3.5	2.2%	3.47	2.09%	3.43	2.0%	3.33	1.85%
Bench Marking	4.0	2.5%	3.96	2.39%	3.92	2.3%	3.80	2.11%
Social corporate responsibility	4.0	2.5%	3.96	2.39%	3.92	2.3%	3.80	2.11%
Managed organisation - management cultural and style	3.4	2.1%	3.37	2.03%	3.33	2.0%	3.23	1.80%
Staff participation	4.0	2.5%	3.96	2.39%	3.92	2.3%	3.80	2.11%
Tenant Selection Criteria	2.6	1.6%	2.57	1.55%	2.55	1.5%	2.47	1.37%
Waiting list	4.5	2.8%	4.46	2.69%	4.41	2.6%	4.28	2.38%
Tenancy offers that are frequently refused	4.5	2.8%	4.46	2.69%	4.41	2.6%	4.28	2.38%
Overcrowding in dwellings	2.5	1.5%	2.48	1.49%	2.45	1.4%	2.38	1.32%
Homelessness issues in the area	3.5	2.2%	3.47	2.09%	3.43	2.0%	3.33	1.85%
Easy to buy or share ownership	3.1	1.9%	3.07	1.85%	3.04	1.8%	2.95	1.64%
Accurate database of type and condition of properties	2.8	1.7%	2.77	1.67%	2.74	1.6%	2.66	1.48%
Response time to Emergency Repairs and Urgent Repairs (reactive)	3.5	2.2%	3.47	2.09%	3.43	2.0%	3.33	1.85%
Well planned routine repairs and completion targets met	3.6	2.2%	3.56	2.15%	3.53	2.1%	3.42	1.90%
Sub Totals	<b>57.9</b>	<b>35.7%</b>	<b>57.2</b>	<b>34.7%</b>	<b>56.84</b>	<b>33.7%</b>	<b>55.1</b>	<b>30.7%</b>
<b>Learning and Growth Perspective Factors</b>								
Stakeholder involvement and partnering	3.0	1.8%	2.97	1.76%	3.0	1.8%	3.0	1.8%
Security provision	3.0	1.8%	2.97	1.76%	3.0	1.8%	3.0	1.8%
Strategic partnerships	3.5	2.2%	3.47	2.06%	3.5	2.2%	3.5	2.2%
Market intelligence – future supply and demand trends	3.0	1.8%	2.97	1.76%	3.0	1.8%	3.0	1.8%
Condition property Verses high demand	4.0	2.5%	3.96	2.35%	4.0	2.5%	4.0	2.5%
Housing provision DHS	2.4	1.5%	2.38	1.41%	2.4	1.5%	2.4	1.5%
Planned routine repairs and completion targets met	3.6	2.2%	3.56	2.12%	3.6	2.2%	3.6	2.2%
Quality of repairs and performance	3.5	2.2%	3.47	2.06%	3.5	2.2%	3.5	2.2%
Quality of renovations	3.0	1.8%	2.97	1.76%	3.0	1.8%	3.0	1.8%
Easy-to-manage properties/estates in deprived and stress areas	2.0	1.2%	1.98	1.18%	2.0	1.2%	2.0	1.2%
Energy efficiency policy	3.5	2.2%	3.47	2.06%	3.5	2.2%	3.5	2.2%
Voids management	2.0	1.2%	1.98	1.18%	2.0	1.2%	2.0	1.2%
Abandonment of properties by residents	2.0	1.2%	1.98	1.18%	2.0	1.2%	2.0	1.2%
Sub Totals	<b>38.5</b>	<b>23.7%</b>	<b>38.12</b>	<b>22.7%</b>	<b>38.5</b>	<b>23.7%</b>	<b>38.5</b>	<b>23.7%</b>
Totals	<b>161.4</b>	<b>100%</b>	<b>158.54</b>	<b>100%</b>	<b>158.56</b>	<b>100%</b>	<b>160.2</b>	<b>100%</b>

Although the above example presents a ‘matrix ratio’ (in simplistic form) asset managers can adapt this BSC model as dynamic by changing the weighting attached to the score ratings (benchmarking) between constructs and elements in order to reflect the particular nature of the RSL organisation together with their inherent existing asset portfolio and also the nature and composition of their customer profile. From this, the strategy-focused actions can be transferred into suitable departmental structures within the RSL for implementation in order to organise work more effectively. It would be a mistake to assume that BSC should be treated in isolation from the organisations culture, its management style, asset base, maintenance management systems, customers’ service delivery, and it should evolve for the improvement of the RSL and act as a decision support tool for developing effective housing maintenance strategies together with effective service delivery.

It is common practice in the commercial and corporate world that when managers develop strategies for portfolio investments and estate management they make decisions based on average risks, where some middle ground is found by a blending together of higher risks with lower risks. Where the strategic objectives require a major changes in the organisation over a short period of time the risks will be greater as to whether the organisation will be able to adapt and embrace changes required to meet the objectives that have been set. The level of challenge will be substantial for a public organisation required to compete with the private sector and in order to do so, a public organisation will need to transform itself into leaner and more cost effective service delivery provider. This is particularly true in the case of RSLs who are required to adopt a corporate social landlord approach to managing asset and deliver effective services to their customers. Rather than applying the BSC to each individual tenant type (i.e. private, affordable, leasehold, first time buyer, shared owner and sheltered) it would be more prudent to use average perspectives as shown in Table 8.2.

Ranjan (2011) adopted a similar BSC ‘matrix ratio’ approach when developing business strategy for the USA automotive industry (see Table 8.6), where the Financial Perspective represented 45%; Customer Perspective represented 25%, Internal Business Processes accounted for 20% of the BSC; and Internal Learning and Growth represented 10%. The main differences in the matrix ratios between Table 8.2 for the RSLs and Table 8.6 for the automobile industry generally lies in the percentage weighting attached to the perspectives. The automotive industry’s retail outlets comprise car showrooms which are heavily reliant on the car sales and hence the weighting attached to financial perspective is much higher. From

Table 8.6, the BSC places emphasis on the level of customer satisfaction and quality of after sales services, where often customers will frequently be prepared to pay a premium for a product that accords with a high level of customer expectation..

Table 8.6: BSC Matrix Ratio for Automobile Industry in USA

BSC Perspectives	Measure	Weightage
<b>Financial (45%)</b>	Target Cost Achievement	20%
	Capital Efficiency	15%
	Return on Value Added (ROVA)	10%
<b>Customer (25%)</b>	Product Portfolio	10%
	Total cost of ownership	10%
	Customer Satisfaction	5%
<b>Internal Processes (20%)</b>	Cost reduction	10%
	Supplier sourced innovation	5%
	Outsourcing/supplier risk	5%
<b>Innovation and Learning (10%)</b>	Intellectual Capital	5%
	Innovation	5%

### 8.3 Validation of the Balanced Scorecard Model

#### 8.3.1 Asset Managers

The BSC model was taken to four senior asset managers representing four separate RSLs, three of whom had participated in the detailed interview surveys, and the other an independent asset manager who was not a party to the original survey carried out in this research. The three RSLs were extremely interested in this study and as had started to give consideration to introducing change in their working practices. This was due to the economic climate and the governments drive for social housing providers to adopt a commercial approach to service delivery. Accordingly, the three RSLs proved to be ideal for testing the BSC model. The researcher provided the asset managers with summary findings of the RG data and a detailed explanation of the BSC model together with the data as in Tables 8.1, 8.2, 8.3, 8.4 and 8.5.

As an integral part of the validation process, each asset manager was required to fully understand the data provided and develop key statements, over a period of three months as this was essential to allow the experts time to fully understand and contextualise BSC within their RSL organisation before implementing the proposed BSC model over a period of

minimum two months. The two month period was suggested by the experts as being a reasonable time, in which, to establish whether the BSC was working or not, and to provide a critique on the usefulness, appropriateness, and applicability of the BSC model.

From the data supplied, the three asset managers were able to use the BSC model by developing key statements with measurable targets and then develop housing maintenance strategy which was approved and supported by their trust boards' senior executive members. The only data currently available in the social housing sector for benchmarking purposes relates to the KLOEs and there are no other benchmarking data available that can be related to the four perspectives of the BSC model. With this in mind, the asset managers were able to use the score ratings elicited in the RG grid as a benchmark for developing measurable targets for their RSL to achieve and map against progress.

Based on the two month trial period these experts have critically evaluated the proposed model / framework and have identified several benefits attaching to using the BSC. These include: strategy execution; it demonstrates accountability and generates results; it attracts scarce resources, namely funding and employees; it creates a focus on strategy; it produces information and not data, identifies critical drivers of success; the use of the BSC avoids outsourcing by producing quality results at efficient prices; it drives change to reach desired outcomes; and it inspires trust by proving accountability. As well as the associated benefits they have also suggested that some practical difficulties in BSC implementation may arise due to each RSLs management culture and that the onus should be on each RSL to make adaptations to suit during implementation.

In applying the BSC, the asset managers (involved in validation) commented on the appropriateness of the factors within each perspective and these factors are elaborated as follows:

- Financial perspectives

All factors are highly appropriate and are measurable and no changes are needed.

- Customer perspective

All factors contained in this perspective relevant and appropriate apart from ‘communication with tenants’. All four asset managers stated that this was difficult to measure as an independent factor as this factor would be ‘embedded’ in the overall theme of the customer care and suggested that this should be removed from the BSC framework;

- Learning and Growth perspective

However, three of the asset managers felt that scores rated by the 10 asset managers (who participated in RG in-depth interviews) regarding the ‘*sustainability / energy efficiency*’ factor was rated rather low and suggested that score rating should be increased to 4.0 as opposed to the average score 2.75. They also acknowledged that despite the governments’ energy targets, not all RSLs are sufficiently geared up to fully embrace ‘*sustainability and energy efficiency*’ due to the method of financing of these initiatives. However, ‘reservations’ still remain in the social housing sector regarding the effective energy efficient initiatives (retrofitting of solar systems - photovoltaic systems, solar water heating, reducing the heat losses through external solid walls) together with their associated life cycle cost and return on investment. The independent asset manager was of the opinion that without sufficient subsidy and financial support from Government, any retrofitting initiatives in social housing would be a non-starter, and that the attitude of the RSL organisation and their customers must change so that everyone understands the implications, but also agreed that something needs to be done to reflect concerns associated with the world ‘*fuel crisis*’.

This raises an important question, which are the key critical factors influencing the development of asset maintenance strategy? And can they be identified from 52 constructs as per Table 7.40 (in Chapter 7) and Table 8.3. The asset managers validating the BSC model viewed this negatively. They stated that it would be impossible to isolate these factors from the 52 constructs for the simple reasons that one has to take a holistic view in the ‘*real world*’ that is to say the challenges (both external and internal – which will vary from time to time) faced by RSLs when strategy is being developed and to simply identify a series of key factors

would be 'very risky'. This would reduce confidence in the BSC model and may also have negative effects on the RSL organisation in deploying / implementing such strategies.

Overall the experts considered the BSC to be influential and to have enabled them make a strategy actionable, permitting execution at all levels by translating strategy into day-to-day action plans and initiatives at all levels of the RSL. They felt that BSC also provides an exact view of what should be done and what measures are to be taken to ensure successful operations. They expressed the view that the BSC approach connects well with '*systems thinking*'. Overall the BSC can achieve optimisation of service delivery, however, the experts stated that optimisation would not simply be achieved by only 'adjusting' an individual factor (construct) or indeed even one perspective, but that, the four perspectives (and their constituent factors that make up the perspective) must be working hand in hand.

However, the independent senior asset manager, whose employing RSL was not contemplating changes in their management approach to managing social housing indicated that it would take approximately 6 months to develop, mainly due to the extent of planning required in order to confirm that the RSL was able to cope with the anticipated changes and that the affected staff / departments would be adequately trained to meet the new challenges and demands which were to be expected. The major problem was seen as the need to convince the board and senior executive to refocus their vision and to re-define the business rationale of the organisation. However, the asset manager was of the view that should board approval be given, it would require approximately 3 months to bring into operation and with final refinements. It was anticipated the implementation would then take a further 4 months to become fully operational. The independent asset manager indicated that he was of the opinion that there were potentially substantial benefits to his organisation from adopting a BSC based management decision support system. The asset manager was also of the belief that the BSC model offered a robust management tool possessing the additional advantages of transparent procedures and protocols to the potential benefit of all service users.

The asset managers validating the BSC model also stated that in the past, whenever their respective organisation (RSL) commissioned independent reviews of strategic policy, the consultants appointed, had always produced business plans based on financial aspects of the organisation such as value for money, extent of revenue generated, rental income versus expenditure on investment and repairs and life cycle costing. The asset managers (as well as

other departments) within their organisations relied solely upon meeting internally set targets on a year on year basis as a means of measuring the efficiency and the quality of service delivery. However, this approach had been found to have noticeable limitations particularly in terms of establishing realistic and attainable targets combined with the difficulty of adjusting these on the basis of the comparatively crude nature of the feed-back from the existing monitoring systems which were used by RSLs.

The asset managers commented that this was the first time that both their senior executives and themselves had seen a holistic model capable of taking into account, not only financial perspectives, but also other crucial perspectives (the customer, internal business and learning and growth) focusing on future business risks and sustainability of the business organisation as well as the physical housing factors. Key business risk factors are well embedded within an ethos of customer service delivery.

#### **8.4.2 Customers views**

In addition, the BSC model was tested by drawing upon the views of 3 randomly selected customers who had been elected as panel members to RSL boards of management, providing a key role in assisting the board on strategic matters with particular regard to the views and needs of the organisations tenants. These board members were independent and had not been involved in earlier consultations or participated in the survey. The response from these customer board members was very positive in the sense that this type of model was considered to be potentially very useful in a sector that is in a state of constant change. It was commented that it would help to encourage asset managers (in their business manager's role) to deliver a high value for money services, placing the customer at the centre of service provision and in parallel making the most effective use of the limited resources in what most social housing organisations would describe as challenging times. The 3 customer board members also agreed that managers would be able redesign and manage real estate services in a more effective way, allowing most RSLs to improve service performance while managing the business risks effectively. However, the 3 customer board members were to some degree concerned that an excessive emphasis on commercialisation and profitability might well detract from the original social conscience lying behind the formation of most RSLs. Their view was that RSLs should not depart as a point of the central principle from the founding purpose of the provision of social housing assets directed towards the needs of the lower

income or disadvantaged groups, who would struggle to find affordable or suitable housing in the privately controlled market.

