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2021
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EXPLORING THE ROLE OF SOCIAL ARCHITECTURAL DESIGN IN THE IMPLEMENTATION OF PUBLIC HOUSING DEVELOPMENTS IN THE INNER CITY OF JOHANNESBURG

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A research report submitted to the Faculty of Engineering and the Built Environment, University of the Witwatersrand, in fulfilment of the requirements for the degree of Master of Built Environment in Housing

Johannesburg, 2020

Declaration

I, Limeze Yasmien Suleman, declare that this research is my own unaided work except where otherwise acknowledged. It is being submitted for the Degree of **Master of Built Environment in Housing** to the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.



…….....

27th day of October 2020

Abstract

Access to well-designed and liveable housing in South Africa by marginalised groups presents an array of complexities due to the disparity between the demand and supply. The interplay between designed spaces and the impact it has on the consumption of space with regards to meeting the everyday needs of people should be a key area of focus in the design process of contemporary architecture. This study assessed the role Social Architecture plays in facilitating the physical and social accommodation of residents, especially marginalised groups. This exploratory study was informed by findings from semi-structured interviews with practitioners in the field of built environment and public sector officials responsible for regulating and implementing public housing policy. The findings and analysis demonstrate that Social Architecture applied in public residential design practice can improve the quality of housing and living conditions of end-users. The application of the principles of Social Architecture within the context of public residential projects requires specific guidelines that enhance the processes and practices employed by practitioners. This study thus presents a proposed reconfiguration of the conventional architectural work stages to include aspects socially inclusive design in the design processes for residential developments.

Key words: Social; architecture; implementation; public residential housing, inner city, Johannesburg

Dedication

To all the phenomenal women whose shoulders I stand on and inspire me to soar higher. I love and appreciate all of you. This research report is dedicated to my mother, Yasmien Bijoux, my aunt Wayida Mohamed, my sister, Imaan Bijoux and my grandmothers, Jane Bijoux and Dolaris Issel.

Acknowledgments

There were many points along this journey when I felt completely defeated and wanted to give in. The almighty Allah (SWT) ensured that I was divinely protected and had the wisdom to persevere and complete this task to the best of my ability.

As I struggled with limitation, I also experienced the power of human kindness and the realisation that we are all bound to each other. I would like to express my sincere appreciation to everyone that has encouraged me in different ways towards completing my master's degree.

To my parents, Yasmien and Michael Bijoux thank you for always supporting my growth and for loving me unconditionally. Thank you to my extended family and in-laws for your relentless support, warm cooked meals, comic relief, childcare services, and kind words of encouragement- I am eternally grateful for your presence in my life. To my husband, Shiraz and three kids, Mikaeel, Nuha and Sa'ad, thank you for sharing our time and space for me to dedicate to my studies- I am because you are...

I would like to extend my gratitude to my supervisor, Dr. Gerald Chungu who was incredibly patient and understanding from inception until close-out! His insights and guidance assisted me immensely and I probably would not have reached this point had it not been for him.

To my MBE housing classmates, friends and colleagues from the City of Johannesburg thank you all for walking with me along this journey and helping me to realise that taking on this task was possible irrespective of the elusive work-life-study balance.

Once we believe in ourselves, we can risk curiosity, wonder, spontaneous delight, or any experience that reveals the human spirit. EE. Cummings

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Nomenclature/List of Acronyms

BNG	Breaking New Ground
CSIR	Council for Scientific and Industrial Research
DBB	Design-Bid- Build
EIA	Environmental Impact Assessment
GDS	Growth and Development Strategy
ICHIP	Inner City Housing Implementation Plan
JDA	Johannesburg Development Agency
JHC	Johannesburg Housing Company
JNEAD	Johannesburg's Non-European Affairs Department
JOSHCO	Johannesburg Social Housing Company
MDGs	Millennium Development Goals
NDoHS	National Department of Human Settlements
NDP	National Development Plan
NHBRC	National Home Builders Registration Council
NUSP	National Upgrading Support Programme
RDP	Reconstruction Development Programme
SACAP	South African Council for the Architectural Profession
SDF	Spatial Development Framework
SDGs	Sustainable Development Goals
SHI	Social Housing Institution

UISP	Upgrading of Informal Settlements Programme
UDF	Urban Development Framework

1 INITIATING THE STUDY

1.1. Introduction

The shape and form of the inner city of Johannesburg, how it is designed and consumed provided a nuanced lens into the architectural dynamics present in the city. The metropolitan core has an array of interesting yet complex realities that constitute its built form. On the one hand, there is the young family compressed into a one-room unit in a low-income block of flats, the vagrant who has made the pavement his or her place to stay and not too far from there, the resuscitation of a once derelict industrial area that attracts a more affluent buyer drawn by the experience of urban city living. Although the economic profile of the occupiers of urban space in the inner city may differ, they are connected by the shared requirement to live in an environment that is responsive to their different individual needs and expectations.

As the economic hub of South Africa, Johannesburg was originally designed from the perspective of accommodating mining activities (Linstra, 2016). Several decades later the city has undergone a metamorphosis of sorts with the emergence of various other industries and the presence of diverse uses of this urban space. It has however been observed that the accommodation needs of marginalised urban dwellers are not adequately provided for by the rigid design and shape of the city. As such the inadequate supply of very affordable housing and the inclusion of the accommodation requirements of marginalised urban inhabitants in the process of designing residential developments is something that requires more understanding and consideration in current spatial planning frameworks and policies. Noble (2010) provokes the idea that there are opportunities in the myriad of urban challenges that are present in Johannesburg’s inner city and this is mainly been driven by progressive built environment practitioners while the local

authority is criticised for being preoccupied by transgression of city by-laws. It emerged that it would be pertinent to understand how these new affirmations of urban space are accommodated to advance the developmental agenda aligned to current housing practices and interventions by the public sector.

The design of place has a direct impact on the way people interact and experience their lived environments (Marschall, 1998). The design of residential developments in the inner city, driven by the public sector is predominantly characterised by multi-storey apartment blocks, which is intended to maximise available space. In addition to the development of greenfield projects, the refurbishment and conversion of old office blocks or abandoned buildings into housing accommodation is a common occurrence throughout the inner city.

Many inhabitants are drawn to the inner city due to its proximity to employment opportunities, public amenities, and transportation nodes. However, whether the existing demands from end-users and the emerging demands from new inhabitants are accommodated in the type of residential accommodation interventions being developed is something that requires further scrutiny.

Although there are various public policy provisions and initiatives that advocate for more engaged approaches and robust public participation processes, the opportunity to participate in the early stages of the design of residential projects remains limited to professionals within the sector. Engaging end-users after the development of concept designs is generally the practice followed in public sector projects and as such, there is not a

collective approach towards participating equally, in how the built environment is shaped.

Participative approaches can be adapted by allowing for a more inclusive exchange between end-users and practitioners which will build on ensuring greater collaboration in the design process (Marschall, 1998). The integration of end-user insights into the design process allows for improved communication and a reciprocal exchange of information which ultimately enhances the development of the final designs.

Driving a fully inclusive residential design approach requires that end-users be involved in all parts of the project development cycle from the planning and detailed design phase up to the post-construction or occupancy phases. This study explored the application of socially inclusive architectural design practices in the implementation and design of public sector residential projects in the inner city of Johannesburg.

1.2 Background and Rationale to the Study

The current spatial disparities that are apparent in the housing sector in South Africa can largely be attributed to the segregative practices that informed the planning and architectural design of residential areas during apartheid. The apartheid policies were premised on separate development, which sought to divide and settle South Africans in different areas based on race. The end of apartheid ushered in a new political regime in 1994. The policies of the newly elected democratic government were directed towards redressing the spatial disparities of the past. This included adopting a housing delivery approach

that was aimed at the mass production of housing units to meet the sizeable demand.

Government through the subsidised housing programme as documented in the White Paper on Housing (1994), the Housing Act (No 107 of 1997) and the Housing Code (2009) has largely shouldered the responsibility with regards to the provision of housing for marginalised groups. The Reconstruction and Development Programme (RDP) was a socio-economic policy framework developed by the African National Congress (ANC) in 1994 and one of the main objectives of this policy was to address the housing backlog through the provision of housing to marginalised groups in South Africa. The reported outputs from this programme was that by 2015 there were 3 million houses developed (Linstra, 2016). There were also several incremental private sector housing developments, but they were often not targeted at the poorest income groups (i.e. R0 to R3500) with unpredictable incomes and this is where the need for housing was mainly concentrated.

The design and development of residential spaces in this context were both inaccessible and did not accommodate the specific needs of the inhabitants. The approach used by government was to meet the sizeable demand for housing by focussing on the annual target of housing units delivered and this resulted in the quality measures being weak (Low, 2011). In addition, the architectural design processes did not accommodate principles of social inclusivity even though one of the key principles of the RDP was to promote a people-driven approach.

While the focus of housing provision was on quantity, there was insufficient attention directed towards other qualitative aspects such as the living needs of end-users, size of units, location of residential space, style, and available amenities in the area surrounding the residential development. RDP housing was highly criticised as it had little consideration for the qualitative aspects of design of residential space (Bond and Tait, 1997). The structural integrity of many RDP units was compromised with water leaks, structural cracks and some houses even sinking because of the poor design and construction (Mokgalapa, 2012).

The design of the RDP residential developments seemed to reinforce previous patterns of marginality. Previously (the 1950s and 1960s) segregated townships were built in a racially structured manner, where these spaces were informed by patriarchal visions of planners (Linstra, 2016). The first-generation RDP houses were found to be of a poor quality and small with some houses having 16 square metre floor plans. However, after the establishment of the National Home Builders Registration Council (NHBRC) in 1997 there was more of a focus on the technical aspects of the design and the standard size for RDP housing was set at 30 square metres (Greyling, 2009).

Hunter et al. (2012) draw a comparison between the standard size of house developed for black communities during the apartheid dispensation which was 51 square metres which was bigger than the RDP units. The design of RDP houses was greatly influenced by the 3-roomed apartheid styled homes with only minor modifications to the layout (Ibid, 2016). The subsidy allocation amount for the development of RDP houses was low and as such appointed

contractors often resorted to cutting costs to make higher profits and this further compromised the quality of the final product (Ibid, 2009).