The researcher also sought opinions on the BSC model from a number of academic research fellows within the Business Schools at Aston and Coventry Universities. The response received from fellow researchers was found to be positive to both the application of the Repertory Grid and BSC models as being a very “exciting and novel” way of applying personal construct theory and business management concepts in social housing. There is limited meta-analysis in the social housing sector apart from business concepts in hospital, hotel and facilities management. Until recently, the BSC approach has been restricted to application within private sector organisations approaches to management rather than the public sector resources especially in facilities management sector (Alexander 1996; Alexander *et al.* 2004; Atkin & Brooks 2005; Amaratunga *et al.* 2000). Several attempts to use BSC models in relation to the housing sector have been made, however, these have generally tended to be associated with KLOEs which are not directly linked to housing maintenance strategy and are difficult to link with the strategic vision of the RSL organisation. KLOEs are too vague (e.g. an employee must answer the phone within 3 rings) and also very general (see Chapter 2). Also the methodology is not sufficiently robust to be used in a meaningful way to permit linkage with real targets and the satisfactory measurement of strategic aims of an RSL organisation. This body of research is considered to be unique in that it is a first attempt to utilise BSC in developing asset maintenance strategy rather than purely focusing on the operational aspects of maintenance.

In view of the comments made above resulting from the trial and extensive consultation undertaken by the researcher regarding the models applicability, it is clear that this research forms a valuable piece of new knowledge providing a potential aid in advancing the effective management of social housing property maintenance services.

#### **8.4 Linking BSC with Governments six standards**

The BSC model operates by assisting asset managers to adopt a holistic approach in relation to the development of objective housing maintenance strategy(ies). However, a question may be raised by the less converted asset managers’, as to how the BSC model links with the Governments six standards (see Section 2.7.2.2). In order to answer this question it is

necessary to understand the rationale behind the BSC and how it works (see Chapter 4). BSC is a strategic management tool - a model in which the RSLs are able to direct their strategy(ies) in a holistic way and balance the key factors (or cluster) influencing the manner in which performance can be measured in terms of a scorecard. The BSC has four perspectives as a holistic model, however, this does not mean the organisation has four departments and each department is measured in accordance with their target and performance measures. Contrary to this, BSC is made up of the 7 clusters developed from the RG. The six standards are solely based around KLOEs and are regarded as superficial measures and therefore do not comprise a sufficiently robust set of measures required to generate confidence that social housing providers are moving towards a viable business model, especially given that government pressures upon social housing providers to adopt corporate management approaches. The BSC model on the other hand is much more robust and sophisticated than the KLOEs. The 7 clusters revolve around the business functions of the RSL (the maintenance department) and KLOEs can be easily extracted from the 7 clusters that make up the BSC.

Although the BSC has been applied successfully within a number of organisations, a number of researchers (Maltz *et al.* 2003; Brown 2007) have looked beyond the BSC with a view of meeting the particular needs of the organisation and instead of the four perspectives, these researchers introduced modifications to make the BSC more '*dynamic multi-dimensional performance model*' (DDP). They have modified the basic model by introducing a further two perspectives on the basis that Learning and Growth contain far too many factors, thereby creating difficulties in measuring performance and rewarding people who are actively contributing to the organisation and accordingly this perspective is divided into two separate perspectives as follows:

1. Financial Measures – similar to BSC – financial perspective;
2. Customer – similar to BSC – customer perspective;
3. Process Measures – similar BSC – internal business process factors;
4. People Development Measures: recognise the critical role of stakeholders in organisational success. The level of employee skills, commitment to technological leadership, personnel development, staff slack resources are indicative of the essential role of employees in organisational success;

5. Preparing for the Future Measures: are clear expressions of foresight. This dimension must be viewed as a critical organisational issue and includes measures such as depth / quality of strategic planning, indicators of partnerships and alliances, anticipating and preparing for changes in the environment, and investments in new markets and technologies (Brown 2007).

Based on these observations, BSC is not limited to 4 or 5 perspectives, Organisation working in a dynamic and complex environment can introduce more perspectives, allowing the organisations such as those within the social housing sector, to develop and control strategy in a meaningful way and not for just the sake of it. The researcher consulted with the four asset managers who validated the model, in order to seek their views with regards to the value of a modified model. It was apparent from their comments, that the 7 clusters developed in RG (i.e. customer factors; asset management factors; tenancy factors; neighbourhood and community factors; financial and economic factors; continuous service improvement factors; and corporate factors) also work well on their own and without having to re-group them into the four perspectives, see Figure 8.2. There are a number of advantages that accrue from this:

- Firstly, these clusters directly relate to the six standard measures and the RSL will not require further extraction or extrapolation processes in order to obtain the required data for auditing purposes;
- Secondly, asset manager and other departments forming part of the RSL can easily relate to the cluster which clearly define the factors;
- Thirdly, the clusters allow the flexibility to add new factors and measures on an as needed basis in order to reflect the particular requirements of the RSL.

The BSC model is flexible and can be modified to suit the specific needs of the RSL. The final proposed model will continue to function in a manner identical to the BSC model the only difference being that it would have 7 perspectives. The final format of the modified model is illustrated in Figure 8.2.

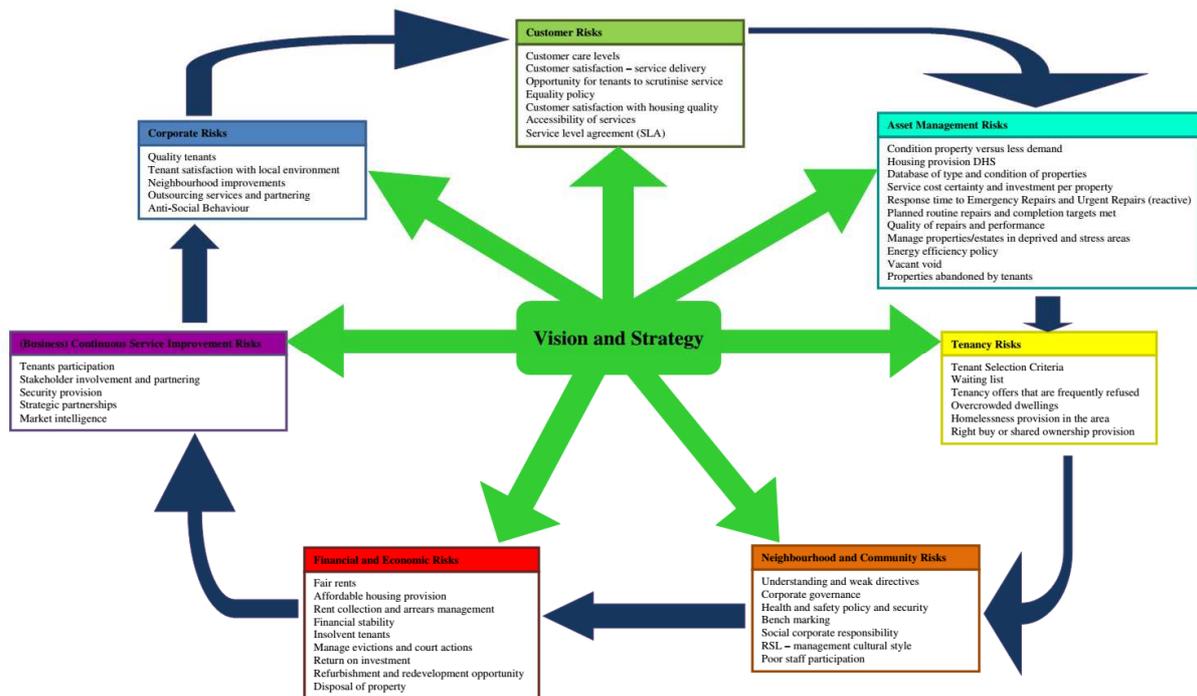


Figure 8.2: Revised BSC Model

The procedure for implementing the BSC as a decision support model for developing housing maintenance strategy has been explained in earlier sections of this chapter.

## 8.5 Summary

The data elicited from 10 asset managers identified 53 constructs (factors) that were considered to influence asset maintenance strategy decision making. These 53 factors are akin to business success (or risk) factors. The research indicates that the BSC model is highly appropriate for the purpose, however, this became apparent only after the RG data had been analysed. The RG data was integrated into the BSC model as a means of supporting asset managers in developing housing maintenance strategies.

The BSC was validated and tested by 4 senior asset managers in order to confirm its viability and its appropriateness as a management tool in developing housing maintenance strategy(ies). From the 53 business risk factors which were identified, 52 were found to be highly relevant and one factor which related to sustainability and energy efficiency was slightly underscored by the asset managers who participated in the in-depth interview process. Otherwise, the feedback received was both positive and encouraging. The asset managers validating the BSC model expressed the view that it would be a mistake to reduce the 52

factors for statistical reasons because strategy is concerned with the wider picture and an overly tunnelled vision should be avoided. By reducing the 52 factors further would result in diluting the strategy being formulated by BSC framework and ultimately compromise the confidence and credibility that it has attained from the trials.

The final BSC incorporates seven perspectives which reflect social housing provider's ability to deliver services in conformity with the audit requirements for RSL in compliance with seven set performance standards.

# CHAPTER 9

## CONCLUSION

### 9.0 Introduction

This study sets out to develop a decision making support system for evaluating housing maintenance strategies in the social housing sector within the UK. During the course of this study, multiple opinions and arguments have been reviewed within the preceding chapters. This chapter discusses the research outcomes, findings and its associated implications in relation to the social housing sector and also its implications in relation to the wider academic community. The chapter provides a conclusion centred on the research objectives that are deemed to be of most particular importance. The study concludes with suggestions for future research.

### 9.1 The Summary - Research Objectives

#### 9.1.1 Identify and understand the key factors used by Social Housing providers in managing their existing housing stock.

In achieving this objective, the researcher has carried out extensive meta-analysis and background literature review together with a historical overview of social housing in the UK. This approach to the proposed line of research was considered to be paramount importance in enabling the fullest understanding of the problems of social housing within an historical context and also governments role in imposing change and creating the challenges faced by the social housing sector. In Chapter 2, the review of the existing literature suggests that government interventions over the last three decades has had a re-shaping effect upon social housing providers inducing them to become more competitive (in economic terms), efficient and effective; and more recently shifting the emphasis of social housing providers from the position of public social housing provider towards a corporate social landlord. As a consequence, in order to meet changing circumstances and needs, social housing providers have been forced (willingly or not) to adopt a more innovative approach towards housing maintenance management and to orientate themselves towards customer service delivery (Audit Commission 1986). The legacy of the government intervention has been a modernisation of maintenance and management procedures in relation to council housing

stocks and the provision of estate services and also an appreciation of the need to provide best value for money in relation to services provided to RSL residents. RSLs have become more financially and service delivery aware as a result of CCT, stock transfers, the best value regimes and more recently pressure on social housing providers to adopt a corporate social landlord approach. This is reflected in an appreciation of the need to sharpen service responsiveness, especially in the area of housing maintenance management (DETR 2000). Furthermore, the social exclusion agenda, coupled with a '*choice-based letting*' policy focused attention on the importance of responsive RSLs housing management (Social Exclusion Unit 1998).

**9.1.2 Define the nature and characteristics of maintenance strategies to distinguish between 'planned preventative maintenance', 'corrective maintenance', emergency maintenance as an aid to understanding the approach adopted in assessing the overall maintenance requirements of the publicly owned housing stock.**

Chapter 3 explored housing maintenance concepts and highlighted the differences between maintenance categories and concepts. Chapter 3 also identified the key factors and variables influencing the operational aspects of housing maintenance (Kangwa & Olubodun 2003, 2005; Olubodun & Mole 1999; Olubodun 1996, 2000, 2001; Pawson 2009; Pawson & Mullins 2010; Audit Commission 1986, 2002; ODPM 2003). The housing maintenance strategy has not yet been researched and there is no substantial body of studious literature available on this topic. The development of a meaningful strategy is highly complex and involves the interaction between the technical, social, legal, fiscal and human determinants governing the use of residential property. However, the effective implementation of housing maintenance strategy is as much a study in providing a level of acceptable service to property users as the technical and constructional aspects of property management. Asset managers will in future need to have training in managerial and social sciences, if they are to provide an acceptable level of customer orientated service delivery; and not just have technical knowledge and understanding of building defects and remedies which they have traditionally relied on.

For any organisation to prosper, regardless of whether they operate within the private commercial sector or within the public sector, suitable strategies must be identified and developed as a central function that are capable of enhancing the prospects for business

growth and survival. The challenges imposed upon social housing providers by changes to regulatory structures introduced by the UK Government have demonstrated that this important ability is less-well developed within the social housing sector than within the private sector. Many of the changes required of the social housing sector, have been partly influenced by the Caves Review (2007) and by the Hills Review (2007) which focused on putting the customers first together with the continuous improvement of value for money services; and also partly as a result of government policy forcing social housing providers to adopt a '*corporate social landlord*' based approach. These pressures have fundamentally altered the historic rationale behind the provision of social housing, which is to ensure that the less fortunate in society are adequately housed irrespective of their personal means. It was not intended that social housing providers would be required to compete with the private sector or be treated as private sector bodies.

At present, social housing providers are at a crossroads, facing a range of challenges which they have not experienced during the preceding three decades as a consequence of a withdrawal or reduction in state making for an uncertain future within social housing. Changing circumstances present an entirely new set of questions to the social housing sector such as '*are RSLs willing and able to move into the area of risk and compete with the private sector for housing quality of the existing stock, demolished and rebuilt or buy land and market share?*'. This requires RSLs to be more creative, risk minded and agile – in their response to complex and ever-changing environments (Lunio 2013). The traditional approaches to asset maintenance management have become outdated and RSLs need to replace existing models in favour of new approaches that are more substantially customer centred, with decisions based upon strong business intelligence and operating through simpler, standardised organisational structures and processes. By embracing a 'change-ready' culture they will remain one step ahead of whatever social, economic or political environment prevails, continuing to deliver exceptional outcomes for the social housing customers.

RSLs are seeking ways of developing a competitive edge and sharpening their responsiveness in relation to customer service delivery and also to formulate a more holistic and business based approach to managing assets. Should service provision not be managed effectively, efficiently and economically then the future of the RSLs may well be compromised, making

the future both short and bleak (Dromey 2013). As consequence RSLs will run themselves at risk of going into administration by the regulators.

### **9.1.3 Determine and provide an understanding of the characteristics of RSLs as Landlords and tenants as customers and the knowledge gap that exist between their expectations of the Landlord's obligations in customer care.**

The desktop based case studies (detailed in Chapter 5) highlighted the fact that different local authority landlords (RSLs) are at various stages in their development of a performance management framework, with some operating at a sophisticated level, whilst others concentrating on basic provisions. The case studies also confirmed that the primary reasons for RSLs not adopting smart business strategies for the management of their housing stock was due to lack of knowledge about their customers' expectations which can vary from one local neighbourhood to another, and also between RSLs. There are also variations in levels of technical / professional expertise required in the management of housing assets.

The research mapping from the information gained from the pilot study enabled establishing the asset managers response to key information regarding maintenance budgets, their awareness of key factors contributing to the day to day maintenance of housing stock values, planning capabilities, organisation responsibilities – linking strategic with operational decision making. The tenants, however, raised concerns on their expectations of the service provider. In particular, these relate to the quality of housing provided, the standard of repairs and the efficiency and of the repairs services, upgrading of existing housing stock, value for money, responsiveness of the housing provider to the tenant, tenants opinion, feedback and the affordability of rents. From the information derived from the pilot study, it became evident that the asset managers involved in the study had an understanding of the factors impacting on housing maintenance (for example the nature of defects, their impact upon deterioration, the need for the prioritising of repairs, budgeting and best value issues). These findings corroborate the results of earlier research (Olubodun 1996, 2000). However, it appears that the primary problems experienced by RSL are deeply embedded within corporate culture. This reflects on lack of strategic direction which has adversely affected RSLs service delivery capabilities. These sentiments are also reflected in the findings of the case studies.

The findings of the pilot study also confirmed that there is a clear gap between the perceptions of service user(s) and those of service provider(s) in terms of the quality of service delivery. This is considered to be partially due to RSLs not fully understanding their customer(s) (in terms of their profile and their expectations) and also failure to deliver services reflecting those customer expectations. Given the commercial redirection being imposed by changes to the regulatory framework, RSLs are under increased pressure to adopt smart business strategies in order to more efficiently and economically manage their housing stock and to take greater account of their customers' expectations, which are presently not fully understood by the asset managers and their employers (RSL). To date, no research or studies have been undertaken to evaluate housing maintenance strategies to assist in meeting these aims..

#### **9.1.4 Ascertain how housing managers can develop customer care strategies to upkeep housing stocks.**

In order to achieve this object the researcher developed a research methodology (detailed in Chapter 5) which was divided into a number of phases i.e. workshop, dry runs and in-depth interviews. The findings arising from each of the phases are discussed below:

The **workshops** were designed to contextualise the main theme of this research and to generate debate and discussion relating to fundamental questions. The most significant research question to be addressed to asset managers was:

**‘In light of the constrained nature of housing maintenance in the social housing sector and given the present economic climate and changing legislations what factors do you feel will affect the housing maintenance strategy both today and in the future’?**

It was intended that asset managers should be challenged to think *‘outside the box’* and to articulate what they felt was desirable, in terms of satisfaction of the tenants' needs, concerns and aspirations. The participating asset managers were also encouraged to express their view as to how best foster commitment on the part of social housing providers (RSL) in the setting and defining goals for asset managers. Such goals might have a positive direct effect on the future development of housing maintenance strategy within the expected continued constraints upon resource availability and the demands of legislative intervention and externally imposed business performance criteria.

However, during the course of the discussions intended to identify key factors, the researcher also introduced a laddering technique which permitted asset managers to clearly describe and define the key factors together with the opposite meanings of the factors. In total 60 constructs were elicited from the asset managers. The findings suggest that these factors are more akin to business success factors within facilities management particularly the NHS (Gombera 2003; Liyanage 2006) and hotels (Jones 2001).

A similar workshop was provided for the tenants taking part in the pilot survey. It was intended that detailed discussions with tenants would help to identify and explain the factors which tenants considered to be significant to them. The primary research question addressed to the tenants was:

**‘In light of the constrained nature of housing maintenance in the social housing sector and given the present economic climate and changing legislations what factors do you feel will affect the customer expectations and customer service delivery both today and in the future’?.**

The participating tenants were challenged to develop a ‘*wish list*’ reflecting their desirable expectations of their social housing provider. The tenants / customers elicited 23 key constructs which they considered affected customer expectation and service delivery.

Several **dry** (dummy) **runs** were conducted with the aim of identifying any deficiencies / inconsistencies in the factors elicited from the participants (asset managers and tenants); and to make any necessary amendments and modifications and fine tuning prior to conducting the main ‘in-depth’ interviews. As a result of the dry runs, the 60 constructs elicited from the asset managers were reduced to 53. This reduction was purely due to an overlapping of descriptions, meaning and interpretations assigned the factors, though no changes were made to the customer factors. The 53 constructs were grouped into 7 clusters under the key headings. These groupings comprised: **Customer risk factors, Asset manager risk factors, Tenancy risk factors, Neighbourhood and community risk factors, Financial and economic risk factors, continuous service improvement risk factors and corporate risk factors.**

The Repertory Grid Data and Analysis - the primary objective behind this aspect of the phase was to elicit data from the 'experts' and the 'end users' (customers) in order to provide a fuller insight into the key factors influencing housing maintenance strategy derived from tenant response. This study adopted a qualitative research methodology using a novel approach to data collection 'personal construct theory' referred to as RG data whereby the data were elicited on a 'one to one' basis in-depth interviews with 10 Senior Asset Managers and 60 Customers. Findings from this phase confirmed a positive relationship observed in the earlier pilot studies which had identified the individual factors found to exist between the constructs. Additionally, this study found that the individualised constructs associated with elements (tenant type) are the most influential factors as they impacted positively on housing maintenance strategy and all the clusters (customers risk factors, asset management risk factors; tenancy risk factors; neighbourhood and community risk factors; financial and economic risk factors; continuous service improvement risk factors; and corporate risk factors) are highly sensitive to developing housing maintenance strategy. All 53 elicited constructs were found to have a potentially significant influence on the development of housing maintenance strategy. Out of the 53 constructs elicited from asset managers 21 constructs were similar to the constructs elicited from the customers.

The experts' cognitive modelling of the thought process was noted to impact directly on service delivery, to reflect end user (customer) profile for each construct elicited, and to be highly sensitive to customer type. From the most significant findings, detailed in section 9.2, it is apparent that there is degree of similarity between the results for 'Leaseholders' and the 'Private rented' tenants. The 'Shared owners' and the 'First time buyer' tenants tend to also share a similar profile and are able to interact well with RSLs. This may be due to tenants having '*sense of belonging*' and a stake in part of the equity of the property which they occupy. Affordable tenants seemed to be dissatisfied with the range of services being provided by the RSLs.

#### **9.1.5 Develop a decision support model or a predictive model for evaluating an effective maintenance management strategies in the social housing stocks**

The conceptual model evolved through a natural process, being amended over time in order to reflect new data as it became available. The literature review and case study identified challenges in the social housing sector and also the shortcomings of RSLs (see Chapter 2 and

3). The pilot study and workshops were instrumental in capturing the thought processes of the asset managers in the development of housing maintenance strategies, which resulted in the identification of the critical factors influencing the decision making process. Before the conceptual model was adopted, the researcher provided a detailed analysis of the decision support systems (see Chapter 4) and considered a range of alternative DSS models relating to service quality management, customer satisfaction, social considerations, economics factors, political and governance factors, environmental factors and sustainability, organisational change and technology. Amongst these models TQM, PEST, SIX SIGMA, SMART and Balanced Scorecard (BSC) were considered and evaluated.

It was only after the nature of the research problem had been adequately defined and the importance of the parameters identified in workshop 2, that the DSS model began to develop. It became apparent that the constructs elicited from asset managers were akin to business success factors. These factors are driven by the aspirations of governments for RSLs to manage their housing stock in a more commercial way; changes in funding and legislation, putting the customer first policies and lastly the evolving role of RSLs towards becoming service provider. During the course of the last three decades, Gruis & Neiboer (2004, 2004a, 2004b) and Gruis *et al.* 2004 have noted that a massive paradigm shift has occurred in the application of business strategies (simple to complex) within the social housing sector with the majority of asset managers now employing a variety of management models and techniques ranging from the simple to the complex, in order to manage business and supply chain risks.

In evaluating the various DSS models that were considered, BSC was selected as providing the 'best fit' model in relation to the problems which this research had identified, on the grounds of it being most appropriate to the task in hand and in particular its applicability to formulation of housing maintenance strategy. In particular, BSC facilitates the implementation of policy by breaking down into measurable actions at various operational levels, thereby providing a direct link between the development of strategy and its implementation. BSC can provide an integrated framework (for performance measurement and management), which is capable of measuring how value is created in relation to current and future customers (tenants) needs, how internal capabilities and systems may be enhanced, and how investment in employees, processes, technology, and innovation should be most effectively be made. The BSC allows measures to be linked between perspectives within a

cause-and-effect relationship through a process of strategy mapping as illustrated in Chapter 4 and Chapter 8. Although BSC was originally developed for businesses operating in complex environments, it has however, been successfully adapted to the requirements of the public sector in particular to facilities management applications as documented by numerous researchers (Gombera 2003; Liyanage, 2006) for example in relation to the NHS.

During the course of the development of the theoretical DSS business model the researcher consulted a number of asset managers in order to obtain their expert advice on the feasibility of developing the theoretical model into a practical tool for the solution of problems with housing maintenance management. The overall response from the asset managers consulted was both encouraging and constructive, resulting in a number minor refinements being incorporated into to the proposed model.

However, traditionally, DSS models are based on the use of artificial neural network techniques such as computer modelling supported by mathematical paradigms in order to simulate human behaviour and various relationships existing between factors for example. However, it is strongly felt that the 53 factors elicited from the experts who were consulted (i.e. asset managers) using the RG are regarded as being of a qualitative nature and accordingly these have been converted into quantitative values for inputting into the BSC that can be employed as a decision-making system capable of enabling asset managers to model, predict and monitor asset maintenance as well as their RSL business performance. The uses of a BSC based system provide asset managers with the ability to identify patterns of critical (risk) factors and to relate them to the development of an effective and efficient asset maintenance strategy.

The model validation process has been previously discussed in Chapter 8. However, the model was validated by four asset managers who represented different RSL organisations. The validation process required a period of five months to complete of which the first 3 months were allocated to allowing asset managers to familiarise themselves with the BSC and to develop strategies (mission) statements for the approval of senior executives or trust boards prior to using the BSC. The last two months was allocated to the application of the BSC model and checking of the targeted outputs against the actual results obtained, in order to confirm the BSC practical application together with its appropriateness to housing maintenance. The BSC data displayed in Table 8.1 and the associated matrix ratio data

displayed Table 8.2 was the data used by the asset managers. The results of the validation trial were very encouraging with asset managers reporting that the BSC model had been found to work as a DSS. However, due to the absence benchmarking data, the score rating derived from the RG was adopted by the asset managers as a starting point. It was discovered that one construct of the 53 constructs, ‘sustainability and energy efficiency’ appeared to have been ‘under scored’ during the in-depth interview phase. The validating asset managers also felt that one of the factors which related to ‘communication with tenants’ was difficult to measure and as it was intended that this factor would be incorporated into other customer perspective factors it was decided to delete this construct thereby reducing the number of constructs to 52. The remaining 52 constructs were considered to be those which played a significant role in developing the BSC model.

## **9.2 Key Findings**

On the basis of the investigation conducted by the researcher, the following questions have been raised:

1. What are the challenges posed to RSLs by changes in the regulatory framework under which they are required to function in today’s economic climate?
2. The need to examine further the roles and responsibilities of RSLs and to identify the key factors which affect the development of maintenance management strategy in relation to social housing stock.
3. How do RSLs relate to their customers (to what extent do they understand their customers expectations) and to what extent are they successful in achieving a satisfactory standard of customer service delivery?
4. What are the critical factors that influence the development of housing maintenance management strategy and the quality of customer service delivery?
5. The need to develop and evaluate a ‘best model’ capable of encapsulating the entire core business function of RSL organisations.

As a result of the above question the following significant findings have been made:

1. Public sector organisations, such as social housing providers, are being placed under pressure to adapt to the effects of changes in the regulatory framework under which they are required to operate. Emphasis is now being placed on the social housing providers to adopt a more commercial approach to their responsibilities and to accept a degree of private sector competition;
2. Maintenance management decision making is no longer primarily directed by the consideration of physical factors related to the age, condition, location, void management of housing stock. There is substantial evidence that a majority of social housing maintenance decisions are multivariate and asset managers need to adopt a holistic approach to maintenance decisions incorporating a wide range of key factors which have evolved over time, to a large degree in response to pressures generated changes in central government direction and policy;
3. The case studies undertaken indicated that the RSLs are not adopting smart business strategies for the management of their housing stock due to lack of knowledge regarding their customers' expectations which can vary from one neighbourhood to another and also from one RSL to another. The implications are that where the methodology is found to work, good practice is being implemented resulting in an improvement to the state of repair of housing stock, improvement in levels of customer care and tenant satisfaction, and continuous ongoing improvement in levels of service quality. This is often not reflected in the performance of weaker performing social housing providers;
4. In order to successfully achieve improved levels of customer service delivery, RSLs need to understand the nature of their customer profile, customer expectations and also their behaviour. Achieving these ends will to a degree hinges on customers' financial circumstances and their interaction with their RSL. Tenants (customer) may be divided into six basic types: namely private rented, affordable, leasehold, first time buyer, shared owner and sheltered tenants. This research has identified that Leaseholders and Private rented share a similar 'profile'. The Leaseholders are tenants who have been granted a lease their properties for a term of years by their RSLs (but continue to pay a nominal annual ground rent and are also required to perform certain covenants under their lease and may also be liable to pay service

charges in respect of services delivered by their RSL). Typically, leases will be granted for terms ranging between 99 and 125 years. This class of tenant will generally have only limited interaction with RSLs. However, the Private rented tenants are tenants who pay an open market rent to their RSLs. In order to attract this type of tenant, it will be necessary for RSLs to ensure that the properties to be let are in good order and meet the expectations of this class of tenant who because sufficient financial means could if they so decided, to rent or buy as an alternative in the private market if dissatisfied with what was being offered by their RSL. The need for ongoing interaction between this class of tenant and the RSL may not be less strong compared with other types of tenants:

- a. The Sheltered tenants residing in social housing with special needs live within a specially adopted environment, which reflects their particular needs and is intended to support their particular physical or mental disability. RSLs are under an obligation to provide an appropriate level of support reflecting the needs of particular tenants. Needs may vary from the provision of medical care to warden control or the provision general assisted living services. RSLs are active in ensuring that their legal obligations and duties of care are met. Shortfalls in service provision in respect of this type of tenant may place an RSL at risk from independent 3<sup>rd</sup> party audits (social services and HCS agency) and perhaps even legal action;
- b. The 'Shared' and the 'First time buyer' tenants have a partial share in the equity of the property which they occupy from the RSLs. As a generality this class of tenants appears to have a sense of place and combined with a sense of ownership in relation to the property which they occupy. Hence this group of tenants will tend to have the ability to liaise and co-ordinate with their RSLs;
- c. Affordable tenants will normally be in receipt of housing benefit and tend to be generally dissatisfied with the quality and levels of services provided by their RSLs. This class of tenant will have poor financial standing, low social status, generally limited education and limited marketable skills, giving rise to the development of both a sense of dependency and actual dependency (Gibb & Leishman 2011). Tenants falling within this category may tend to be associated

with unemployment, low levels of disposal income, and areas of social deprivation, the high level of criminal activity (theft, drugs, anti-social behaviour, and vandalism). In a wider context, insurance companies will tend to classify and reflect the perceived levels of risk with postal codes associated with the presence this type of tenants. This outlook also appears to be shared by the asset managers in their evaluation of customer related factors;