There was an increase in urban population which meant that the smaller houses needed to accommodate larger families. Most of the public residential developments were often located on the margins of urban areas, thus reinforcing historical spatial disparities. Therefore, while the needs of physical accommodation would have been fulfilled, this did not come with an improved quality of residential accommodation.

End users residing in these developments were unable to access economic opportunities because they were located far from transport nodes and often had to commute long distances in search of work or to places of employment (Osman et al., 2011). The development of the RDP housing resulted in communities that were not socially cohesive and spatially integrated because of the design and location of the projects. Government subsidised residential developments located on the periphery resulted in urban sprawl and cities became more fragmented (Tonkin, 2008).

In response to the widespread criticism received regarding RDP housing, the National Department of Human Settlements adopted the Breaking New Ground (BNG) strategy in 2004, which coincided with the global development targets attached to the Millennium Development Goals (MDGs). The BNG was a progressive strategy that not only focussed on building houses but also on ensuring that communities were located near social, economic, and institutional amenities. The strategy was also focussed on building more integrated and socially cohesive communities. The quality and size (45

square metres) of RDP units (refer to figure 1-1) under the BNG programme have improved with a more deliberate focus on the environmental and economic sustainability of residential developments.

Figure 1-1: RDP/BNG housing units at public residential projects in Johannesburg



a) Multistorey walk-ups at the Riverside Housing Development



b) Row housing typology at Lufhereng Housing Development

Source:(https://www.engineeringnews.co.za/article/raubex-completes-quality-rdp-multi-storeys-at-riverside-view-2018-03-08/rep_id:4136) (https://www.livinspaces.net/projects/architecture/the-lufhereng-greenfields-housing-project-by-2610-south-architects/)

More recently, the focus has turned towards the global Sustainable Development Goals (SDGs) which was an outcome of the Rio+20 Conference in 2012. The implications for the architectural design process relating to the SDGs is the recognition and a responsibility to ensure that developments were designed in a manner that ensures inclusivity, sustainability, and resilience.

Locally, in the city of Johannesburg, the development of the Growth and Development Strategy 2040 (City of Johannesburg, 2011) is an expression of the commitment towards these global development imperatives relating to sustainability. The GDS 2040 is a long-term strategic planning framework, which espouses towards achieving a development trajectory focussed on social inclusivity and sustainable human environments. An area-focussed intervention such as the Draft Inner City Housing Implementation Plan (ICHIP), which is an implementation framework for the inner city of Johannesburg, also emphasizes this focus towards sustainability in human settlements design by local government. Part of this strategy includes densification of the inner city of Johannesburg through the provision of suitable housing opportunities which ensures that people are accommodated in areas close to employment, institutional and public amenities. Considering that the fully subsidised RDP typology has never been implemented in the inner city of Johannesburg, the plan caters for varying tenure models of housing for marginalised individuals and families.

The inner city of Johannesburg underwent major changes from the 1990s with the fall of apartheid. The abolishment of the Group Areas Act of 1950 led to many people who were previously not allowed to live in the inner city, leave the township areas and move to the city centre. This was also accompanied

by a large influx of people from other African countries. The increase in population was met by high levels unemployment and poverty. The lack of access to basic resources and amenities decreased the quality of life for inner city inhabitants (Beavon, 2004). As a result of the perceived deterioration of the inner city, many large corporations moved to areas considered more affluent in the north of Johannesburg such as Sandton. Several commercial and residential properties were abandoned which resulted in the informal occupation of the unused buildings (Mosselson, 2015).

Currently, the inner city of Johannesburg continues to be characterised by buildings that have been informally occupied, unsanitary living conditions and a lack of or illegally connected municipal services. The informal supply of housing in the inner city to the poor takes on various forms. There are single people living in one-room accommodation, to average sized families living in small units and people who are known or unknown to each other, coming together to share space for different periods of time (ICHIP, 2015). The available supply of housing units in the inner city is unable to meet the needs and demands of inhabitants living informally. The average income levels across the inner city is diverse with the largest percentage (39%) of inhabitants earning R3200 per month and less and 25% of the population are unemployed. Although there is a growing middle-income category the second largest proportion of inhabitants earn low to moderate incomes of between R3500 to R7500 per month (SERI, 2013).

Any plan intended to improve accommodation in the inner city needs to cater to the diversity of the demographic profile of these inhabitants. For instance, there are several informal traders who require accommodation for short periods and facilities where their stock can be stored. There are also

professionals working in the inner city who need accommodation that is conducive for family living and centrally located to all urban amenities. A complete understanding of the varied needs and requirements of everyone occupying space in the inner city would better inform the supply of housing typologies.

The current supply of housing tenure in the inner city is informed by competing priorities within both the public and private sectors. The private sector housing developments are mainly driven by the need to make sizeable profits. Whereas the public sector driven housing interventions is aimed at further promoting the tenets of a developmental local government and at the same time attempting to attract further private sector investment through targeted capital investments aimed at regenerating the inner city (Mosselson, 2019).

The main type of tenure provided in the inner city by government is social housing and the housing projects are implemented by Social Housing Institutions (SHI) who are funded by government to deliver affordable housing (HDA, 2013). The two prominent accredited SHI's operating in the inner city is the Johannesburg Social Housing Company (JOSHCO) and the Johannesburg Housing Company (JHC). JOSHCO is a municipal entity, wholly owned by the City of Johannesburg Municipality. Whereas the JHC runs independently and is subsidised by the government and have also received capital investments from other funders. There are different rentals (ranging from R900 up to R7500) charged to tenants based on their combined household incomes. There is also a sizeable informal housing market where old derelict buildings that were abandoned by original owners are now informally occupied. These buildings are usually overcrowded where

single units are subdivided to accommodate more occupants (Zack et al. 2009).

Although there appears to be a broad range of formal accommodation available to inner city inhabitants, they are not included in the processes of designing these residential spaces and often what is provided by both the public and private sector do not suit the needs of the people. As such there is a need to drive an inclusive design process that are tailored to the needs of end-users and manifests in a housing product or solution that is an expression of this collective effort (Marschall, 1998).

Social Architecture facilitates a process where end-users are actively involved in driving the design and development of their living spaces. The use of local materials and the economic empowerment of community members through the transfer of skills are additional determinants attached to socially inclusive architectural design projects (Gribat et al, 2017).

The contemporary discourse and debate around socially inclusive architectural design practices and processes places emphasis on the social role architecture can play in effecting positive change in the built environment. The facilitation of progressive social change is underpinned by the notion that architecture has a role in reducing the marginalisation and oppression of human beings.

It should, however, be recognised that although there are fundamental commonalities concerning how Social Architecture is unpacked, the

application of these practices is dependent on the specific context. In addition, the local spatial practices and spatial context also influence how the practice of Social Architecture is advanced. These considerations are supported by the idea that the built environment is not static, and it is made up of representation of multiple architects that are in practice. It has however been found that within this multiplicity, a large majority of architects remain disconnected from social problems that pervade marginalised communities, and this impedes on the spatial and social transformation agenda in South Africa (Luckan, 2016).

Social Architecture thus strives to challenge the conventional perception of the architect as the expert whose role is to direct and design what she or he thinks the end user requires. A balance between the expert or professional insight of the architect merged with the opinions and experiences of the end-user would facilitate a functional and meaningful relationship. The reimagined role of the architectural practitioner is to understand and appropriately manage the relationship with end-users by designing solutions that accommodate both the technical requirements of the design and socio-spatial requirements of the end-user. Adopting this type of approach manifest in an improved quality living environment and greater sense of ownership by end users (Lewis, 2005).

1.3 Research Problem Statement

Access to well-designed and liveable housing in South Africa by marginalised groups presents many complexities due to the challenges in determining the actual housing demand. The proliferation of informal tenure shown by the growing number of informal settlements, land invasions and the occupation of hijacked buildings is indicative that the delivery of housing is not meeting the

exact requirements of the demand. According to statistics cited in the Inner-City Economic Transformation Roadmap (2019), the population in the inner city has grown from 92,000 inhabitants in 2008 to 290,000 in 2018. The number of households accommodated in the inner city for the same period also increased substantially from 22, 000 to 95,000. The figures provided show that although there has been an increase in residential accommodation, the pace at which it is being supplied is outstripped by demand.

To address the lack of housing, the City of Johannesburg has instituted several housing initiatives aimed at the alleviation of the housing deficit. However, some of these projects have not been implemented to a quality that is responsive to the needs and requirements of end-users. Although the inner city of Johannesburg still remains an attractive destination for many people from different parts of the continent and country seeking access to employment and economic activity, the quality of housing for many inner-city inhabitants is inadequate (Murray, 2008). Some of these problems are manifested by lack of inclusivity in processes and this leads to an outcome where the housing developed is not of a good quality.

On a policy level, there has been a focus by the City of Johannesburg on attempting to drive a more inclusive process in the implementation of projects. However, there remains a pervasive gap with regards to including end-users in the actual design processes and accommodating their diverse needs. Although there has been a shift in policy towards integration and inclusivity, the implementation of residential projects is still focussed on the quantitative aspects of the housing demand. While there have been notable changes to the spatial landscape of the inner city of Johannesburg, the architectural and

planning processes have not involved active engagement between government and inner-city inhabitants at an urban scale (SACN, 2014).

While the importance of meeting the housing demand cannot be overstated, it is just as important to understand qualitative aspects of housing. It is within the latter aspect that there should be a consideration of Social Architecture principles in residential design, which has the potential to improve the quality of housing design for end-users. Therefore, this warrants examination of how or the extent to which diverse interests of the various groups are considered in changing the spatial landscape of the inner city of Johannesburg. In other words, to establish whether principles of Social Architecture are incorporated by the public sector in the redesign of inner-city living space. In a country characterised by exclusion, lack of access to resources and exploitation of marginalised groups the social architectural principles of social inclusion, locally sourced resources, transfer of skills and spatially inclusive architectural design can assist with developing more responsive public housing interventions.

1.4 Aims and Objectives of the Study

1.4.1 Aims

This research study was aimed at understanding how the implementation of Social Architecture in public sector residential projects can improve the quality of housing and living conditions of end-users. The research therefore aimed to gauge how socially inclusive principles are interpreted by built environment practitioners as part of the design work stages of residential projects. As a means of achieving these aims, the objectives listed below were set.

1.4.2 Objectives

- To understand the role implementation of Social Architecture principles could play in building inclusive communities.
- To increase the knowledge capacity of the applicability of Social Architecture in the context of South African residential design.
- To advance an improved understanding of how socially inclusive architectural design approaches are interpreted by architects and local government practitioners in the built environment.

1.5 Research Questions

Main Question: What role does the incorporation of Social Architecture principles play in improving the quality of residential housing in the inner city of Johannesburg?

1.5.1 Sub-research questions

- In what ways are current architectural practices in the inner city of Johannesburg incorporating principles of Social Architecture?
- What principles of Social Architecture are incorporated in residential design?
- What is the nature of the relationship between the quality of housing and the adoption of design work stages that incorporate elements of Social Architecture?

1.6 Methodology

A qualitative study entrenched in the constructivist and interpretivist paradigm was used for this study. The multidimensional nature of the research problem required that information be gathered from various sources to gain a holistic understanding of how principles of Social Architecture are considered in the development of public sector residential projects. The evolution of

architectural design approaches over various historical periods in the built environment sector, the key discourses on the meaning and objectives of Social Architecture, the incorporation of principles of Social Architecture in public sector frameworks and public policies, perspectives and insights from practitioners involved in socially inclusive residential design projects is what directed the research design approach for this project.

An inductive approach was utilised, which allowed for in-depth interaction with built environment practitioners on different practical understandings and social constructs of what a socially inclusive housing design project entailed (Berg, 2007). Inductive reasoning was best suited for this study because it allowed for the identification of patterns and common themes in the understandings shared by practitioners around how the adoption of Social Architecture processes and practices can improve the living environments of end-users. Although the purpose of an inductive approach is not focussed towards the generalisability of the research findings, there was a great deal of value extracted from the insights shared and captured as part of this study (Marshall and Rossman, 1999).

The semi-structured interviews that were conducted involved open-ended discussions where respondents were able to engage openly on questions being posed (Kvale, 1996). The interviews were conducted with built environment practitioners who have been involved in the implementation of socially driven architectural design projects. Due to physical incapacitation experienced by the researcher during the period of conducting the interviews, a few interviews were conducted virtually through platforms such as Microsoft Teams and WhatsApp video call. Other interviews took place at a venue and time suitable to the selected respondents.

1.6.1 Research Design and Approach

The practice of architecture has generally been directed by a broad spectrum of universal principles and paradigms. Social Architecture as relatively new and emerging practice challenges conventional architectural methods of practice by focussing on social inclusion through participatory mechanisms. Within the context of a city as diverse as Johannesburg, the incorporation of socially inclusive architectural design principles would require an approach that is tailored to the specific conditions of the city. This required a review of both conventional and socially inclusive architectural approaches both locally and globally which in part informed the scope and nature of the research methodology**.**

The study utilised both primary and secondary sources of data to gather the required findings. The review of secondary sources assisted with developing an improved understanding of what research has previously been undertaken in this field of research (Patton, 1990). The literature review and local and international case studies were critically appraised against the main research question. The understandings developed through the review of these sources was focused on emerging with a conceptual framework for a new process flow that facilitated socially inclusive architectural design. The review of literature included a qualitative analysis of a broad range of writings including spatial information such as maps and photographs. Academic sources that were accessed included journal articles, books, online publications, conference proceedings that were relevant to the study of Social Architecture.

The primary sources utilised as part of this study included public policies, key legislation and regulations relating to ways in which government has attempted to promote inclusivity in the housing sector and the impact this

legislation poses on bodies such as the South African Council for the Architectural Professional (SACAP). SACAP is an authorized regulatory body that directs the architectural profession in South Africa and derives its legal impetus from the Architectural Professions Act 44 of 2000. The outline architectural work stages listed by SACAP provided useful insight into whether the prescribed architectural services accommodate principles of social inclusivity.

The strategic frameworks, policies and regulatory guidelines of local government departments, regulatory bodies, and Social Housing Institutions (SHI) involved in the built environment sector imparted important information relating to the objectives and programmes in place. Analysis of these documents provided insight into the degree to which socially driven design approaches is being embraced by private and public institutions such as the City of Johannesburg Housing Department, Johannesburg Housing Company (JHC), Johannesburg Social Housing Company and the Johannesburg Development Agency (JDA). Qualitative interviews with practitioners involved in the built environment allowed for open-ended discussions into whether it is beneficial or not to incorporate aspects of Social Architecture in public sector funded residential projects in the inner city. Practitioners shared what elements they thought enabled sustainable and meaningful socially inclusive residential design interventions.

The research approach for this study was informed by the research aims and objectives, problem statement and the research questions that were posed. The study probes how Social Architecture can be implemented as part of design practices of public residential developments and how this will, in turn, improve access to better quality housing opportunities. The exploratory

nature of the research questions allowed for a more definitive perspective on the views held by practitioners relating to socially inclusive design within the inner city. The differences and similarities in perspectives on the key areas of enquiry discussed during the interview process provided an opportunity to weave together common linkages and contrasting understandings (De Vaus, 2001). It should also be highlighted that although the adoption of socially inclusive design approaches is increasingly popular, the issues that were raised within the context of this project are relatively unexplored especially since it unfolds within the inner city of Johannesburg. Neuman (2006) stated that the purpose of exploratory research is to lay the foundation for further descriptive or explanatory research.

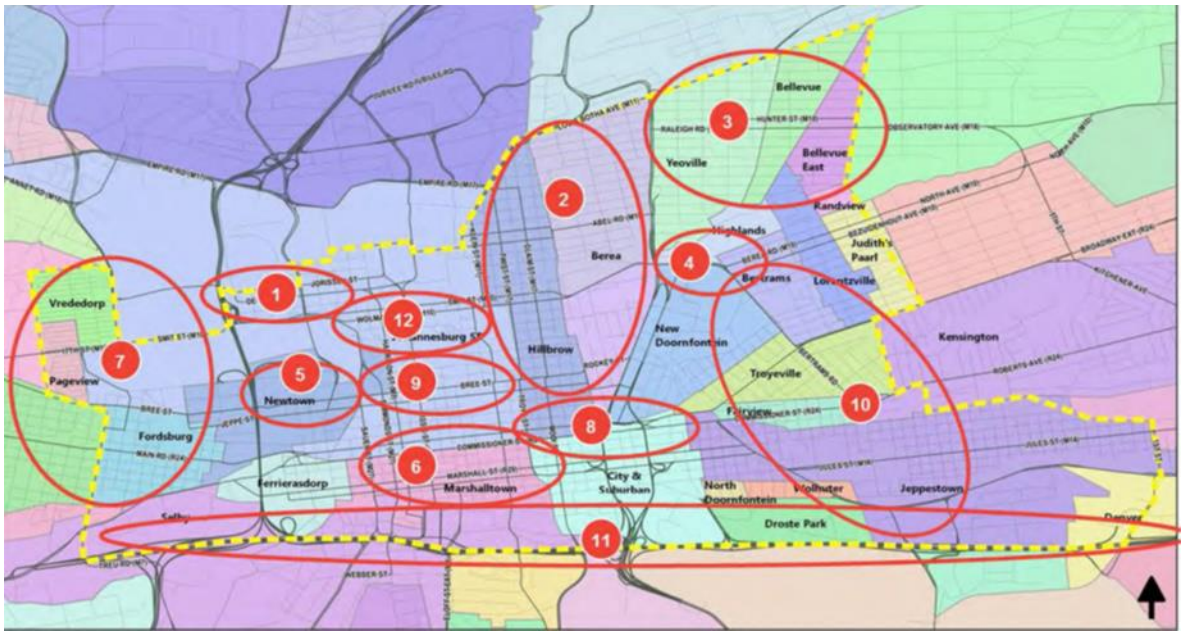
1.6.2 Identifying the research site and sample

As per the Spatial Development Framework (SDF) and draft, Inner City Housing Implementation Plan (ICHIP) twelve key precincts make up the inner city. The different precincts have diverse demographic and spatial characteristics, which allowed for a comparative analysis of how Social Architecture unfolds in different contexts. Some of the precincts are composed predominantly of residential accommodation whereas others are newly developed cultural precincts. In the ICHIP, the precincts have been categorised based on their predominant land uses and location. A map illustration of the selected precincts is included in Figure 1-2. The twelve precincts (Precinct 1: Braamfontein Precinct, 2: Hillbrow and Berea, 3: Yeoville and Bellevue; Precinct 4: Greater Ellis Park, Doornfontein and New Doornfontein, Precinct 5: Newtown, Precinct 6: Inner City south-western precinct, Precinct 7: Fordsburg, Vrededorp, and Pageview, Precinct 8: Inner City eastern core; Precinct 9: Inner City central core, Precinct 10: Bertrams, Jeppestown, Troyeville, Precinct 11: Industrial Belt and Precinct 12: the

railway seam- Park Station and surrounds) form part of the public sector regeneration and redesign strategies in the inner city of Johannesburg.

The projects that were cited in the research interviews and further probed through a desktop analysis included the Brickfields Social Housing Precinct located in precinct 5 and Elangeni Social Housing Project located in precinct 6. The way current and past residential projects in the inner city have been implemented and designed with regards to the presence or absence of Social Architecture principles was a central component of this study.

Figure 1-2: Twelve key precincts selected for this study



Source: Inner City Housing Implementation Plan (ICHIP), 2015

Purposive sampling was used to identify respondents that were interviewed for the study. This method of sampling was a suitable for this study because the qualitative interviews were intended to assess the predetermined criteria

that emanated from the literature review (Kvale, 1996). The criteria for selection were that respondents should be professionals working in the built environment and should be familiar with the nature of the inner city of Johannesburg and socially inclusive design processes. When practitioners were contacted to be interviewed they were informed that the study area for this project is focussed on their experiences working in any of the twelve precincts that form part of the public sector regeneration initiatives in the inner city.