5. The RG interviews which were conducted with participating asset managers identified 53 constructs (or key critical factors), which in their view influenced the development of housing maintenance management strategy. These factors are considered to be akin to business risk factors encountered within a commercial environment. With the present condition of the economy and on the assumption government policy will remain unchanged into the foreseeable future, pressure will continue to be placed on the public sector to adopt a more commercial approach to the management of their assets. In order to accommodate these pressures, it will be necessary for public sector organisations, as part of their response, to make greater use of performance management frameworks. When the 53 constructs were ranked in the order of priority, all 53 constructs fell within the 35 ranking (where some the constructs shared the same ranked position). These include: vacant properties (void) and properties abandoned by tenants; tenants insolvency; corporate social responsibility; property condition versus reduction in demand; financial stability; overcrowding of dwellings; RSL organisation - management style and cultural; outsourcing of services and partnering; homelessness provision in the area of operation of RSL; affordable housing provision; anti-social behaviour; bench marking; return on investment; market intelligence; understanding of and compliance with legislation; quality tenants; fair rents; tenant selection; corporate governance; decent home standard provision; rent collection and arrears management; stakeholder involvement and partnering; disposal of property; security provision; equality policy; customer satisfaction with housing quality; evictions and court actions; tenant satisfaction with local environment; tenants' participation; customer care provisions; staff participation; service level agreements; easy to buy/shared ownership; quality of repairs and performance; strategic partnerships; accessibility to services; health and safety policy and security; waiting list; cost certainty and investment per property;

6. Furthermore, from 23 constructs identified by the residents (customers) using social housing identified 21 constructs that overlapped with the constructs elicited from asset managers. These included customer care provision; communication with tenants; overall levels of tenant satisfaction with service delivery; tenants' participation; equality policy; customer satisfaction with housing quality; response time to emergency repairs and urgent repairs; satisfaction with quality of routine repairs; satisfaction with quality of repairs and performance; satisfaction with quality of renovation; tenant selection criteria; waiting lists; choice based letting of dwellings; provision for shared ownership; quality of tenants; neighbourhood improvements and the local environment; anti social behaviour; competitive rents; security provision; health and safety policy; corporate social responsibility;
7. Balanced Scorecard (BSC) was evaluated as providing the 'best model' capable of encapsulating the entire core business functions of RSL organisations. There are several reasons considered as to why BSC is deemed to provide the best model. Firstly, the model places a firm emphasis on customer satisfaction, and how well the RSLs integrate service delivery with the design of performance frameworks. Secondly, a key strength of the BSC is that it measures performance in a range of areas and not just in terms of financial results. Thirdly, BSC has the ability to link strategy to the operational aspects of the business management and provides a useful tool in motivating managers and staff. Fourthly, challenges may relate to managing sub-standard assets which in many cases have exceeded their useful life expectancy. RSLs need to have a thorough understanding of their housing stock and how best to develop investment and maintenance programmes. Fifthly, in order to gain a competitive edge and to achieve a profit or an operating surplus, RSLs will need skilled surveyors, who have an understanding of all elements of stock investment and building pathology – BSC has the ability to address via learning and growth perspectives.

The 53 constructs were incorporated within the BSC representing four perspectives, namely, financial perspective, customer perspective, internal business perspective and learning + growth perspective. Trials were conducted by four senior asset managers working for 4 separate RSLs) resulting in a positive feedback. Of the 53 constructs 52 were found to be

highly sensitive and influenced the asset managers in developing a responsive housing maintenance strategy.

### **9.3 Practical Implications**

Social housing providers are presently facing an unprecedented range of challenges, on a scale that has not been experienced in the preceding three decades, as a result of profound changes to the regulatory framework under which they are required to operate. In response RSL have been compelled to adopt more commercial approaches to the delivery of housing services and to adopt a more sensitive attitude towards the needs and aspirations of their customers. A number of changes in the business environment such as a re-orientation away from public towards a more private sector ethos, the introduction of the localism legislation, the need to put the customers first, the need to maximise value for money, combined with greater transparency and accountability by way of a small range of examples.

However, research shows there is little practical help available to assist RSLs to become competitive in order to improve their standards of service delivery or their organisational performance. This may be due to limited research into housing maintenance strategies (Sagoo *et al.* 2010). Although the literature review identifies some of the issues relating to the improvement of RSL performance, RSLs face a number of dilemmas in attempting to redirect themselves away from a public sector outlook towards being more in keeping with the private sector. In order to improve standards, customer service delivery, housing maintenance and overall performance, asset managers (RSL) will need to improve their understanding of their customers (their expectations and aspirations), if they develop effective housing maintenance strategies within the existing legislative framework. Asset managers will also need to be in the position to identify the key factors that influence the development of effective housing maintenance strategies and not to be overly reliant on KLOEs, which are comparatively crude and not sufficiently robust limiting their value in assisting RSLs to develop improved service delivery. In order to compete in the commercial world asset managers (RSLs) will need to embrace a holistic approach to the development of housing maintenance strategies in order to provide a firm platform from which to deliver customer centered services. Housing maintenance strategies need to be capable of creating an enabling environment in which bench mark will be accepted as a means of measuring performance and also a means for motivating service delivery teams. Senior asset managers

need to develop strategies which are readily understood by all persons working within RSL organisations. Additionally, individuals within housing maintenance departments will have to become more accountable for the time expended on each job (or project) recorded against the specific job (or project). In such an environment, any activity which has an uncertain outcome is not likely to be encouraged.

The feedback from this study obtained from workshops, dry runs and also from in-depth interviews, has established that senior asset managers have a direct responsibility for mapping out the future directions of the housing asset management and that their role is changing from technical expert on construction matters to that of a strategic manager in a position to make important contributions towards the creation of an environment in which customer centered service delivery is encouraged. For that reason, it is important that RSLs make efforts to cultivate the leadership among the senior management in order to foster customer participation and improve performance. In the absence of a rigorous system of business benchmarking, this study shows that the RG scores can be of significant value in meeting the RSL performance improvement goals.

The BSC approach for developing housing maintenance strategies will help facilitate the introduction of innovative measures (RSLs might otherwise be reluctant to do), potentially leading to enhanced organisational effectiveness and in the long-term improved service delivery performance. It is for the reasons identified in this study that it is considered important and beneficial that BSC should be adopted as part of everyday management practice within housing maintenance. Finally, the results of this study are considered to provide a pool of practical guidance and a suitable starting platform for the adoption of BSC by other RSLs with a view to providing a more responsive and effective customer aware service delivery and performance.

#### **9.4 Academic Implications**

To date, research has mainly concentrated on the analysis of maintenance management factors at the micro level with a view to developing maintenance models and framework to the operational level rather than to an examination of housing policy maintenance at a strategic level within RSL organisations.

Housing maintenance strategy to date has not been adequately researched and there are no studies carried in the topic area of the present research. This may at least in part be due to the traditional and inherently conservative outlook of social housing bodies which are to a degree reluctant to experiment with innovative management systems with a view to improving service delivery. However, as the challenges and problems faced by RSLs become more complex and demanding, combined with pressure from government to adopt a more commercial approach (such as ‘continuous business improvement’, ‘customer service delivery’ and ‘agility’) to service delivery this attitude may well be seen to alter substantially (sink or swim). This is a first study of its kind that has been evolved around the needs of housing maintenance strategy, which is focussed upon customer aware service delivery. This research is concerned with providing a quality service to property occupiers rather than concerning itself with the housing assets themselves. The modern asset maintenance manager will have to rely less upon traditional technical and constructional knowledge and take greater account of the human dimension in terms of tenant perceptions and aspirations - in short, asset managers will need to become more tenant directed. Accordingly, this research seeks to give particular consideration to the cognitive decision-making process of asset management (experts) and to develop a decision making support model which is capable of providing an understanding and insight into the drivers behind the formulation of a housing maintenance strategy. As an equally important part of the research, social housing residents (customers) were also interviewed in order to obtain an appreciation of their expectations of the nature of the service which they hoped to expect from their social housing provider. This information obtained was collated, analysed and a DSS model developed with the intension of aiding asset managers when developing housing maintenance strategies.

It is hoped that this research will act as a spring-board for other researchers who may become involved in business modelling, continuous business improvement, and supply chain management in the future.

## **9.5 Originality and contribution to knowledge**

Previous research has tended to be focused towards the technology and cost related aspects of maintenance management rather than being directed to the development of strategic management systems. Examples of earlier research includes development of DSS as an aid to asset managers to decide when replace or when to repair a housing element, reliability

centred maintenance, characteristic of maintenance, building decay and deterioration (building pathology), cost effectiveness maintenance solutions and life cycle costing. However, this research is rapidly becoming outdated due to changes in the economic conditions and the need for organisations (both public and the private) to become agile in their response to changing conditions in order to assure future front business success. Reflecting the changing needs and pressures within public sector housing, this research has uniquely attempted to develop an aid to the improvement of housing asset management that both recognises the requirements of asset managers (as technical experts) charged with the responsibility of developing a maintenance strategy and is also capable of incorporating the views and aspirations of public sector residential tenants thereby leading to improved service quality.

This research has adopted a novel approach to researching maintenance management by making use of a technique frequently employed in clinical psychology, called the 'The Repertory Grid'. This is a qualitative tool for triadic elicitation of key drivers. The RG in-depth interviews were conducted with senior asset managers, exposed hidden or latent factors that would not have been easily identified if a quantitative questionnaire had been employed. The hidden factors were perceived as being akin to business success factors (see Chapter 7 and Chapter 8). The participating asset managers (experts) reported positively on this technique which they considered provided an opportunity for them to examine the constructs they used to describe the key factors influencing their decision making and to critically reflect upon the range of choices available to them. This approach was found to be useful in assuring congruence between asset management, service delivery and customer needs and expectations. It was also useful in identifying environments facilitating preferred modes of behaviour. The RG tool was also found to be helpful in clarifying the nature of psychological processes associated with delivery of services and the RSLs culture and internal / external environment conditions. Furthermore, RG was perceived as providing a good basis for the development of a deeper understanding of the cognitive nature of decision making within the social housing sector.

This research has identified 52 key factors that drive housing maintenance strategy and which were highly sensitive to customer profile.

By linking the RG with BSC model, a powerful tool has been provided for aiding the RSL to align their organisational strategies, which is also sufficiently structured to assist in sharpening the delivery of housing services to meet the present challenges faced by social housing providers. The BSC is highly flexible and adaptable to the requirements of any social housing organisation. BSC adds value to the decision making process, facilitating iterative factors that influence the decision making process, which directly involves the end users and is capable of improving RSL ability to deliver customer services. The technique reduces the chance that no critical need or opportunity is overlooked.

Senior Asset Managers who have used this tool during the trial have found that they have been able to successfully adapt and apply this to their particular organisation. This tool has the potential to introduce a level of quantification and to additionally generate detailed and specific answers during in early phases of policy development, which would otherwise be affected by uncertainty. This tool is capable of providing significant insights into strategic decision making and policy implementation.

## **9.6 Limitation of the Research**

A significant problem with the use of the Repertory Grid Method: is that it is a time-consuming approach in that it requires the formulation of comprehensive descriptions than would be the case with a purely quantitative approach particularly as completion of the grid is not always straightforward. The larger the grid the more reliable will be the RG, however, the longer it will takes to complete, also there is a greater the risk of losing the respondent's interest. Even a relatively simple grid will take the greater part of an hour to set up and complete the constructs. The scoring will then have to be completed. From start to finish the time required can typically range from one hour to more than two hours. If there are many interviewees, more time will be needed, not only for conducting interviews but also for the analysis of data produced. Thus, time constraints will always impose limits on potential number and range of interviewees in any particular study of this nature. An initial problem found with the study was one of definition, particularly regarding the setting and wording of the objectives and the relevancy of the elements to the objectives as the lack of clear definition may negate the value of the remainder of the Grid. It should be noted that if too much control is imposed, the results can be unreliable through contamination or the generation of a negative reaction on the part of the participants. However, should there be no

control, the choices made by the participants can be unacceptably wide and so individually centred, that any degree of comparison is rendered impossible.

## **9.7 Suggestions for Further Research**

The following suggestions for future research are made:

- The undertaking of a similar study, but covering the housing sector on a regional or national basis in order to establish any variance in the decision making process.
- To undertake a study directed to more fully understand customer perception of the service delivery within the social housing sector either on a regional basis or across the UK and reflecting this within a model. It would also be interesting to establish the regional variations of customer perception of the services provided by their RSLs.
- Continuous business improvement in social housing.
- Supply chain management and identification of the factors influencing key stakeholders.
- Undertake a comparative study of the social housing asset managers in the UK, Europe and USA in order to understand and model differences in approach.
- To undertake a comparative study of the social housing customers in UK, Europe and USA to understand and model the differences that may occur.

## **9.8 Summary**

This study set out with the purpose of evaluating a DSS capable of assisting in the development of housing maintenance strategy within the social housing sector in the UK. Towards the achievement of this aim, the researcher carried out the following:

- a review of existing literature and an in depth examination of current asset management practices within social housing organisations;
- an exploratory case study directed towards ascertaining the extent to which RSLs have advanced towards the achievement a and customer aware and directed assets management delivery service;

- a pilot study to identify the current problems affecting housing maintenance management and levels of customer expectation;
- a series of workshops together with a series of dry runs intended to finely tune the in-depth interviews which were to be conducted (employing a novel tool - a RG) intended to elicit key factors impacting upon the decision making processes involved in formulating housing maintenance strategy;
- an analysis of the relationships between key influencers;
- the development of a DSS model and an evaluation of the usefulness of that model through a process of validation involving the input of four housing providers.

The study revealed seven key clusters which had a significant influence on the developments of housing maintenance strategy. The research also indicated that asset managers need to adopt a more holistic approach to housing maintenance services if they are to develop a '*competitive edge*' and customer responsive service.

It is considered that this study has implications for both social housing sector providers and for academia, particularly in relation developing housing maintenance strategies which encourage innovative technique and strategies capable of enhancing organisational effectiveness and with long-term performance improvement. The research captures the cognitive thought-process of both the asset managers participating in the study and also provides a valuable insight into customer expectations of the services provided to them. In addition, the study recommends that further research should be carried out into the feasibility of adopting a longitudinal research strategy and involving a larger number of social housing organisations in the social housing sector in order to provide further confirmation of the findings arising from this study.