The built environment sector is comprised of professionals involved in designing, creating, influencing, or regulating the systems that make up the architectural landscape. Due to the diverse nature of this sector, it was anticipated that the insights and experiences of the identified professionals on how socially inclusive design approaches are interpreted would be varied. Respondents were identified by doing an online search of practitioners in the built environment who matched the selection criteria for the study. The snowball sampling method was also utilised to identify additional respondents for the study. This method is a non-probability sampling technique that relies on referrals from respondents who have already been interviewed (Berg, 2007). This method of sampling was utilised because socially inclusive residential design is a relatively new field of practice and there are a limited number of practitioners involved in such residential projects.

Most respondents expressed interest in participating in the study and some even provided useful links to relevant literature and policy documents. The process of identifying and interviewing respondents spanned across two calendar months with the scheduling of interviews being dependant on the availability of the selected respondents. Henning et al. (2004: 71) assert that

although the "results of the [qualitative] interviews cannot be generalised to a study…they are [found] to be transferrable and that may be extended to other settings."

The selected sample of respondents was mainly composed of practitioners who were actively involved in the design of socially inclusive architectural projects. The other respondents were academics who sometimes served in an advisory capacity in the development of new public sector residential projects or spatial planning policies.

1.6.3 Methods for Data Collection

One of the primary sources of data collection for this study emanated from the insights solicited from the semi-structured interviews. The interviews were intended to further explore information detailed in the literature review and uncover other insights related to the tacit knowledge of respondents (Berg, 2007). The open-ended nature of the semi-structured interview provided respondents with the freedom to expand on their experiences and views more openly that allowed for new perspectives on the research area of enquiry to be uncovered (Bryman et al., 2005).The in-depth engagement, which is provided for when conducting qualitative interviews allowed for deeper insight into the research questions on the relationship between the quality of housing and the adoption of social inclusive architectural work stages. An additional key focus area of the interviews was to engage practitioners on whether current architectural practices in the inner city incorporate principles of Social Architecture (refer to interview schedule attached as Appendix C). The key focus of these interviews was on the value extracted from the quality of the engagement and not from the generalisability of the information provided by the respondents.

During the interviews, various themes emanated from the research study questions that were addressed. The opinions and attitudes of respondents were probed by asking questions in line with the interview schedule. Although there were pre-determined questions set to guide the discussion, respondents were also given the space to deviate from the questionnaire, which allowed for a more open discussion.

The data collected from the interview process was in the form of handwritten notes and audio recordings of the discussions, which was consented to by all respondents. After each interview, the audio recordings were stored electronically and transcribed to identify emerging themes (Babbie et al. 2001). Listening to the audio recordings and reading the notes also allowed for useful reflection on what issues to further probe in future interviews.

A document review exercised was undertaken through the analysis of policy and practice documents. The documents in the review process included public sector urban spatial planning frameworks, local government long, medium- and short-term human settlements strategies and business plans, human settlements legislation and policy frameworks and built environment regulations. The document review exercise brought forward unique aspects of the issue being studied, which gave more depth towards the interpretation of findings. Marshall and Rossman (1999) state that the document review research method can be used to enhance other research methods adopted in the research study. The analysis of the documents allowed for an assessment of whether there are existing synergies between programme strategies relating to inclusive housing development and the envisaged impact it is intended to have when incorporating aspects of Social Architecture in public sector funded residential projects.

The case studies were informed by site visits to briefly observe the social character of residential projects, a collection of institutional information such as online marketing, promotional flyers, internal policies, and business plans of some SHIs was gathered. Information that emerged from the research interviews and a desktop study of relevant documentation was also utilised. Case study research is a qualitative approach that involves an exploration of an identified case over a short- or long-term trajectory using various methods of data collection within a specific context (Yin, 2003). The selection of case studies was based on further understanding of what components constitute Social Architecture as defined in Chapter 2 and identifying the key principles that underpin the implementation of socially inclusive residential projects.

The case studies of the two residential developments (Elangeni and Brickfields) provided an understanding of the socio-spatial experience of end-users through the qualitative interpretation of the researcher. The physical and social characteristics of these residential spaces was central to developing findings on the quality of the living environments and how principles of Social Architecture are incorporated in residential design.

1.6.4 Data Analysis and Interpretation

The interpretation and analysis of data occurred throughout the data collection phase. Barrett (2009) argues that the key differentiating factor of qualitative research from quantitative research is that data analysis occurs throughout the life cycle of a research project and not at the end. This is further supported by the notion that data analysis and collection make up a synergetic process, which allows the data to be reduced and simplified into results (Tesch, 1990).

The comparative analysis of secondary data was analysed against the key research questions and concepts that formed part of the literature review. Qualitative analysis directed the selection of case studies and the type of questions included as part of the semi-structured interviews.

The qualitative analysis of primary data obtained from research interviews with relevant built environment practitioners was necessary for understanding the practices and processes employed when implementing socially inclusive architectural projects. The data that emerged from the qualitative interviews was analysed by utilising inductive logic in an interpretative manner, which allowed for the identification of nuances of each respondents' experiences (Bryman et al. 2005).

The interpretation of primary data derived from qualitative research is referred to as content analysis (Henning et al. 2004: 102). In this study, the narrative was derived from different sources of data such as transcripts of the in-depth interviews and written notes were analysed and interpreted. After transcription, key concepts were identified, and codes were generated based on the correlation between concepts. The process of coding assisted with identifying linkages between the data and the research ideas. The analysis of data followed the coding, and this involved the identification of themes that correlated with assertions made in the literature. This occurred concurrently to the identification of themes and variables that contrasted with what was presented in the literature on Social Architecture. Where these contradictions were apparent there was an attempt to re-examine certain variables and then develop plausible explanations for the contrasting results.

This meaning extracted from the interpretation of the findings forms the core of the study. Strauss and Corbin (1990:124) contextualise the relationship between the main category and the other subcategories in the process of data analysis by stating, “the core category must be the sun, standing in orderly systematic relationships to its planets.” For this study, Social Architecture is the core category (the sun) and the sub-categories relate to active community engagement, spatial integration, local economic development. This study, therefore, strove towards ensuring that there was coherence between the identified categories, which brought more meaning to the body of the text.

There was also emphasis placed on ensuring that there is synergy between the conceptual framework and the identified themes. The study required that there be an understanding of similarities and differences in the opinions expressed relating application of socially inclusive design processes in the inner city of Johannesburg. The differentiation in perspectives expressed by respondents allowed for an examination of whether current definitions need to be reconsidered or whether current practices need to be better aligned to existing definitions. The variances in perspectives expressed based on the profession was also an interesting aspect of analysis as this highlighted divergent and convergent perspectives.

1.6.5 Ethical Considerations and Protocols

An application to obtain ethics clearance from the School of Architecture and Planning Research Ethics Committee at Wits was submitted. There were various ethical protocols prescribed before permission was granted by the School to proceed with the study. To protect the confidentiality and reputation of respondents, there were controls put in place to ensure that everyone that

was approached to participate was not unfairly jeopardised if they chose not to participate in the study. There was also emphasis placed on ensuring that respondents were fully informed about the aims and objectives of the study, which enabled them to provide informed consent. All respondents were provided with a Respondent Information Form, which gave further detail on what the study was about. Respondents were requested to sign a consent form (refer to Annexure B) agreeing to the terms of participation and to be audio recorded.

There was also diligence exercised on the drafting of the interview schedule to ensure that the questions posed were not offensive and remained relevant to the objectives of the study. The questions were open-ended and where respondents sought clarity; they were provided with such.

It should be highlighted that all researchers have the responsibility to adhere to the established ethical and legal guidelines by various conventions in the research fraternity. Caution was exercised throughout the study, to ensure that respondents were treated respectfully and there was complete transparency with clear lines of accountability established (Babbie, 2010:120). The responsibility to maintain high ethical standards in the collection of data, analysis of data and ultimately the dissemination of the research findings are key components of developing a credible research output (Ibid, 2010).

As s an official at the City of Johannesburg Municipality, there was emphasis placed on ensuring that the influence of bias did not affect the credibility of the research findings. All respondents were informed that their choice to

participate or not to participate in the study would not disadvantage them in any way as the research being conducted was solely for academic purposes. Respondents were asked whether they feel comfortable to proceed with the interview once they were informed of the researcher's employment status at the City of Johannesburg Municipality. Respondents were all made aware that the recourse they had if they were of the view that the researcher behaved unethically during or prior to the interview process was to report the matter to the University of Witwatersrand Ethics Committee or the Corporate and Shared Services Department at the City of Johannesburg.

1.7 Report Structure

Chapter one of the report introduces what the study was about. It outlines the background, the problem statement, and the objectives of what the research seeks to achieve. The main and sub-research questions which formed the core of the research project and provide guidance to all related stages of inquiry presented in this chapter. The methodological approach and methods utilised for undertaking the research study were also incorporated as part of the introductory chapter.

Chapter two intends to provide a review of existing literature in line with the objectives of this study. The main themes that are unpacked in the discussion centre on Social Architecture and its different dimensions. The conceptual framework is illustrated and explained by unpacking the key themes that make up the foundation of the study. Various definitions and understandings of architecture are explored over a trajectory of socio-historical periods, which is aimed at providing insight into contemporary architectural practices. The role architects play within the design of projects and the expectations

attached to the social role embedded within the social structural conditions is an area of inquiry contained in chapter two.

Chapter three explores the notion of social inclusivity to establish whether the South African Council for the Architectural Profession (SACAP) design work stages accommodate principles of Social Architecture. The main themes of discussion are focussed on socially inclusive design approaches and processes. Practitioners working in the built environment shared their experiences and understandings on the role of social architectural design in the implementation of public sector residential developments in the inner city of Johannesburg. Chapter three also identified patterns of agreement and contrast within the literature that was unpacked in Chapter 2.

The fourth chapter provides insight into the practicalities of incorporating principles of Social Architecture by observing the practices and processes used on current and past public residential projects. Case studies of the residential projects ascertained whether the success or failure of these projects could be linked to the use of Social Architecture. It also sought to establish the success or failure of Social Architecture and whether a reconfiguration of current architectural practices was warranted or whether current, practices should be better aligned to existing public policy prescripts.

The concluding chapter draws together the key findings and highlight whether there is scope for the inclusion of principles of Social Architecture in design practices of housing projects in the inner city of Johannesburg. This also provided concluding remarks to the research questions posed on whether such inclusion has the potential of increasing community participation in

residential projects, therefore increasing the usability of housing products and instilling a sense of empowerment and ownership over projects

2. LITERATURE REVIEW

2.1 Introduction to the literature

The purpose of this study is to understand the role that principles of Social Architecture play in the implementation of residential developments in the inner city of Johannesburg. The literature that was reviewed for this study was centred on the role architects play in the design of residential projects for marginalised urban dwellers. A reflection on how architectural practice has changed over a trajectory of socio-historical periods and its evolvement provides an understanding of how the characteristics of contemporary architecture have come into being. The main criticisms and dissatisfactions with the practice of contemporary architecture and how this has led to the emergence of Social Architecture is an additional area of focus in reviewing current discourses in the built environment.

Further analysis was aimed at assessing the role Social Architecture could play in the redesign of public sector residential projects in Johannesburg, and how it can facilitate the physical and social accommodation of residents, especially marginalised groups. To further understand the relationship between architects and end-users, it was important to probe the extent to which those who use, and experience architecture can participate in the design process. Inclusive public residential spaces and the oppression of marginalised urban inhabitants was an additional area of enquiry to understand how broader socio-economic structural relations influence access to the built form.

This chapter provided an analysis of the following key concepts: socially inclusive architectural design processes, the level at which end-users can participate in designing their living spaces and whether social inclusivity in

design improves the quality of housing. An analysis of literature relevant to Social Architecture including a critique of this approach to architecture and whether Social Architecture remains relevant for the design of residential projects in the inner city of Johannesburg is included in this chapter.

2.2 Architectural Design Approaches: Past and Present

Architectural design is influenced by the socio-economic, historical, and political conditions of a given period. When locating design theories on a trajectory it is evident that the evolution of architectural theories and practice can be identified by ideological shifts in thinking informed by specific historical periods. The classical period, modernism, postmodernism, and post-postmodernism was expanded on concerning how it influenced architectural design.

One of the first foundational thinkers from the classical period (850 B.C to A.D 476) who influenced early thinking on the practice of architecture was Marcus Vitruvius, an architect from Rome during the 1st century AD. *De architectura* (published as Ten Books on Architecture) is one of his most widely cited scholarly contributions and its core assertions was that the end product of the architectural design process should satisfy three main requirements namely: firmness, commodity, and delight. The firmness of a design refers to the technical and physical components whereas delight relates to the artistic aspects and commodity is the capacity of a building or structure to be responsive to the human facet within the design (Rowland and Howe, 1999). The Vitruvian philosophy affirmed that a building should stand the test of time, assert its presence in the period, and serve as a monument for the period thereafter.

Pecora (1987) reflects on these ideals of permanence as espoused to by Vitruvius and forms the opinion that the permanence of design through monumental buildings is an affirmation of the power and dominance of human beings over the earth. The fundamental architectural rules and principles prescribed as part of ancient architectural history were closely guarded and adhered to by those in the built environment. Access to the profession was also exclusive with the services and expertise of architects being the purview of the elite classes. Class structure was particularly prominent during the classical period with the upper and lower classes being separated with their rights and access also being determined by their political associations and social status in society. This is further expressed in how ideas and knowledge were developed as this too was confined to thought leaders within the built environment (Kostoff, 2000).

The ideology of invention was closely aligned to Classicism as it was believed that the capacity to invent was grounded in a tradition that would further promote the longevity of the architectural design. The utilitarian value of the design is also highlighted where the use of the building should be closely aligned with how it was designed (Rowland and Howe, 1999). This is further expanded on later during the 1400s by Leon Battista Alberti (1988) in *De Re Aedificatoria* where importance is attached to the aesthetics in the design. Alberti directed much emphasis on the beauty and the visual appeal of the building from the perspective of the artist, which is aligned, to the requirement of delight found within the Vitruvian philosophy.

The Middle Ages or Dark Ages spanned from 476 AD to 1453 and it was a period characterized by war, which required an architecture that allowed for defence and protection (Miller, 2003). The defensive architecture referred to

relates to the firmness and the ideal arrangement of buildings in line with what Vitruvius espoused. The grandeur and elegant designs of past periods were replaced with high imposing walls and the development of buildings that did not necessitate specialised expertise. At the time, the architect had no relevance and the master builders assumed roles ordinarily assigned to architects (Woods, 1999).

The Renaissance followed the middle ages and was considered a rebirth of human social-cultural development. From an architectural perspective, the focus was on reigniting classic architectural forms as architects endeavoured to design buildings that would resonate with people on an emotional level. Architecture was considered an art form and professionals practicing as architects elevated their status to that of an artist (Ibid, 2003).

Moving into the modern history of architecture in the eighteenth century there was the advent of a higher class of architects. Consequently, as with the Renaissance, wealthy people who financed the construction of elaborate places of residence commissioned most of the public and private architectural design projects. Having the title of an architect was considered prestigious and sought after amongst elitist groups (Woods, 1999). Although there was a general improvement in the living conditions, the class structure during this period divided people into upper, middle, and lower classes. The implication of this was that the quality of housing differed based on the economic standing of the household. The lower classes living in rural areas lived in self-built houses made of wood and there was often limited living space dividing them from their livestock. The design and development of secure tenure for the lower classes was not something architectural professionals of the time ventured into because the role of the architect was not focussed on a socially

conscious design or social responsibility towards marginalised groups (Kostoff, 2000).

The dawn of the nineteenth century marked the establishment of architecture as a profession. The architects' role became more specialised and as such, the master-builder did not have the requisite technical expertise to oversee some of the complex aspects of the projects that were being commissioned (Thomsen, 2002). The establishment of formal structures and codes of ethics were put in place to regulate and professionalise the industry.

During the 1800s there was more of an appreciation for the functional value of building design. This preference for functionality is expressed in the work of Louis Sullivan (1856 CE) where he came up with the familiar notion of *Form follows Function*. Sullivan promoted the view that the form and design of a building should complement its purpose. Every aspect of the design process had considerations for functionality and as such, how space was consumed and experienced was influenced by function.

Modernism, located in the industrial revolution, was focussed on reinventing architecture for the twentieth century while attempting to develop a standardised approach to architecture. Whereas the Classical period was fixated on invention, there was now a preference for creation by using new technology and materials. There was an amplified emphasis on social characteristics attached to the architectural design and symbolism of buildings. In addition to the contributions by Louis Sullivan, other scholars expressed the trends of the artistic movement through design. Frank Lloyd Wright (1867 CE) favoured a decentralised model with low rise and low-density urban housing. Although the Lloyd's model presented an alternative

option to the overly industrialised urban spaces of the modernist era, the decentralised model led to increased suburban sprawl, pollution, and a higher demand on the infrastructure (Jenks et al 1996).

Ludwig Mies van der Rohe-1186 CE (*less is more*) placed importance on simpler designed spaces favouring quality over quantity. Le Corbusier-1187 CE (*machine for living*) was opposed to over-designed spaces with decorative frills and asserted the importance of well-designed spaces and objects. The high-rise model such as La Ville Radieuse aimed to increase urban densities was put forward by Le Corbusier (Lang, 1987: 4). During the modernist period, the demand for the high-rise housing typology increased because it allowed for a higher yield which was a favoured option for low-income public housing. However, as much as the design was able to accommodate more families, there were many complex social problems such as crime, neighbour disputes and domestic violence that arose within these public housing estates.

The modernist architectural design was a response to the social issues such as rapid urban growth, shortage of housing and overcrowding that were pervasive at the time. In some post-colonial African countries the housing solutions developed to respond to these challenges resulted in interventions focussed on the eradication of squatter camps (now referred to as informal settlements) and slum areas and the development of government assisted rental housing interventions. These housing interventions were pursued in order to meet the growing demand for secure tenure however they were later found to be unsustainable due to the high cost of development and it was not accommodating the needs of marginalised urban dwellers (Stren, 1990).

The Jan Hofmeyr Improvement Scheme is an example of one of the first subsidised housing schemes targeted at the white poor population in Johannesburg and was implemented in 1933. Like other modernist housing projects, this scheme was focussed on eradicating slum areas and creating functional residential estates for the white working-class urban inhabitant (Du Plessis, 2016). This type of residential model was premised on racially segregating people by providing them with substantially different quality of residential accommodation based on their racial grouping. Arguably, the discrimination based on race brought about by unequal access to residential accommodation further entrenched the division and social isolation amongst racial groupings within Johannesburg and South Africa as a whole.

The architectural design influence in South Africa at that time did not aspire towards embodying an all African inspired design style but instead sought to develop modernist solutions with slight references to African culture (Chipkin, 1993). One of the only buildings that had a dominant African design style was the Bel Aire (seen in figure 2-1), a tower block of flats located in North Beach in Durban. This building was designed in 1956 by Reg Buck from Bernard Whitehead and Buck. The design of Bel Aire drew inspiration from the Zulu culture with mosaic artwork on the exterior façade (Claude, 1996). This approach was a break from convention in comparison to other main urban centres where there was no overt reference to an African styled architectural design.

Figure 2-1 Bel Aire flats located along Durban's north beach designed by Reg Buck in 1956



Source: Marschall, 2001

Part of the apartheid government's segregative policies used the different cultures and ethnicities to further entrench and emphasize difference amongst different groupings. The architectural fraternity was dominated by white professionals who designed public facilities black Africans without engaging them in the design process. Harms (1972: 194) refers to the "technocratic caretaker model" which is involved the development of a professional design based on a concise brief and this was not informed by any consultative process with the end-user community. The use of local labour was also not prioritised in the implementation and construction of projects. The requirements of end-users were not met and as a result there was a lack of ownership and some of these public infrastructure projects were vandalised and under-utilised (Marschall, 1998).