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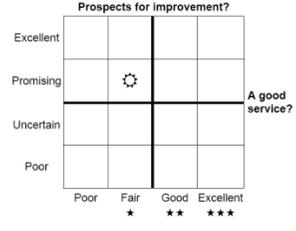
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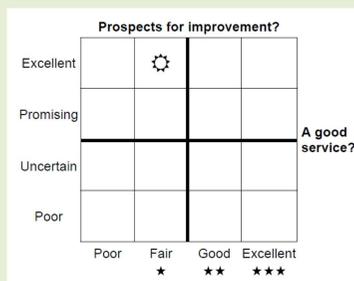
## APPENDIX A - Case study of 5 RSLs

Registered Social Landlord	Audit Commission - Score rating	Weaknesses	Recommendations
<p style="text-align: center;"><b>RSL 1</b></p>	<div style="text-align: center;"> </div> <p>Based on:</p> <ul style="list-style-type: none"> <li>• High standard of customer care to tenants and leaseholders;</li> <li>• Significant improvements in the quality, consistency and availability of key documents for tenants;</li> <li>• Meaningful engagement with tenants to improve services;</li> <li>• Stock condition information;</li> <li>• Effective strategic partnership for decent homes standards compliance;</li> <li>• Maximised resources for investment in decent homes;</li> <li>• Quick response to urgent and routine repairs;</li> <li>• Robust external benchmarking of costs;</li> <li>• Significant improvements in gas servicing.</li> </ul>	<ul style="list-style-type: none"> <li>• Support and supervision arrangements - performance not realised;</li> <li>• Performance improvement plan over-ambitious;</li> <li>• Service improvement plan is still at an early stage;</li> <li>• Council not yet using the complaints system to shape service improvements and address inequitable outcomes;</li> <li>• Evidence of union opposition to the implementation of initiatives such as performance development reviews for all staff;</li> <li>• Disrepair litigation, aids and adaptations is significant with no real certainty about the time frame for delivery of real improvements.</li> </ul>	<ul style="list-style-type: none"> <li>• Review compliance with the requirements of DDA.</li> <li>• Service improvements - adaptations services / capital improvements;</li> <li>• Robust performance management - all services and customers accessibility.</li> <li>• Develop and implement a profile of tenants for service delivery.</li> <li>• Analyse why BME tenants are dissatisfied with service delivery.</li> <li>• Improve complaint response times / analyse complaints by equality / diversity groups.</li> <li>• Develop training on diversity issues for all frontline staff and others.</li> <li>• Increase repair / completion rate of voids within realistic target times.</li> <li>• Review the letting standard.</li> <li>• Develop customer-focused system for repairs and gas servicing.</li> <li>• Improve interview facilities and leaflets in local offices.</li> <li>• Provide user-friendly web site.</li> <li>• Reduce areas of inefficiency - high numbers of pre inspections, urgent and emergency repair orders and repair cancellations,</li> <li>• Establish challenging targets to increase the levels of multi-skilling of operatives.</li> <li>• Implement planned maintenance strategy.</li> <li>• Increase the ratio of planned to responsive expenditure.</li> </ul>

			<ul style="list-style-type: none"> <li>• Reduce rate of tenant refusals of planned works.</li> <li>• Develop strategy to reduce disrepair litigation cases.</li> <li>• Capital programme delivered on time and to budget.</li> <li>• Securing access to properties in order to carry out gas servicing.</li> </ul>
<p><b>RSL 2</b></p>	 <p>Based on:</p> <ul style="list-style-type: none"> <li>• Customer care - easy access to services and attractive information is readily available to customers;</li> <li>• Equality and diversity and effective strategic approach;</li> <li>• Improvements works are well managed and within the budget;</li> <li>• Effective systems of report repairs, resulting in high levels of tenant satisfaction;</li> <li>• Strong performance in collecting the rent;</li> <li>• Strong resident involvement;</li> <li>• Comprehensive approach to anti-social behavior and supported by partnership working;</li> <li>• Empty properties are let more quickly within the agreed standards;</li> <li>• Leaseholders are provided with clear information;</li> </ul>	<ul style="list-style-type: none"> <li>• Customer enquiries, monitoring and customer feedback is not effective;</li> <li>• Two offices do not comply DDA;</li> <li>• Customer profiling (age, ethnicity and diversity) monitoring not sufficient;</li> <li>• Stock investment is not delivered within a strategic framework;</li> <li>• Performance in completing jobs in priority times is weak;</li> <li>• Empty properties take a long time to repair and let;</li> <li>• Partnership arrangements with Council is not effective;</li> <li>• Money and debt advice are not robust;</li> <li>• Inconsistencies in dealing with anti-social behaviour cases;</li> <li>• Widening participation is weak;</li> <li>• Inconsistent estates management strategies;</li> <li>• Allocation of homes is confusing;</li> <li>• Value for money across all its services and procurement has not been effective.</li> </ul>	<ul style="list-style-type: none"> <li>• Strengthen the focus on customers.</li> <li>• Strengthen the strategic approach in key areas.</li> <li>• Strengthen and sustain performance in key service areas aiming to achieve top quartile.</li> <li>• Deliver a consistent estate management service so that estates are managed and maintained to the same standard.</li> <li>• Deliver and demonstrate value for money across all services, integrating it into working practices.</li> <li>• Strengthen performance management.</li> <li>• Strengthen the capacity of the organisation to deliver improvement.</li> <li>• Strengthen the focus on meeting the Decent Homes Standard.</li> <li>• Minimise the financial uncertainties in the relationship between the council and Wolverhampton Homes.</li> </ul>

	<ul style="list-style-type: none"> <li>Value for money is a clear organisational priority.</li> </ul>		
<p><b>RSL 3.</b></p>	<div> </div> <p>Based on:</p> <ul style="list-style-type: none"> <li>Offices are well located, have good access and facilities; staff are friendly, polite and helpful;</li> <li>Homes are of a good standard and are energy efficient; repairs are generally carried out promptly;</li> <li>Good range of rent payment methods and effective prevention and enforcement has resulted in a drop in arrears;</li> <li>Effective approach to anti-social behaviour, invests time and resources in prevention and diversionary activities but takes firm and effective action where necessary;</li> <li>Promotes community cohesion, involving young people, facilitating inter-generational activities and tackling racial harassment.</li> </ul>	<ul style="list-style-type: none"> <li>No published bench mark standards available to compare services;</li> <li>Services are not shaped around customer convenience;</li> <li>Absence of comprehensive approach to diversity;</li> <li>Lack of comprehensive information about its customer profile;</li> <li>Adaptations and improvement works service is underdeveloped;</li> <li>Debt advice underdeveloped;</li> <li>Value for money is not being maximised - to full advantage of modern methods of procurement and inefficiencies in the repairs service.</li> </ul>	<ul style="list-style-type: none"> <li>Strengthen focus on customers.</li> <li>Strengthen the strategic and practical approach to diversity.</li> <li>Strengthen performance management.</li> <li>Develop a more systematic approach improving value for money.</li> </ul>

## RSL 4

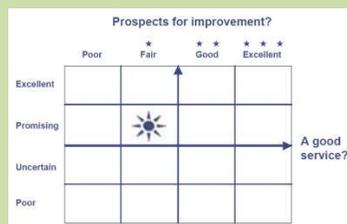


Based on:

- Strong customer focus, staff are helpful and knowledgeable, website is informative;
- Customer involvement in managing and developing services;
- Promoting equality and diversity, backed up by a range of support services to help vulnerable customers;
- Major works delivered effectively and is running ahead of government targets - homes are being improved to a high standard;
- Gas servicing arrangements are effective;
- A wide range of rent payment options, the approach to collecting rent arrears is proportional;
- Tenancy enforcement is effective;
- Regeneration projects and partnership working is at a strength;
- Commitment to value for money.

- Service standards are not consistently publicised or monitored - inconsistencies in the way complaints are dealt with;
- Information for customers are not comprehensive in all service areas;
- Limited information on profile of customers preventing services being tailored to individual needs and engagement with 'hard-to-reach groups' is underdeveloped;
- Lack of publicity about Aids and Adaptations services and delivery is not being tracked;
- No appointments system for responsive repairs and too many repairs are completed as emergencies - no effective monitoring of post inspections;
- Performance on re-letting empty properties and collecting rechargeable repairs income is weak;
- Estate management and maintenance is variable;
- Value for money is not fully embedded across all service areas and under developed;
- Customer involvement in service standards and performance monitoring is underdeveloped and weak;
- Board members, management teams and staff are not fully representative of the broader community they serve and sickness levels remain high.
- Strengthen the focus on customers.
- Strengthen performance management.
- Strengthen service delivery.
- Strengthen the approach to value for money.

## RSL 5



Based on:

- A good understanding of the extent and nature of housing need in the borough;
- Effective partnership working and access to funding opportunities;
- Involvement in regional and sub-regional housing partnership work;
- Decent homes standard targets - one third already achieved;
- Well balanced housing consultative panels with delegated budgets for environmental and community safety work;
- Partnership with Dudley Citizens Advice Bureau to offer advice to new council tenants in order to prevent repeat homelessness;
- The development of a home assistance scheme in line with the Regulatory Reform Order 2002;
- Good progress made towards the Government's 2005 Home Energy Conservation Act target.

- Disabled facilities grant customers are waiting 3.5 years;
- Inadequate line-management and quality control of homelessness case work;
- No service user involvement in developing new homelessness service standards;
- No published service standards for private sector housing;
- No structured arrangements for customer feedback on the homelessness service;
- No formal communication systems for informing tenants and other service users;
- No published nominations agreement for existing housing association homes and poor performance on nominations generally;
- Service users were not consulted on changes to homelessness service delivery;
- The council's hostel for homeless families is institutional and does not provide modern standards of temporary accommodation.

- Implement measures to considerably reduce the waiting time for disabled facilities grants.
- Review housing capital allocations between sectors on the basis of assessed relative needs.
- Develop service standards for private sector housing services in conjunction with public and service users – once in place to monitor and report upon them.
- Monitor and report on the newly established standards for the homelessness service.
- Obtain feedback from homeless and private sector housing service users, report on the findings and use feedback to inform future service developments.
- Ensure that the council's investment priorities for its own stock are communicated to the wider tenant audience.
- Establish feedback mechanisms to customers.
- Develop a comprehensive approach to the line-management and quality control of homelessness case work.
- Undertake a review of the suitability and future use of the hostel for homeless families.
- Ensure that the council achieves its full nomination rights and monitors the quality and types of properties coming through for nominations.
- Devise appropriate performance indicators and targets as part of the home assistance policy and report on performance.

**APPENDIX B – PILOT STUDY – EXPERTS**

**QUESTIONNAIRE: ASSET MANAGERS**

*The Derby University is currently engaged in a number of research projects involving asset management of social housing within the west midlands. This questionnaire has been designed to ascertain critical factors affecting strategic maintenance management of social housing. All answers will be treated in absolute confidence and used only for academic purposes. You are free to skip any question considered 'inquisitive' by putting a line across it. Extra space is provided to enable you to expand your answers to the questions where necessary*

**Questionnaire Survey**

**Thank you.** **Please tick  as appropriate**

**PERSONAL DATA**

1. What is your job title: .....

**MAINTENANCE PERFORMANCE**

2. How effective do you feel organisation was at maintaining its housing stocks?

- Very Good
- Fairly Good
- Neither
- Fairly Poor
- Very Poor

3. How has your maintenance budget developed?

	<b>Very likely</b>	<b>Likely</b>	<b>Unlikely</b>	<b>No Opinion</b>	<b>Not applicable</b>
Historical	<input type="checkbox"/>				
Performance (KPI)	<input type="checkbox"/>				
Other RSL	<input type="checkbox"/>				
Other	<input type="checkbox"/>				

Other(s), please state.....

4. Is your budget for year 2009/2010?

- Overspent  Go to Question 5
- Under spent  Go to Question 6
- On Budget
- Other

Other(s), please state.....

5. If your budget for 09/10 is overspent what was the cause?

	<b>Very likely</b>	<b>Likely</b>	<b>Unlikely</b>	<b>No Opinion</b>	<b>Not Applicable</b>
Overtime	<input type="checkbox"/>				
Contractors	<input type="checkbox"/>				
Materials	<input type="checkbox"/>				
Extra Works	<input type="checkbox"/>				
Legal Notices	<input type="checkbox"/>				
Poor Performance	<input type="checkbox"/>				
Poor Management	<input type="checkbox"/>				

6. If your budget for 09/10 is under spent what was the cause?

	<i>Very likely</i>	<i>Likely</i>	<i>Unlikely</i>	<i>No Opinion</i>	<i>Not applicable</i>
<i>No Overtime</i>	<input type="checkbox"/>				
<i>No Contractors</i>	<input type="checkbox"/>				
<i>Materials</i> <i>(cheaper supplier)</i>	<input type="checkbox"/>				
<i>No Extra Works</i>	<input type="checkbox"/>				
<i>No Legal Notices</i>	<input type="checkbox"/>				
<i>Good Performance</i>	<input type="checkbox"/>				
<i>Good Management</i>	<input type="checkbox"/>				

### Maintenance Planning

7. Listed below are factors which may have some bearing on the maintenance requirements of dwelling unit. Please rank each of the factors according to the following:

<i>Very important</i>	<i>1</i>
<i>Important</i>	<i>2</i>
<i>Not so important</i>	<i>3</i>
<i>No opinion</i>	<i>4</i>
<i>Not Applicable</i>	<i>5</i>

<i>Factors :</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<b>Dwellings</b>					
<i>Low rise</i>	<input type="checkbox"/>				
<i>High-rise</i>	<input type="checkbox"/>				
<i>Size</i>	<input type="checkbox"/>				
<i>Design</i>	<input type="checkbox"/>				
<i>Construction</i>	<input type="checkbox"/>				
<i>Age of property</i>	<input type="checkbox"/>				
<i>Location</i>	<input type="checkbox"/>				
<b>Customer</b>					
<i>Age of tenant</i>	<input type="checkbox"/>				
<i>Stable tenant</i>	<input type="checkbox"/>				
<i>Support</i>	<input type="checkbox"/>				
<i>Family size</i>	<input type="checkbox"/>				
<i>Children</i>	<input type="checkbox"/>				
<i>Black &amp; Ethnic minority</i>	<input type="checkbox"/>				
<i>Disability</i>	<input type="checkbox"/>				
<i>Vulnerable</i>	<input type="checkbox"/>				
<i>Health of tenant</i>	<input type="checkbox"/>				
<i>Right to buy</i>	<input type="checkbox"/>				
<i>Difficult Tenants</i>	<input type="checkbox"/>				
<i>Tenancy issues</i>	<input type="checkbox"/>				
<b>Area</b>					
<i>Orientation of dwelling</i>	<input type="checkbox"/>				
<i>Exposure of dwelling</i>	<input type="checkbox"/>				
<i>Income level</i>	<input type="checkbox"/>				
<i>Anti social behaviour</i>	<input type="checkbox"/>				
<i>Crime</i>	<input type="checkbox"/>				
<i>Vandalism</i>	<input type="checkbox"/>				
<i>Graffiti</i>	<input type="checkbox"/>				
<i>Infrastructure (travel)</i>	<input type="checkbox"/>				

### Human Habitation

<i>Structurally stable</i>	<input type="checkbox"/>				
<i>Serious disrepair</i>	<input type="checkbox"/>				
<i>Dampness prejudicial to health</i>	<input type="checkbox"/>				
<i>Lighting, heating, ventilation</i>	<input type="checkbox"/>				
<i>Supply of water</i>	<input type="checkbox"/>				
<i>Satisfactory facilities Cooking, hot &amp; cold water</i>	<input type="checkbox"/>				
<i>Water closet</i>	<input type="checkbox"/>				
<i>Bath or Shower WHB hot + cold water</i>	<input type="checkbox"/>				
<i>Drainage of foul, waste &amp; surface water</i>	<input type="checkbox"/>				
<i>Legionaries</i>	<input type="checkbox"/>				
<i>Asbestos</i>	<input type="checkbox"/>				
<i>Legal notices</i>	<input type="checkbox"/>				
<i>Energy efficient</i>	<input type="checkbox"/>				
<i>Environmentally Friendly</i>	<input type="checkbox"/>				

8. Listed below are factors which may have some bearing on the Best Value performance framework. Please rank each of the factors according to the following:

- Very important** 1
- Important** 2
- Not so important** 3
- No opinion** 4
- Not Applicable** 5

<b>Factors:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<i>Void Management</i>	<input type="checkbox"/>				
<i>Rent Collection</i>	<input type="checkbox"/>				
<i>Repairs overall</i>	<input type="checkbox"/>				
<i>Tenant satisfaction</i>	<input type="checkbox"/>				
<i>Operating Costs</i>	<input type="checkbox"/>				
<i>Stock transfer and energy efficiency</i>	<input type="checkbox"/>				

9. Listed below are factors which may have some bearing on the Key Performance indicators. Please rank each of the factors according to the following:

- Very important** 1
- Important** 2
- Not so important** 3
- No opinion** 4
- Not Applicable** 5

<b>Factors:</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<i>Access, customer care &amp; user focus</i>	<input type="checkbox"/>				
<i>Diversity</i>	<input type="checkbox"/>				
<i>Strategic approach to housing</i>	<input type="checkbox"/>				
<i>Making the best use of existing housing</i>	<input type="checkbox"/>				
<i>Enabling the provision of more housing</i>	<input type="checkbox"/>				
<i>Value for money</i>	<input type="checkbox"/>				

10. *What the key factors you believe are affecting Housing maintenance management, please specify so, in the space provided* .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....
- .....

*Thank you for your kind assistance*

## APPENDIX C – PILOT STUDY – CUSTOMERS

### QUESTIONNAIRE: RESIDENTS FOCUS GROUP

The Derby University is currently engaged in a number of research projects involving asset management of social housing within the west midlands. This questionnaire has been designed to ascertain critical factors affecting strategic maintenance management of social housing. All answers will be treated in absolute confidence and used only for academic purposes. You are free to skip any question considered 'inquisitive' by putting a line across it. Extra space is provided to enable you to expand your answers to the questions where necessary

*Questionnaire Survey*

*Thank you.* *Please tick  as appropriate*

**Q1 From the services currently provided by your social landlord, which are most important to you?**

Very Important	1					
Important	2					
Niether agree or disagree	3					
Not important	4					
Dont know / not applicable	5					
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Efficient day to day repairs service		<input type="checkbox"/>				
Allocations, including managing waiting lists for housing and requests for moves and transfers		<input type="checkbox"/>				
Customer service		<input type="checkbox"/>				
Security/ Keeping the buildings		<input type="checkbox"/>				
Involving tenants in decision making		<input type="checkbox"/>				
Dealing with anti-social behaviour		<input type="checkbox"/>				
Dealing with nuisance neighbours		<input type="checkbox"/>				
Complaints handling		<input type="checkbox"/>				
Wider estate management/ Upkeep and maintenance of communal grounds		<input type="checkbox"/>				
Taking tenants views into account/listening tenants		<input type="checkbox"/>				
Good quality housing/accommodation		<input type="checkbox"/>				
Major modernisation/upgrades/improvement programmes (kitchens, bathrooms etc.)		<input type="checkbox"/>				
Other please state.....		<input type="checkbox"/>				
Nothing specific		<input type="checkbox"/>				
Don't know		<input type="checkbox"/>				

**Q2 Choose the one service you think is more important to you.**

A good day to day repairs service	<input type="checkbox"/>
Efficient maintenance of the estate and communal grounds	<input type="checkbox"/>
Major modernisation and improvements work (e.g. kitchens and bathroom upgrades)	<input type="checkbox"/>
A fair system, for managing waiting lists for housing and requests for moves and transfers	<input type="checkbox"/>
Good customer service	<input type="checkbox"/>
Effective complaints handling procedures	<input type="checkbox"/>

- Keeping the buildings and entrances secure
- Dealing with anti-social behaviour
- Dealing with nuisance neighbours
- Involving tenants in decision making
- Taking tenants views into account
- The provision of good quality accommodation

**Q3 How satisfied or dissatisfied are you with your social landlord's performance, please circle your response**

- Very Satisfied 1
- Fairly satisfied 2
- Neither satisfied nor dissatisfied 3
- Fairly dissatisfied 4
- Very dissatisfied 5
- Don't know/ Not applicable 6

	1	2	3	4	5	6
Providing a good day to day repairs service	<input type="checkbox"/>					
Efficiently maintaining the estate and communal grounds	<input type="checkbox"/>					
Carrying out major modernisation and improvement work (e.g. kitchens and bathroom upgrades)	<input type="checkbox"/>					
Ensuring a fair system for managing waiting lists and requests for moves and transfers	<input type="checkbox"/>					
Providing good customer service	<input type="checkbox"/>					
Having effective complaints handling	<input type="checkbox"/>					
Keeping the buildings and entrances secure	<input type="checkbox"/>					
Dealing with anti-social behaviour	<input type="checkbox"/>					
Dealing with nuisance neighbours	<input type="checkbox"/>					
Involving tenants in decision making	<input type="checkbox"/>					
Taking tenants views into account	<input type="checkbox"/>					
Providing good quality accommodation	<input type="checkbox"/>					

**Q4 Given the accommodation and the services your social landlord provides, to what extent do you think that the rent for this property represents good or poor value for money? Is it....**

- Very good value 1 go to Q6
- Fairly good value 2 go to Q6
- Neither good nor poor value 3 go to Q6
- Fairly poor value 4 go to Q7
- Very poor value 5 go to Q7
- Don't know 6 go to Q7

**Q5 Why do you rate this as representing good value for money?**

- They make sure important services are looked after
- Work is carried out promptly
- Services are performed to a high standard
- Rent is reasonable
- Landlord keeps residents informed of what is going on
- Good standard of accommodation/living conditions
- Good standard of facilities and amenities
- Landlord listens to tenants/Involve tenants in decision making that will affect them
- Landlord makes improvements/modernisations to my home
- Other please state.....
- Don't know

**Q6 Why do you rate this as poor value for money?**

- Important services are not provided
- Take too long to carry out work
- Services are performed to a low standard
- Rent is too high
- Residents are not kept informed about what is going on
- Poor standard of accommodation/living conditions
- Poor standard of facilities and amenities
- Landlord does not listen to tenants/Involve tenants in decision making that will affect them
- Landlord does not make improvements/modernisations to my home
- Other please state.....
- Don't know

**Q7 What aspects of the services would you suggest that your housing provider needs to improve to give you better value for money – please state**

- Better cost control / fiscal management
- Modernising / upgrading properties
- Listening to tenants
- Keeping property in good condition
- Ensure rents are affordable
- More efficient / quality repairs
- Improved quality of service facilities
- No change – we get better value for money
- Don't Know
- Others... please state

**Q8 Are there any issues that you feel may not have been addressed by this questionnaire if so please state below:**

.....

.....

.....

.....

.....

.....

.....

.....

Thank you for your kind assistance

## APPENDIX D – REPERTORY GRID

### IN DEPTH INTERVIEW QUESTIONNAIRE SURVEY

#### ASSET MANAGER:

#### USING THE REPERTORY GRID

The Derby University is currently engaged in a number of research projects involving asset management of social housing sector. This questionnaire has been designed to ascertain critical factors affecting strategic maintenance management of social housing. All answers will be treated in absolute confidence and used only for academic purposes.

This questionnaire contains a series of elements which form part of the asset maintenance management and a series of statements (constructs) are stated underneath.

When interpreting the statements please consider your own thoughts on this matter, taking into account the attitudes and behaviour within your organisation.

Please consider each statement listed below and rank each factor according to the following sliding scale.

<b>Extremely important</b>	<b>5</b>
<b>Very important</b>	<b>4</b>
<b>Important</b>	<b>3</b>
<b>Neither important / unimportant</b>	<b>2</b>
<b>Not so important / Not applicable</b>	<b>1</b>

#### *Repertory Grid Questionnaire Survey*

*Thank you.*

*Please tick  as appropriate*

**ALL CONSTRUCTS INDICATED WITHIN THIS IN-DEPTH INTERVIEW HAVE BEEN ELICITED THROUGH WORKSHOP 2 AND DRY RUNS. DURING THIS PROCESS LADDERING TECHNIQUES WAS USED TO ENSURE THAT ALL PARTICIPANTS AGREED THAT THE CONSTRUCTS ARE RELEVANT AS WELL AS THEIR ARE ACCURATELY DEFINED AND DESCRIBED.**

	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	
<b>Constructs</b>							<b>Bi-polar</b>
<b>Customer Risks</b>							
How important is customer care provision levels							Weak customer care provision levels
How important is communication with tenants							Poor communication with tenants
How important is customer satisfaction on service delivery							Poor customer satisfaction - service delivery
How important is opportunity for tenants participation							Poor opportunity for tenants to scrutinise service
How important is equality policy							Poorly equality –tenants are not treated equally
How important is customer satisfaction with their HQ							Poor customer satisfaction with their housing quality
How important is accessibility of services							Poor accessibility of services
How important is service level agreement (SLA)							Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
How important is condition property Verses high demand							Poor condition property Verses less demand
How important is provision of DHS							Poor Housing provision DHS
How important is to have accurate database of type and condition of properties							Weak database of type and condition of properties
How importance is developing a planned maintenance programmes							Poorly developed planned maintenance programmes
How important is to have accurate service cost certainty and investment per property							Weak service cost certainty and investment per property
How important is response time to Emergency Repairs and Urgent Repairs (reactive)							Poor response time to Emergency Repairs and Urgent Repairs (reactive)
How important is to have well planned routine repairs and meet completion targets							Poorly planned routine repairs and completion targets met
How important is quality of repairs and performance							Poor quality of repairs and performance
How important is quality of renovations							Poor quality of renovations
How important easy is to manage properties/estates in deprived and stress areas							Difficult -to-manage properties/estates in deprived and stress areas
How important is energy efficiency policy							Weak energy efficiency policy
How important is to reduce the level of vacant voids							High level of vacant void
How often do you get abandonment of properties by residents							High level of abandonment of properties
<b>Tenancy Risks</b>							
How important is Tennant Selection Criteria							Weak Tennant Selection Criteria
How important is have reduced waiting list							High waiting list
How importance often are tenancy offers refused							Low level of tenancy offers that are refused
How important of overcrowding in dwellings							Poorly overcrowded dwellings
How important is attached to homelessness issues in the area							Weak homelessness provision in the area
How easy is it to buy or shared ownership							Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
How important is quality tenants							Weak quality tenants
How important is tenant satisfaction with local environment							Poor tenant satisfaction with local environment
How important is neighbourhood improvements							Poor Neighbourhood improvements
Excellent outsourcing services and partnering							Poor outsourcing services and partnering
How important is reduced Anti-Social Behaviour							High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
How important is fair rents							Poor rents
How important is affordable housing							Poor affordable housing
How important is rent collection and arrears management							Poor rent collection and arrears management
How important is financial stability							Weak financial stability
How important is insolvency – tenants ability to pay rents							Poor Insolvency – tenants ability to pay rents
How important are costs associated with evictions and court actions							Poorly managed evictions and court actions
How important is return in investment							Poor return in investment
How important is refurbishment and redevelopment opportunity							Weak refurbishment and redevelopment opportunity
How easy is to dispose property							Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
How important is tenants participation							Weak tenants participation
How important is it to have stakeholder involvement and partnering							Poor stakeholder involvement and partnering
How important is security provision							Weak security provision
How important is it to have strategic partnerships							Poor strategic partnerships
How important is to have market intelligence – future supply/demand trends							Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
How important is to understand and comply with legislation							Poor understanding and weak directives
How important is corporate governance							Weak corporate governance
How important is Health and safety policy and security							Weak health and safety policy and security
How important is Bench Marking							Poor Bench Marking
How important is social corporate responsibility							Weak social corporate responsibility
How important is managed organisation-management cultural/style							Poorly managed organisation-management cultural /style
How important is staff participation							Poor staff participation

## APPENDIX E – REPERTORY GRID

### **IN DEPTH INTERVIEW QUESTIONNAIRE SURVEY CUSTOMERS:** **USING THE REPERTORY GRID**

The Derby University is currently engaged in a number of research projects involving asset management of social housing sector. This questionnaire has been designed to ascertain critical factors affecting strategic maintenance management of social housing. All answers will be treated in absolute confidence and used only for academic purposes.

This questionnaire contains a series of elements which form part of the asset maintenance management and a series of statements (constructs) are stated underneath.

When interpreting the statements please consider your own thoughts on this matter.

Please consider each statement listed below and rank each factor according to the following sliding scale.