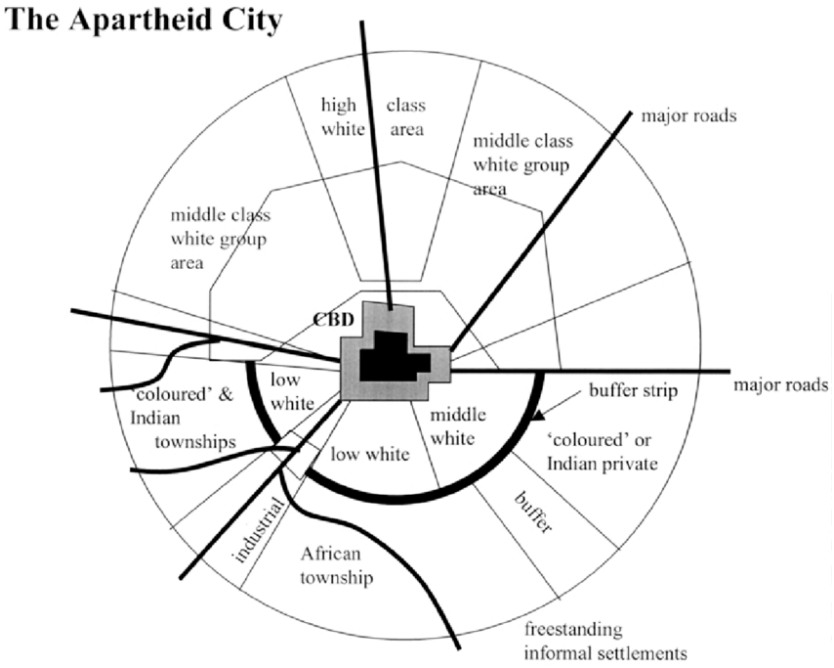
There were large-scale housing projects being implemented in township areas in Johannesburg to accommodate black people after the adoption of Native Urban Areas Act in 1923 which restricted movement of black people into the cities (Linstra, 2016). As with many other countries at the time, in South Africa, the demand for secure tenure outstripped the supply as many urban centres faced uncontrolled growth. There was an insufficient supply of housing in township areas in South Africa which resulted in overcrowding and the establishment of informally occupied areas known as squatter camps.

During modernity across the globe, people lived far from their places of work and commuted for long distances, which was costly and harmed the environment. A lack of social and institutional amenities accompanied by unsanitary living conditions further affected the quality of living conditions for communities (Jenks et al. 1996). Globally the focus, therefore, was centred on ensuring that everyone had access to a dignified living environment, which was previously reserved for the rich during earlier historical periods. However, in South Africa, access to better quality living environments was confined to white people and black communities remained without access to secure tenure and adequate infrastructural services. The spatial segregation of communities based on race divided people into different areas by using buffer zones and this was the main spatial planning tool utilised by the apartheid dispensation (Burdet et al, 2007).

The design of cities in South Africa during this period (refer to figure 2-2) was characterised by a segregated spatial structure that resulted in social, racial, economic, and spatial fragmentation of communities. The design of housing for black people across the various local authorities differed and as such

guidelines for Minimum Standards of Accommodation was developed and further adapted for non-European housing (Linstra, 2016).

Figure 2-2 Spatial planning structure of the apartheid city by M. Napier

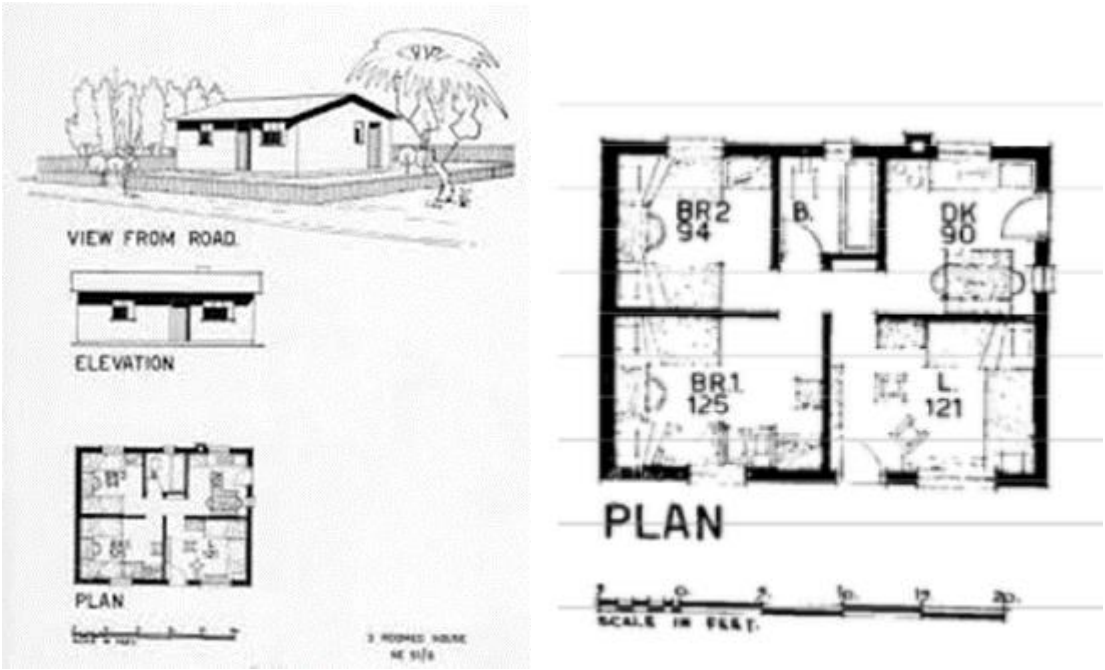


Source: du Plesis and Landman, 2005

Within the South African context, apartheid was institutionalised in 1948 and came to an end in the early 1990's. During apartheid there were additional complexities further impeding the housing crisis as the political dispensation of time sought to segregate people based on their race as part of the apartheid system. A direct manifestation of this separation of people within the architectural space was the ill-designed *matchbox house* often found in black township areas (Chipkin, 1998). This three-roomed housing typology was known as the NE 51/9 (refer to figure 2-2) and it was developed for *non-European* people (Osman et al. 2005). Towards the end of apartheid there

were massive housing shortages accompanied by uneven development across South Africa. The incoming democratic dispensation at the time had the mammoth task of redressing spatial disparities and distorted patterns of property ownership (Jones et al, 2000).

Figure 2-3 Low cost NE 51/9 housing model and plans designed by apartheid dispensation



Source: Chipkin, 1998 and Linstra, 2016

Modernist architectural design approaches such as the spatial policies of apartheid have been criticised for having a limited understanding of the relationship between human behaviour and the built environment (Kostoff, 2000). The model for understanding human behaviour was deficient in that the meaning attached to the consumption of space by end-users were incongruent with the claims made by architects. There was an obvious

disjuncture between what end-users required and what architects provided as housing solutions. It was stated that the theoretical underpinnings of architectural design were weak as principles were universally applied without consideration for the local context (Lang, 1987). The metropolitan area of Brasilia (capital city of Brazil) in Latin America, is an additional case in point where there was a disregard for the housing requirements of the local context.

The housing approach adopted in Brasília is often cited as the embodiment of modernism's failure (Dowall et al. 2007). Oscar Niemeyer and Lucio Costa were the appointed architects that gave the city its unique design resembling the shape of an airplane. The Plano Piloto was the masterplan developed to maintain the urban layout of Brasília by prohibiting the development of housing near the urban centre. Most middle to lower income inhabitants were forced to settle in peripheral areas of the city while those with higher incomes were homeowners in Brasília (Ibid, 2007). The restrictive land and housing policies which were influenced by Le Corbusier's notion of the ideal city failed to achieve this illusive balance as there was no consideration for broader socio-cultural and economic dynamics of Brazil (Avila et al. 2005).

Much like Johannesburg, the spatial structure and settlement patterns of Brasilia led to urban sprawl, with people having to commute for long distances to places of employment and other social amenities. The parallels in the restrictive spatial distribution patterns of Brasília and Johannesburg both led to the formation of the informal occupation of areas outside of the city centre. Importantly, the impact of these inefficiencies in the urban form negatively affected the quality of the living environment for marginalised urban inhabitants due to high transportation and housing costs further

exacerbating social division between people of different income groups (Ibid, 2005).

Additional shortfalls that architectural modernism have been criticised for was the isolating effect the standardised design of the period had on the people occupying these spaces (Conway and Roenisch, 2005). The standardisation of components and materials during this period was an attempt to bring more organisation and rationalisation to the building industry. The focus was also on stimulating the production of industrialised construction across the sector. The mass production of housing units through the standardisation of architectural design was pursued with architectural buildings being standardised and often identical in design (Kostoff, 2000). However, in attempting to address the failures of previous architectural design models, modernist architecture was ultimately unable to effectively address the wide array of complex social dynamics through its focus on standardisation and functionality.

Postmodernism in architecture began in the late 1960's and the type of buildings designed were more ornate with brighter colours and arched forms (Larson, 2004). The height of postmodernism was during the 1980s and 1990s with design styles such as neo-classicism, high-tech and deconstructivism featuring prominently. Learning from Las Vegas (1972) was the book written by Robert Venturi and Denise Scott Brown that is considered to have introduced the first post-modernist principles. The Vanna Venturi House (refer to figure 2-4) located in Chestnut Hill, Pennsylvania was built in 1964 by Robert Venturi and was considered a physical manifestation of one of the first postmodern buildings (Ghirardo,1991). Other leading architects in

the postmodern movement were James Stirling, Terry Farrell, Michael Graves, Phillip Johnson, and Charles Moore.