<b>Extremely important</b>	<b>5</b>
<b>Very important</b>	<b>4</b>
<b>Important</b>	<b>3</b>
<b>Neither important / unimportant</b>	<b>2</b>
<b>Not so important / Not applicable</b>	<b>1</b>

#### *Repertory Grid Questionnaire Survey*

*Thank you.*

*Please tick  as appropriate*

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**ALL CONSTRUCTS INDICATED WITHIN THIS IN-DEPTH INTERVIEW HAVE BEEN ELICITED THROUGH WORKSHOP 2 AND DRY RUNS. DURING THIS PROCESS LADDERING TECHNIQUES WAS USED TO ENSURE THAT ALL PARTICIPANTS AGREED THAT THE CONSTRUCTS ARE RELEVANT AS WELL AS THEIR ARE ACCURATELY DEFINED AND DESCRIBED.**

	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Constructs</b>							
<b>Customer Risks</b>							
How important is customer care provision levels							Weak customer care provision levels
How important is communication with tenants							Poor communication with tenants
How important is customer satisfaction on service delivery							Poor customer satisfaction - service delivery
How important is opportunity for tenants participation							Poor opportunity for tenants to scrutinise service
How important is equality policy							Poorly equality –tenants are not treated equally
How important is customer satisfaction with their HQ							Poor customer satisfaction with their housing quality
<b>Asset Management Risks</b>							
How important is response time to Emergency Repairs and Urgent Repairs (reactive)							Poor response time to Emergency Repairs and Urgent Repairs (reactive)
How important is to have well planned routine repairs and meet completion targets							Poorly planned routine repairs and completion targets met
How important is quality of repairs and performance							Poor quality of repairs and performance
How important is quality of renovations							Poor quality of renovations
<b>Tenancy Risks</b>							
How important is Tennant Selection Criteria							Weak Tennant Selection Criteria
How important is have reduced waiting list							High waiting list
<b>Neighbourhood and community risks</b>							
How important is good quality tenants							Weak quality tenants
How important is tenant satisfaction with local environment							Poor tenant satisfaction with local environment
How important is Neighbourhood improvements							Poor Neighbourhood improvements
How important is to reduced Anti-Social Behaviour							High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
How important is fair rents							Poor rents
<b>(Business) Continuous Service improvement risks</b>							
How important is security provision							Weak security provision
<b>Corporate risks</b>							
How important is Health and safety policy and security							Weak health and safety policy and security
How important is social corporate responsibility							Weak social corporate responsibility
How important is value for money service							Poor value for money services
How important is ABS reporting systems, response and victim support							Poor ABS reporting systems, response and victim support

## APPENDIX F – REPERTORY GRID DATA

### Asset Manager 1

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	3.5	3.5	2.5	3.5	3.5	4.0	Low customer care provision levels
Excellent communication with tenants	2.5	3.5	1.0	4.0	4.0	3.5	Poor communication with tenants
High customer satisfaction on service delivery	3.0	3.0	2.0	3.0	4.5	3.5	Poor customer satisfaction - service delivery
High opportunity for tenants participation	2.0	2.5	2.5	3.5	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.5	3.5	3.5	3.5	3.5	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	2.5	2.5	3.5	4.0	4.0	4.0	Poor customer satisfaction with their housing quality
Good accessibility of services	2.5	3.0	2.0	3.5	3.5	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	2.5	3.5	3.0	4.0	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	4.5	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	2.5	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	3.0	3.5	1.0	3.0	3.5	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.5	3.5	2.5	2.5	3.0	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	2.5	3.0	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	3.0	3.5	4.0	Poor quality of repairs and performance
High quality of renovations	3.5	3.0	1.0	3.5	3.5	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	2.0	3.0	2.5	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	3.0	2.0	5.0	4.0	5.0	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	2.0	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	4.5	1.0	3.0	3.5	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	4.5	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.0	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	3.0	4.5	3.5	3.0	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	2.8	3.0	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	4.5	Poor affordable housing
Good rent collection and arrears management	3.0	2.5	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	2.5	1.0	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.5	3.5	4.5	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	3.5	3.5	4.5	Poor return in investment
Good refurbishment and redevelopment opportunity	3.5	1.5	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	4.0	4.0	2.0	Weak tenants participation
High level of stakeholder involvement and partnering	2.5	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	3.5	3.5	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	3.5	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	3.5	4.0	3.5	4.0	4.0	3.5	Poor understanding and weak directives
Strong corporate governance	3.5	4.5	3.0	4.0	4.0	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	1.0	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	3.5	4.0	3	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	4.0	3.0	4.0	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.5	4.0	2.0	2.0	2.0	5.0	Poor staff participation

## Asset Manager 2

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	2.5	3.0	2.5	4.0	3.5	4.0	Low customer care provision levels
Excellent communication with tenants	2.5	3.0	3.0	4.0	4.0	3.5	Poor communication with tenants
High customer satisfaction on service delivery	3.0	2.0	2.0	3.0	3.5	3.5	Poor customer satisfaction - service delivery
High opportunity for tenants participation	2.0	2.5	2.5	3.5	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.5	3.5	3.5	3.5	3.5	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	2.5	2.5	3.5	4.0	4.0	4.0	Poor customer satisfaction with their housing quality
Good accessibility of services	2.5	3.0	2.0	3.5	3.5	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	2.5	3.5	2.5	4.0	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	4.5	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	3.0	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	2.5	3.0	1.0	3.0	4.0	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.0	3.5	2.5	2.5	3.0	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	2.0	3.5	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	3.5	3.5	4.0	Poor quality of repairs and performance
High quality of renovations	3.0	3.0	1.0	3.5	3.5	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	2.5	3.0	2.0	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	5.0	2.0	5.0	4.0	5.0	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	3.0	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	4.0	1.0	3.0	4.0	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	4.0	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	3.5	4.5	3.5	3.5	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	3.0	3.5	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	4.5	Poor affordable housing
Good rent collection and arrears management	3.0	2.0	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	2.5	1.5	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.0	3.0	4.0	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	3.0	3.0	4.0	Poor return in investment
Good refurbishment and redevelopment opportunity	4.0	1.0	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.0	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	3.5	3.5	2.5	Weak tenants participation
High level of stakeholder involvement and partnering	2.0	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	4.0	4.0	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	2.0	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	4.0	4.0	3.5	4.0	4.0	3.5	Poor understanding and weak directives
Strong corporate governance	3.5	4.5	2.5	3.5	3.5	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	2.0	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	4.0	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	4.0	2.0	3.5	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.0	4.0	2.0	3.0	3.0	5.0	Poor staff participation

## Asset Manager 3

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	3.0	2.5	2.5	3.5	3.5	4.0	Low customer care provision levels
Excellent communication with tenants	2.5	4.0	2.0	3.5	4.0	3.0	Poor communication with tenants
High customer satisfaction on service delivery	3.0	2.0	2.0	3.0	4.0	4.0	Poor customer satisfaction - service delivery
High opportunity for tenants participation	3.0	3.0	2.5	3.5	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.5	4.0	3.5	3.5	3.5	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	2.5	2.5	3.5	4.0	4.0	4.0	Poor customer satisfaction with their housing quality
Good accessibility of services	3.0	4.0	2.0	3.5	3.5	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	3.0	3.5	2.5	4.0	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	5.0	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	2.5	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	2.5	3.0	1.0	3.0	3.5	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.0	3.5	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	2.0	3.5	1.0	2.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	3.5	3.5	4.0	Poor quality of repairs and performance
High quality of renovations	3.5	3.0	1.0	3.5	3.5	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	3.0	3.0	2.5	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	3.0	2.0	5.0	4.0	5.0	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	3.0	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	4.5	1.0	3.0	3.5	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	4.5	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	2.0	4.5	3.5	3.5	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	2.6	4.0	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	5.0	Poor affordable housing
Good rent collection and arrears management	3.0	2.5	4.0	4.0	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	3.0	1.0	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.5	3.5	4.5	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	3.5	3.5	4.5	Poor return in investment
Good refurbishment and redevelopment opportunity	3.5	1.5	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	3.5	3.5	2.5	Weak tenants participation
High level of stakeholder involvement and partnering	3.0	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3	4.0	4.0	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	3.5	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	3.0	4.0	3.5	4.0	4.0	3.0	Poor understanding and weak directives
Strong corporate governance	3.5	4.5	2.5	3.5	3.5	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	1.5	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	4.0	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	2.0	3.5	3.5	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.5	4.0	1.5	3.5	3.5	5.0	Poor staff participation

## Asset Manager 4

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	2.5	2.5	2.5	2.5	3.5	4.0	Low customer care provision levels
Excellent communication with tenants	2.5	4.0	2.0	3.0	2.5	4.0	Poor communication with tenants
High customer satisfaction on service delivery	3.0	2.5	2.5	2.0	3.5	3.5	Poor customer satisfaction - service delivery
High opportunity for tenants participation	2.5	3.5	3.0	3.0	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.5	3.5	3.0	3.0	3.0	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	2.5	3.0	3.5	3.75	3.75	3.75	Poor customer satisfaction with their housing quality
Good accessibility of services	2.0	3.5	2.0	3.0	3.0	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	2.5	3.5	3.0	4.0	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	4.5	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	2.5	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	2.5	3.5	1.0	3.0	3.5	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.0	3.0	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	2.5	4.0	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	4.0	4.0	4.0	Poor quality of repairs and performance
High quality of renovations	3.5	3.0	1.0	3.5	3.5	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	2.5	3.0	3.0	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	4.0	2.0	5.0	4.0	4.5	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	2.5	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	4.5	1.0	3.0	3.5	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	4.0	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	3.5	4.5	3.5	4.0	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	2.6	3.5	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	4.0	Poor affordable housing
Good rent collection and arrears management	3.0	3.0	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	2.5	1.0	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.5	3.5	4.5	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	3.5	3.5	4.5	Poor return in investment
Good refurbishment and redevelopment opportunity	3.0	2.0	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	3.5	3.5	2.5	Weak tenants participation
High level of stakeholder involvement and partnering	2.5	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	3.0	3.0	4.5	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	3.5	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	3.5	4.0	3.5	4.0	4.0	4.0	Poor understanding and weak directives
Strong corporate governance	4.0	4.5	2.5	3.5	3.5	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	1.5	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	4.0	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	3.5	3.5	2.0	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.5	4.0	1.5	3.5	3.5	5.0	Poor staff participation

## Asset Manager 5

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	3.5	3.5	3.0	3.0	4.0	4.0	Low customer care provision levels
Excellent communication with tenants	2.5	3.5	1.0	2.5	2.5	3.0	Poor communication with tenants
High customer satisfaction on service delivery	3.0	1.5	2.5	3.0	4.0	3.5	Poor customer satisfaction - service delivery
High opportunity for tenants participation	3.0	3.5	2.5	4.0	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.5	4.0	4.0	4.0	4.0	4.0	Poorly equal –tenants are not treated equally
High customer satisfaction with their housing quality	2.5	2.5	3.5	4.0	4.0	4.0	Poor customer satisfaction with their housing quality
Good accessibility of services	2.5	3.5	2.0	4.0	4.0	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	2.0	3.5	3.0	4.0	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	4.0	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	2.0	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	3.0	2.5	1.0	3.0	4.0	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.5	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.0	3.0	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	3.0	3.5	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	4.0	4.0	4.0	Poor quality of repairs and performance
High quality of renovations	3.5	3.5	1.0	3.5	3.5	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	1.0	3.0	3.0	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	4.0	2.0	5.0	4.0	4.0	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	2.5	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	4.5	1.0	3.0	3.5	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	5.0	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	5.0	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	3.0	4.5	3.5	3.0	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	3.0	3.0	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	4.0	Poor affordable housing
Good rent collection and arrears management	3.0	1.5	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	3.0	1.5	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.0	3.0	5.0	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	3.0	3.0	5.0	Poor return in investment
Good refurbishment and redevelopment opportunity	3.0	2.0	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.0	4.0	4.0	4.0	4.0	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	3.5	3.5	2.5	Weak tenants participation
High level of stakeholder involvement and partnering	2.5	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	3.5	3.5	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	3.5	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	3.5	4.0	3.5	4.0	4.0	3.0	Poor understanding and weak directives
Strong corporate governance	4.0	4.5	2.5	4.0	4.0	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	1.5	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	4.0	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	3.5	3.5	3.0	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.5	4.0	1.5	3.0	3.0	5.0	Poor staff participation

## Asset Manager 6

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	2.8	3.0	3.5	2.5	3.8	5.0	Low customer care provision levels
Excellent communication with tenants	2.5	3.0	3.0	3.0	4.0	4.0	Poor communication with tenants
High customer satisfaction on service delivery	3.0	3.0	2.0	3.0	4.0	3.5	Poor customer satisfaction - service delivery
High opportunity for tenants participation	2.0	3.5	2.5	4.0	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.5	4.0	4.0	4.0	4.0	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	2.5	2.5	3.5	4.25	4.25	4.25	Poor customer satisfaction with their housing quality
Good accessibility of services	2.5	3.5	2.0	4.0	4.0	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	3.0	3.5	3.0	4.5	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	5.0	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	3.0	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	2.0	3.0	1.0	3.0	3.5	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.0	3.0	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	3.0	3.5	1.0	4.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	3.5	3.5	4.0	Poor quality of repairs and performance
High quality of renovations	3.5	3.0	1.0	4.0	4.0	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	2.0	3.0	2.5	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	4.0	2.0	5.0	4.0	4.0	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	2.5	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	5.0	1.0	3.0	3.5	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	4.5	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	3.5	4.5	3.5	3.5	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	3.0	3.8	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	4.5	Poor affordable housing
Good rent collection and arrears management	3.0	2.0	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	2.5	1.5	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.5	3.5	4.5	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	3.5	3.5	4.5	Poor return in investment
Good refurbishment and redevelopment opportunity	3.5	1.5	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	3.0	4.0	4.0	2.0	Weak tenants participation
High level of stakeholder involvement and partnering	2.5	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	3.0	3.5	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	3.0	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	3.5	4.0	3.5	4.0	4.0	3.5	Poor understanding and weak directives
Strong corporate governance	3.5	4.5	2.0	3.0	3.0	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	1.5	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	3.5	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	3.5	4.0	3.0	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.0	4.0	2.0	4.0	4.0	5.0	Poor staff participation

## Asset Manager 7

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	3.2	3.5	2.5	3.0	4.0	4.0	Low customer care provision levels
Excellent communication with tenants	3.0	3.0	2.0	2.5	2.5	4.0	Poor communication with tenants
High customer satisfaction on service delivery	3.0	3.0	1.5	4.0	4.0	3.0	Poor customer satisfaction - service delivery
High opportunity for tenants participation	3.0	3.5	1.0	3.0	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	3.0	4.0	3.0	3.0	3.0	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	3.0	1.0	3.5	4.5	4.5	4.5	Poor customer satisfaction with their housing quality
Good accessibility of services	2.5	3.5	2.0	3.0	3.0	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	2.5	3.0	3.5	4.0	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	5.0	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	2.0	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	1.0	3.0	1.0	3.0	3.0	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.5	3.0	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	2.5	3.0	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	3.5	3.5	4.0	Poor quality of repairs and performance
High quality of renovations	4.0	3.0	1.0	3.5	3.5	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	1.0	3.0	2.5	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	4.0	2.0	5.0	4.0	4.5	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	2.0	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	5.0	1.0	3.0	3.5	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	4.0	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	2.0	4.5	3.5	4.0	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	2.6	3.3	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	4.5	Poor affordable housing
Good rent collection and arrears management	3.0	3.0	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	2.0	2.0	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.5	3.5	4.5	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	3.5	3.5	4.5	Poor return in investment
Good refurbishment and redevelopment opportunity	3.5	1.5	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	3.5	3.5	2.5	Weak tenants participation
High level of stakeholder involvement and partnering	3.0	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	3.5	3.5	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	3.0	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	3.5	4.0	3.5	4.0	4.0	4.0	Poor understanding and weak directives
Strong corporate governance	3.5	4.5	2.5	3.5	3.5	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	2.0	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	3.5	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	3.5	3.5	3.5	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.5	4.0	1.5	3.5	3.5	5.0	Poor staff participation

## Asset Manager 8

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	3.0	3.5	2.5	3.5	3.8	4.0	Low customer care provision levels
Excellent communication with tenants	2.0	3.5	2.0	2.5	3.0	3.0	Poor communication with tenants
High customer satisfaction on service delivery	3.0	3.0	2.0	3.5	4.0	3.5	Poor customer satisfaction - service delivery
High opportunity for tenants participation	2.5	3.5	3.0	4.0	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.0	3.5	4.0	4.0	4.0	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	2.0	3.0	3.5	3.5	3.5	3.5	Poor customer satisfaction with their housing quality
Good accessibility of services	2.5	3.0	2.0	4.0	4.0	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	2.5	4.0	4.0	4.0	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	4.0	4.0	4.5	4.0	4.0	5.0	Poor condition property Verses less demand
Excellent Housing provision DHS	4.0	2.0	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	4.0	2.0	1.0	3.0	3.5	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	3.0	3.5	2.5	3.0	3.0	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	2.5	4.0	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	3.5	3.5	4.0	Poor quality of repairs and performance
High quality of renovations	3.5	3.0	1.0	3.5	3.5	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	1.5	3.0	2.5	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	5.0	2.0	5.0	4.0	4.0	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	2.5	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	4.5	1.0	3.0	3.0	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	5.0	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	3.5	4.5	3.5	3.5	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	3.0	3.1	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	5.0	Poor affordable housing
Good rent collection and arrears management	3.0	2.0	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	2.5	2.0	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	3.5	3.5	4.5	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	3.5	3.5	4.5	Poor return in investment
Good refurbishment and redevelopment opportunity	4.0	1.5	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	3.0	3.0	3.0	Weak tenants participation
High level of stakeholder involvement and partnering	2.5	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	3.5	3.0	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	3.5	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	3.0	4.0	3.5	4.0	4.0	3.5	Poor understanding and weak directives
Strong corporate governance	3.5	4.5	2.5	3.5	3.5	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	1.5	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	3.5	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	3.0	4.0	3.0	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.5	4.0	1.5	3.5	3.5	5.0	Poor staff participation

## Asset Manager 9

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	3.0	2.5	3.0	3.5	3.8	4.0	Low customer care provision levels
Excellent communication with tenants	2.5	3.5	2.0	3.0	4.0	4.0	Poor communication with tenants
High customer satisfaction on service delivery	3.0	2.5	2.0	3.5	4.0	3.5	Poor customer satisfaction - service delivery
High opportunity for tenants participation	2.5	3.0	3.0	3.0	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.5	3.5	3.0	3.0	3.0	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	3.0	3.0	3.5	4.5	4.5	4.5	Poor customer satisfaction with their housing quality
Good accessibility of services	2.5	3.5	2.0	3.0	3.0	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	2.0	3.5	3.5	4.0	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	3.0	4.0	4.5	4.0	4.0	4.5	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	2.5	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	2.0	2.0	1.0	3.0	3.5	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	3.0	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.5	3.0	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	2.5	4.0	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	3.0	3.0	4.0	Poor quality of repairs and performance
High quality of renovations	3.5	3.0	1.0	3.0	3.0	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	1.5	3.0	2.0	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	4.0	2.0	5.0	4.0	4.5	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tennant Selection Criteria	3.0	3.0	4.0	4.0	4.0	4.0	Weak Tennant Selection Criteria
Reduced waiting list	3.0	4.0	1.0	3.0	4.0	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	5.0	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	3.5	4.5	3.5	3.5	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	2.7	3.5	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	4.5	Poor affordable housing
Good rent collection and arrears management	3.0	3.0	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	2.5	1.5	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	4.0	4.0	5.0	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	4.0	4.0	5.0	Poor return in investment
Good refurbishment and redevelopment opportunity	3.5	1.5	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	1.5	4.0	4.0	4.0	3.0	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	3.5	3.5	2.5	Weak tenants participation
High level of stakeholder involvement and partnering	2.5	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	3.5	3.5	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	2.0	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	3.5	4.0	3.5	4.0	4.0	3.5	Poor understanding and weak directives
Strong corporate governance	3.0	4.5	2.5	3.5	3.5	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	2.0	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	3.5	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	2.0	3.5	3.0	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.5	4.0	1.5	3.5	3.5	5.0	Poor staff participation

# Asset Manager 10

Constructs	Private	Affordable	Leasehold	First Time Buyer	Shared Owner	Sheltered	Bi-polar
<b>Customer Risks</b>							
High customer care provision levels	3.0	2.5	3.0	3.5	3.5	3.0	Low customer care provision levels
Excellent communication with tenants	2.5	3.5	2.0	2.5	3.5	3.0	Poor communication with tenants
High customer satisfaction on service delivery	3.0	2.5	2.0	2.0	4.5	3.5	Poor customer satisfaction - service delivery
High opportunity for tenants participation	2.5	3.0	3.0	3.5	4.0	4.0	Poor opportunity for tenants to scrutinise service
Excellent equality policy	2.5	3.5	3.5	3.5	3.5	4.0	Poorly equality –tenants are not treated equally
High customer satisfaction with their housing quality	2.0	3.0	3.5	3.5	3.5	3.5	Poor customer satisfaction with their housing quality
Good accessibility of services	2.5	3.5	2.0	3.5	3.5	4.5	Poor accessibility of services
High service level agreement (SLA)	3.0	3.5	2.5	3.5	2.0	4.5	Weak service level agreement (SLA)
<b>Asset Management Risks</b>							
Good condition property Verses high demand	2.0	4.0	4.5	4.0	4.0	4.0	Poor condition property Verses less demand
Excellent Housing provision DHS	3.0	2.0	3.5	4.0	4.5	4.0	Poor Housing provision DHS
An accurate database of type and condition of properties	2.5	2.5	1.0	3.0	3.0	4.0	Weak database of type and condition of properties
Highly developed planned maintenance programmes	2.5	3.5	1.5	2.5	3.0	4.5	Poorly developed planned maintenance programmes
Accurate service cost certainty and investment per property	2.5	3.5	2.5	3.0	2.5	4.5	Weak service cost certainty and investment per property
High response time to Emergency Repairs and Urgent Repairs (reactive)	3.0	3.5	1.0	3.0	3.5	4.5	Poor response time to Emergency Repairs and Urgent Repairs (reactive)
Well planned routine repairs and completion targets met	2.5	4.0	1.0	3.0	3.0	4.5	Poorly planned routine repairs and completion targets met
High quality of repairs and performance	3.0	3.5	2.0	3.0	3.0	4.0	Poor quality of repairs and performance
High quality of renovations	3.5	2.5	1.0	3.5	3.5	4.0	Poor quality of renovations
Easy-to-manage properties/estates in deprived and stress areas	2.5	3.0	3.0	2.5	3.0	3.5	Difficult -to-manage properties/estates in deprived and stress areas
Excellent energy efficiency policy	2.5	3.5	2.0	3.0	3.0	2.5	Weak energy efficiency policy
Reduced level of voids vacant	4.0	2.0	5.0	4.0	4.5	5.0	High level of vacant void
A few abandonment of properties by residents	3.0	2.0	5.0	4.5	5.0	5.0	High level of abandonment of properties
<b>Tenancy Risks</b>							
Good Tenant Selection Criteria	3.0	3.0	4.0	4.0	4.0	4.0	Weak Tenant Selection Criteria
Reduced waiting list	3.0	4.5	1.0	3.0	3.0	4.0	High waiting list
High level of tenancy offers that are frequently refused	4.0	4.5	1.0	2.0	3.0	3.0	Low level of tenancy offers that are frequently refused
Minimised overcrowding in dwellings	3.5	2.5	5.0	4.0	4.0	5.0	Poorly overcrowded dwellings
Minimised homelessness issues in the area	2.5	3.5	4.5	3.5	4.0	4.5	Weak homelessness provision in the area
Easy to buy or shared ownership	2.0	3.0	4.5	3.5	3.5	2.0	Weak right buy or shared ownership provision
<b>Neighbourhood and community risks</b>							
Good quality tenants	3.0	2.5	3.0	4.5	4.0	4.0	Weak quality tenants
High tenant satisfaction with local environment	2.5	2.5	3.0	3.5	4.0	4.5	Poor tenant satisfaction with local environment
Excellent Neighbourhood improvements	3.0	2.6	3.3	3.0	3.5	4.0	Poor Neighbourhood improvements
Excellent outsourcing services and partnering	3.0	3.0	4.0	4.0	4.5	4.0	Poor outsourcing services and partnering
Reduced Anti-Social Behaviour	3.5	2.5	3.5	3.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic risks</b>							
Excellent Fair rents	4.0	3.0	4.0	4.0	4.0	5.0	Poor rents
High affordable housing	2.0	4.0	4.0	4.0	4.0	4.5	Poor affordable housing
Good rent collection and arrears management	3.0	2.5	4.0	3.5	4.0	4.5	Poor rent collection and arrears management
Good financial stability	4.5	2.5	4.5	4.0	4.0	4.5	Weak financial stability
High Insolvency – tenants ability to pay rents	3.0	4.5	1.0	3.0	2.0	1.0	Poor Insolvency – tenants ability to pay rents
Minimise Costs Associated with evictions and court actions	3.5	1.5	4.0	4.0	4.0	4.5	Poorly managed evictions and court actions
Good return in investment	4.0	2.5	4.0	4.0	4.0	4.5	Poor return in investment
Good refurbishment and redevelopment opportunity	3.0	1.0	4.0	3.0	3.0	3.0	Weak refurbishment and redevelopment opportunity
Excellent disposal of property	4.0	2.0	4.0	4.0	4.0	3.5	Poor disposal of property
<b>(Business) Continuous Service improvement risks</b>							
Excellent tenants participation	3.0	3.0	2.5	3.0	3.0	3.0	Weak tenants participation
High level of stakeholder involvement and partnering	3.0	3.0	3.5	4.0	4.0	4.0	Poor stakeholder involvement and partnering
High security provision	3.0	3.0	3.0	3.0	3.5	5.0	Weak security provision
Excellent strategic partnerships	3.0	3.5	2.5	3.0	3.0	4.5	Poor strategic partnerships
High Market intelligence – future supply and demand trends	2.0	2.0	5.0	4.0	4.0	4.0	Weak market intelligence – future supply and demand trends
<b>Corporate risks</b>							
High understanding and compliance of legislation	4.0	4.0	3.5	4.0	4.0	3.5	Poor understanding and weak directives
Strong corporate governance	3.0	4.5	2.5	3.5	3.5	4.0	Weak corporate governance
Sound Health and safety policy and security	3.0	3.5	2.0	3.0	3.0	5.0	Weak health and safety policy and security
Excellent Bench Marking	3.5	4.0	3.0	3.5	3.5	4.5	Poor Bench Marking
High Social corporate responsibility	4.0	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
Well managed organisation - management cultural and style	3.0	3.0	3.5	4.0	4.0	5.0	Poorly managed organisation - management cultural and style
High staff participation	2.5	4.0	2.0	3.0	3.5	5.0	Poor staff participation

## APPENDIX G – REPERTORY GRID

### Customers - Summary

Constructs	Private	Affordable	Leasehold	FTB	Shared Owner	Sheltered	Bi-Polar
<b>Customer Factors</b>							<b>Customer Factors</b>
1 High customer care levels	2.5	2.0	2.0	4.0	4.0	4.0	Low customer care levels
2 Excellent communication with tenants	2.5	3.0	1.5	3.5	4.0	4.0	Poor communication with tenants
3 High customer satisfaction – service delivery	2.5	2.5	2.0	3.5	4.0	4.5	Poor customer satisfaction – service delivery
4 High opportunity for tenants participation	1.0	2.5	1.0	3.0	3.5	4.0	Poor opportunity for tenants to scrutinise service
5 Excellent equality policy	1.0	2.5	2.5	3.5	3.5	4.0	Poor equality policy
6 High customer satisfaction with housing quality	3.0	2.5	4.0	3.5	4.0	4.5	Poor customer satisfaction with housing quality
<b>Asset Management Factors</b>							<b>Asset Management Factors</b>
7 High response time to Emergency Repairs and Urgent Repairs	2.5	3.0	1.5	3.0	3.5	4.0	Poor response time to Emergency Repairs and Urgent Repairs
8 Well planned routine repairs and completion targets met	3.0	3.5	1.5	3.5	4.0	4.5	Poorly planned routine repairs and completion targets met
9 High quality of repairs and performance	3.5	2.5	1.0	4.0	4.0	4.0	Poor quality of repairs and performance
10 High quality of renovations	4.0	3.5	2.0	3.5	3.5	4.0	Poor quality of renovations
<b>Tenancy Factors</b>							<b>Tenancy Factors</b>
11 Good Tennant Selection Criteria	2.5	2.0	4.0	4.0	4.5	4.5	Weak Tennant Selection Criteria
12 Reduced waiting list	1.0	1.0	3.0	2.0	2.0	1.0	High waiting list
13 Low level of tenancy offers that are frequently refused	2.0	1.5	1.0	2.5	3.0	2.5	High level of tenancy offers that are frequently refused
<b>Neighbourhood and community Factors</b>							<b>Neighbourhood and community Factors</b>
14 Good quality tenants	2.5	2.0	1.5	4.0	4.0	5.0	Weak quality tenants
15 High tenant satisfaction with local environment	2.0	1.0	4.0	2.5	3.5	4.5	Poor tenant satisfaction with local environment
16 Excellent Neighbourhood improvements	2.0	3.0	4.0	4.0	4.0	4.5	Poor neighbourhood improvements
17 Reduced level of Anti-Social Behaviour	3.0	2.5	4.0	4.5	4.5	4.5	High level of Anti-Social Behaviour
<b>Financial and economic Factors</b>							<b>Financial and economic Factors</b>
18 Excellent Fair rents	4.0	1.5	4.0	4.0	4.0	3.5	Poor rents
<b>(Business) Continuous Service improvement Factors</b>							<b>(Business) Continuous Service improvement risks</b>
19 Good security provision	2.0	1.5	4.0	3.5	4.0	4.5	Weak security provision
<b>Corporate Factors</b>							<b>Corporate Factors</b>
20 Sound Health and Safety policy and security	3.5	3.0	2.5	3.5	4.0	5.0	Weak Health and Safety policy and security
21 High social corporate responsibility	3.5	4.0	3.5	4.0	4.0	5.0	Weak social corporate responsibility
22 Good Value for Money Service	3.5	2.5	4.5	3.5	3.5	4.0	Poor value for Money Service
23 Excellent reporting ASB, response and good victim support	2.0	2.5	3.5	3.5	3.5	4.0	Weak reporting ASB, response and good victim support

## APPENDIX H - PUBLICATIONS

Third World of Construction Project Management Conference (WCPM 2010). Coventry University.

### **An Overview of Asset Management of Social Housing in UK – A Decent Homes Approach**

**A. Sagoo\***, **M. Okoro<sup>†</sup>**, **C. Jones<sup>‡</sup>**, **T. Sihra<sup>‡†</sup>**

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