Figure 2-4 Vanna Venturi House located in Chestnut Hill, Pennsylvania built in 1964



Source: Venturi, 1966)

Moving from modernism to post-modernity from an African perspective the architectural design approaches that were adopted in post-colonial countries (Ethiopia, Angola, Namibia) shifted from supply-driven to self-help housing which commenced at the beginning of the 1970's (Stren, 1990). However, this shift did not take place in South Africa as the segregative policies of apartheid were still in place. The World Bank assumed a prominent role in funding these self-help housing projects in these African countries which were based on the knowledge gathered from projects undertaken in Latin America (Croese et al. 2016). Radical architects such as John Turner (1972), Paul Barker, Reyner Banham, Peter Hall and Cedric Price (1969) who put forward

the idea that the design process should be more inclusive and the people should drive the design process through self-help architecture (Crawford, 1991). This type of architecture was participatory and advocated for strategies where end-users drove the architectural design and development process. Self-help approaches not only sought to empower end-users in the production of architectural space and design but also served to reverse traditional client-architect relationships. The role of the government in the housing process and the development of secure tenure is also said to be reduced when a self-help approach is adopted.

A key defining factor of self-help housing approaches is end-users are given the responsibility and autonomy to decide what informs design and construction processes to ensure that the needs of the inhabitants are adequately met (Hatch, 1984). Although end-users are given the freedom to drive the housing process through self-help approaches, the technical expertise, capacity, and scale at which housing delivery occurs may be limited. As such, government is then expected to play a more active role in the housing delivery process to ensure the successful implementation of the project and the sustainability of the development. The upgrading of slum areas and the site and serviced stand initiatives formed part of the self-help approach but there was widespread criticism that emerged which resulted in the World Bank no longer funding these types of projects (Payne, 1984).

In South Africa during this time, the apartheid system of segregation and oppression was being dismantled and with the dawn of democratic South Africa, there was a concerted focus on improving access to housing through the mass roll-out of a housing subsidy scheme. The policy intent of the macro-economic strategy known as the Reconstruction and Development

Programme (RDP) was focussed on the mass delivery of housing to communities who were previously marginalised (Osman et al. 2005). This housing approach was not well considered in that the provision of basic infrastructural and social amenities was inadequate. Most of the RDP housing developments were located on the peripheral edge of the city far from economic opportunities (Donaldson, 2001).

Even though there was a high scale of housing delivery through the RDP programme, the demand continued to exceed the supply, and this continues to be the basis of the housing crisis in South Africa. There was a concerted attempt by the new democratic dispensation to undo inhibiting spatial characteristics of the apartheid city by transforming areas with painful histories of segregation and exclusion. Unfortunately, the design of the RDP housing typology (refer to figure 2-5) was still an inefficient *match-box* design. The RDP housing design neglected to factor in issues around social integration, identity, location, and access to institutional amenities. While families who previously occupied informal housing were provided with security of tenure and access to basic infrastructural services, the quality of housing was not substantially better than informal settlement areas.

Figure 2-5 Architectural plans for RDP housing typology developed by democratic dispensation



Source: Linstra, 2016 and Website: https://housingfinanceafrica.org/app/uploads/RDP-Assets-Qualitative-Report_Final_May11.pdf

The widespread urban sprawl, fragmentation, and overt social and economic division further perpetuated this, which ultimately resulted in urban environments that were not functional and integrated (Osman et al. 2005). Further exacerbating the housing crisis was the lack of innovation using efficient technological methods to decrease the environmental impact and to develop sustainable living environments for end-users. This gave rise to the need to design sustainable housing solutions that are responsive to the environmental and social context of housing delivery (NDoHS, 2004).

The BNG was a policy response by the South African government towards creating sustainable human settlements. The focus was now redirected from redistribution towards integration and spatial restructuring. Although sustainability in design and the development of sustainable human settlements remained a central feature of public housing policy, the effective

implementation of public residential projects that embody these principles are not commonly found (Irurah et al. 2003). It was also further noted that in cases where energy efficient housing projects (Midrand Eco-city, the Soweto energy-efficient house and All Africa Games Village near Alexandra in Johannesburg) have been rolled out by Community Based Organisations (CBOs) or Non-governmental Organisations (NGO's) the projects are often not sustainable over time because communities often do not have the capacity (technical expertise and financial resources) to manage the settlements efficiently (Ibid, 2003).

Reflecting on architecture today, there have been several changes in how buildings are designed and the degree of complexity. Environmental sustainability and the green development agenda have gained prominence in the built environment especially since the activities of the construction industry is cited as one of the major contributors towards global warming (du Plessis et al., 2003). Contemporary design paradigms such as the New Urbanism and Neo-Classical architecture have gained popularity but there are still architectural elements from previous architectural periods incorporated into the design of new buildings. Contemporary approaches are focussed on sustainable building which involves sourcing materials that are environmentally friendly and locally produced. The ecological footprint of buildings and projects are also factored in the design process through issues such as water and waste management, efficient lighting installations and other energy saving electrical fixtures (Irurah et al. 2003).

There is growing attention directed towards issues on sustainability within the built environment due to the recognition of the importance of reducing carbon emissions and preserving the existing resource base for future generations.

The drive towards sustainable development has also impacted on the approaches and considerations in the architectural design process. Although the beauty and form of architectural designs remain pertinent, there is, however, more emphasis placed on the impact the built environment can contribute towards the agenda on sustainable development (Widener, 2000).

However, there is a view that although sustainable design practices have many positive effects, the implementation and adherence to these regulations are often considered to be costly and overly time consuming for design professionals (Miller, 2003). In countering the assertion that adopting sustainable practices is a hindrance to professionals, the definition of sustainable developments highlights that there is a need to move towards "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987:43). Therefore, although the financial costs and regulations may be burdensome at first, the long-term impact of adopting sustainable development practices are worth the investment. Besides, the architecture of today is not only about understanding today but it is reflective of the past and how improvements in the environment can be realised by correcting deficiencies in practices previously made and also preserving the environment for the future.

Reflecting on the history of architecture allowed for a perspective into how architecture as a practice and the role of the architect has evolved throughout various periods. Although practice of architecture and the role of the architect during earlier historical periods appeared to be an individualistic artistic pursuit only for the benefit of the elite classes, there was a significant shift from the modernist period and further into post-modernity. The practice of architecture sought to expand its reach through the recognition that architects

have a social responsibility in participating in the design of socially inclusive and sustainable living environments for everyone.

Although the fundamental principles of architecture remain relatively unchanged across time, some extraneous factors shape the practice of contemporary architecture. This requires advancing a more inclusive approach that accommodates the different ideas and insights of end-users (Widener, 2000). Even though there is a growing recognition in the contemporary architectural practice of embracing, a more socially inclusive design approach there is still some preoccupation with the aesthetic form of architectural designs. Notwithstanding the importance of the proportionately and appropriateness of design emphasized by the likes of Alberti, the contemporary architectural practice should develop responsive design solutions that address the needs of its end-users.

2.3 Architecture, Social Architecture, and the role of Architects in design

Le Corbusier (1927: 19) defined “architecture is the masterly, correct and magnificent play of masses brought together in light.” The definition highlights that lighting accentuates the form and beauty of architecturally designed buildings. Le Corbusier promoted the notion of an ideal city through the standardisation of design where everything fits together. This perspective is critiqued for its narrow focus on that which is aesthetically pleasing, neglecting to acknowledge that the built environment is diverse with end-users that have varied needs for their living environments. There appears to be much debate on what should constitute the definition of architecture. This stems from the fact that the meaning of architecture differs from one context to the next. To further, expand on this argument there is an emphasis placed

on understanding the architecture of place by fully comprehending what influences the development of certain buildings and projects.

The ideas and ideals of a specific period, market forces and who the funders are of architectural design projects are cited as important determinants of the architectural style of a period and place (Goodsell, 1988). The meaning and value attached to buildings are found to extend beyond the physical façade, but they also symbolise various associated needs that are attached to accessing the built form, which takes on various understandings. This is articulated in the interplay between having access to a house contrasted against having a place to call home. “Architecture provides the environment for our lives. Buildings are not just places for physical shelter, but places in which our social rituals are enacted” (Conway and Roenisch, 2005:27).

This is a perspective supported by Ghirardo (1991) where it is expressed that architecture cannot be considered autonomous because it operates within a structure. If the broader social aspects of architecture are neglected, it leads to the design of space, which is influenced by trends, and this disregards the functional value of the end product by focussing on what appears to be aesthetically pleasing. There is a call for architecture to focus on how the product is experienced by the subject which is informed by the various understandings and interpretations attached to the discipline (Ibid, 1991). The provision of housing for black communities during apartheid is an illustrative case study of how the practice of architecture is influenced by and influences broader socio-political conditions. In a research study undertaken by Calderwood during apartheid, the following observations were advanced:

“Houses alone cannot create a good environment, and it is necessary to provide shops, schools, parks, playing fields, halls, libraries, clinics etc. in

order to establish a neighbourhood in which persons can live a full life." (Calderwood, 1955: 88)

The design of apartheid housing for black communities was a deliberate attempt by the state to advance its agenda on racial segregation. The focus was on developing housing structures at scale and as such the architectural design approach neglected to factor in access to important urban amenities and the integration of communities across racial categories (Linstra, 2016).

The social role and contribution architecture can make towards society is dependent upon the reconsideration of the strategies attached to this discipline. This acknowledgment allows for the recognition that architecture as a discipline plays a pivotal role in informing the politics of identity and can further influence the social consciousness that pervades society and how people live and experience their environments(SACN, 2014). Ghirardo puts forward the critique that the onus placed on the modern-day architect is that there is an expectation that they can address the challenges of society by simply inserting buildings into spaces and by doing so influencing how "culture is consumed and commodified" (Ghirardo,1991: 9). However, how architecture can impact society should not be confined to the physical product, but it should be a representation of how the needs and spatial practices of end-users are integrated into the architectural design.

A concept related to the view that architecture should be representative of the needs of people is *community architecture* which can be traced back to the 1970s where it was used to refer to the provision of architecture for the community by local authorities. Over two decades, the term came to refer to the provision of a wide number of related built environment professional

services, which included planning, and surveying in addition to architecture. The purpose was to enable local groups to actively participate in the development and redevelopment of their environments (Jenkins and Forsyth, 2010). Essentially the ideals attached to participatory design changed the nature of the relationship between the architect and the end-user. The primary area of focus was now on the social contribution architects were able to make and this influenced the broader policy context as organised structures within communities were increasingly recognised as formal structures.

However, the criticism put forward by scholars such as Burgess (1978) and Pugh (1994) was that this new social role by radical architects further reinforced the already powerful position architects assumed and such did not have the effect of empowering the broader community. The economic and social forces that direct the built environment afforded architects ideological control and this served to distort the client-architect relationship and as such, it remained an unequal relationship (Crawford, 1991). For participatory design approaches to be fully inclusive and effective, a mutually beneficial relationship between the built environment practitioner and the identified end-users needs to be facilitated. The design solutions that emanate from this collaborative process will ensure that the design solutions can address the requirements of end-users and improve the quality of housing.

Ghirardo (1991) suggests that architecture that functions on a superficial if not supercilious level through the design of artistic spaces, which are intended to be for the benefit of the nonprofessional but instead remains somewhat of an outsider rather than an active participant. Through this perspective, it is almost assumed that low or popular culture needs to be

rescued by arbiters of high culture. The exclusionary nature of architecture is also apparent within the actual built environment where there is a separation between architect-designed buildings and non-architect designed buildings. There is a need identified to unpack the relationship between the various interpretive categories instead of blatantly isolating non-architectural buildings, as this would contribute towards an improved understanding of dynamics within the design profession that may have previously been neglected.

Borden et al. (2000) adopt the view that it is too simplistic to simply reduce the discourse on architecture to the contention between what is architectural versus that which is not. These scholars assert that the inclination to objectify architecture as a practice is widespread and it is thus proposed that "…architecture is no object. At an interdisciplinary nexus, as an intrinsic element of everyday life, architecture is not composed of isolated and monumental objects. Architecture is ambient and atmospheric, and architecture allows us to tell stories" (Ibid, 2000: NP). This argument further advances the idea that architecture is not disaffected by society but instead it is embedded within the social structural conditions and experienced subjectively by its observers and users.

2.3.1. The meaning of Social Architecture

Social Architecture is the conscious design of an environment that encourages a desired range of social behaviours leading towards certain outcomes or a set of outcomes. In defining Social Architecture, it is important to understand how the two separate, yet related concepts *social* and *architecture* are merged to form Social Architecture. When defining that which is *social* in relation to society, it is the arrangement of people in society and

how they relate and interact with each other (Lopez, 2000). However, the concept social cannot be adequately conceptualised without acknowledging the broader social structure in which people exist.

According to Teevan (1982), society is a “a group of people who reside in the same geographic area, who communicate extensively among themselves, and who share a common culture” (Teevan, 1982: 46). It is also important to note that society or the social structure in which people are arranged is not static and subjected to patterns of change spurred on by economic, social, cultural and other forces that influence how society is arranged (Osman, 2002). As such, the physical and social environment in which people exists impacts upon the way in which people interact and relate to one another.

Architecture is defined as both an artistic art form and a practice that can effect positive social change through the design of spaces that improve existing (social, economic, environmental) conditions. It involves the creative and technical process of designing human environments and these architecturally designed spaces influence how people consume space and engage with each other (Ibid, 2002). The contribution of architectural design cannot be overstated as it is arguably a reflection of the conditions of a society at a given point in time. Architecture shapes the physical environment and also has the ability to impact the social environment in which we exist and how we navigate our daily lives.

The social character of architectural design is defined by the way in which society can influence the design process in relation to a specific place and time in which a building is located (Marschall, 1998). A design strategy driven by the needs and requirements of end-users provides the architect with the

opportunity to produce a positive design environment that is responsive to the needs of end-users. Social Architecture as a design approach allows for the design of residential spaces with communities and this increases end-user's identification with the building. The building thus becomes a physical manifestation of a collective effort between end-users and practitioners. However, a socially inclusive design approach should not be considered a once-off intervention but instead should be aimed at empowering and sustaining an ongoing meaningful relationship with communities before the inception of a project until post-occupancy.

Social Architecture incorporates the roles and responsibilities of architecture in a socio-political context dealing with various crises. Supporters of Social Architecture (Ghirardo, 1991, Gribat et al, 2017, Hatch, 1984 and Jones and Card, 2011) see it as an instrument that can effect progressive social change by foregrounding the moral imperative of increasing human dignity and reducing human suffering.

Scholars of Social Architecture acknowledge that it is not a static concept representing an objective and neutral reality Weder's (2016). Rather it is a description of a multitude of practices by architects and other professionals, which contain a vision of the roles and responsibilities of architects that are themselves influenced and largely determined by pre-existing contradictions and crises of specific contexts (Jones and Card, 2011).

In South Africa, Ahrends (1996) expresses a view that "architecture carries a powerful potential to touch, draw upon and assimilate shared need and, in cultural gestures, to give structure and form of aspirations" (Ahrends, 1996: 72). Although there is recognition of the social value that can be attached to

the architectural practice, the attainment of community-based development and innovation is dependent on specific conditions within the local environment. However, it has been contended that because communities are involved throughout the design process when Social Architecture is practiced, collective aspirations will be embodied in the projects as a result of local inhabitants being empowered to design their space in ways previously unavailable (Richter *et al.* 2017). Based on the views presented above, it can be argued that the democratisation of architecture through the adoption of socially inclusive approaches is intended towards facilitating sustainable and inclusive practices.

Previously, the practices attached to architectural design has not been democratic in that it neglected to meaningfully engage affected stakeholders and role-players in the processes attached to the design of the architectural product. The RDP housing design is an example of a housing programme that did not adequately engage and include end-users and other stakeholders in the architectural design process. Further honing into the current South African context, the role of participation within architectural design varies depending on the nature of the project. Much importance is ascribed to the value of participation by the democratic political dispensation, as this was a way of encouraging a greater sense of inclusivity in the development of a collective spatial vision for the built environment (Jenkins and Forsyth, 2010).

Pieterse (2004) highlights that in South Africa, metropolitan municipalities like Johannesburg was established after apartheid to repair deeply rooted spatial fragmentation by aligning with the constitutional responsibility to execute the developmental local government mandate. The promotion of a participatory democracy remains a constitutional imperative and it is legislated that

planning processes related to the development of projects should incorporate public engagement (Constitution of RSA, 1996).

However, it has been found that although these legislative requirements for participation are prescribed, several projects were not inclusive of the views of future users or the broader beneficiary community (Jenkins and Forsyth, 2010). Considering the current prevalence of urban challenges in South Africa and across the globe, there is a need to adopt functional strategies to facilitate a democratic and inclusive architectural design approaches.

Although there are benefits attached to Social Architecture that have been cited, the concept itself has not been without criticism. Social architectural approaches towards design are intended to make architecture more relevant to the context in which a project is undertaken so that a sense of identification and pride unfolds amongst those who will become future users (Richter *et al.* 2017). The weaknesses identified in Social Architecture generally centre around three main themes, which are *scale, agency*, and *community* (Richter *et al.* 2017:772). With reference to *scale* is it said that design processes that attempt to be socially relevant are generally confined to local communities and as such neglect the broader socio-economic structural conditions, which may affect the sustainability of such developments in the long term (Richter *et al.* 2017; Gribat et al, 2017). An alternative perspective to the critique on scale is offered by Jones and Card (2011) who make the following claim: “smaller scale approaches also seem to harbor more potential to embed architects’ practices in the politics of the community, rather than, for example, retreating to the abstractions and heroic scales associated with modernism’s utopianism” (Jones and Card, 2011: 233).

However, the ambiguity that persists is that socially inclusive design assumes that incremental interventions can generate a wider positive impact yet there is no consensus on the meaning of the *social* (Richter *et al.* 2017). It can, therefore, be stated that the absence of a concise conceptual framework for what constitutes *social* responsibility, results in the neglect of overarching political, economic, and spatial conditions (Pugalis and Giddings, 2011). It is therefore important to have a holistic understanding of factors affecting design and architecture within a specific context to have an informed approach towards improving the quality of life for end-users.

Due to the collaborative nature of the practice, urban inhabitants engaged in a socially inclusive design process with architects benefit from influencing the process, which sanctions a degree of agency for those previously marginalised. However, Richter *et al.* (2017) argue that this is an over simplistic and idealistic way of perceiving the outcome of such interaction because the broader structural relations still place architects and designers in a more powerful bargaining position. Further to this, it is stated that the notion of inclusion within the context of Social Architecture neglects broader societal exclusions and modes of oppression (Ibid, 2017). It is for this reason that Dikec (2012) affirms that urban space is directed by socio-political conditions and being ambivalent about these conditions creates the impression that the promise of socially inclusive design practices might be superficial.

Building on the critique relating affirmative views on community building associated with Social Architecture there is also the idea that a greater sense of agency is promoted amongst non-experts. Social architects suggest that being given the latitude to inform the design process serves to emancipate communities from their marginalised living conditions (Weder, 2016). A

provocative point of enquiry put forward by Richter *et al.* (2017) questions whether it is the responsibility of architects and designs to effect agency for marginalized communities.

Proponents of Social Architecture acknowledge that there is a dearth of research that analyses how designs can make spaces that increase social connection. The lack of research is a result of funding requirements, political will, and the amount of time that it would take for such meaningful studies to be undertaken (Weder 2016). In the South African context, it is generally accepted that social cohesion is a requirement of governance to heal divides that currently characterise South African society, especially in urban areas. As such, ideas of developing an integrated living spaces have caught on with various local authorities. Examples of such projects includes the Cosmo City in Johannesburg, Pelican Park integrated housing project in Cape Town and Florida Heights integrated housing development in Despatch.

The role of an architect in designing spaces that can increase social connection, and the role of architecture in studying and bringing about various understandings of how this can be done, cannot be undervalued. As such, no matter how localised, minimal, or specific the role of Social Architecture may be, there is a requirement for expansion of studies focusing on this aspect of architecture and urban design.

2.3.2. Socially inclusive architectural design processes and quality of housing

Architecture is appreciated not only for its artistic contribution but also for its social contribution through the provision of tenure and a place for people to connect and interact by carrying out daily activities. Dutton and Mann (1996: 27) describe Social Architecture as "practice of architecture as an instrument for progressive social change." It is further asserted that due to the inherently social role attached to architecture there is scope for it to effect change within the public realm. The emphasis on architecture's contribution towards effecting social change represents a departure from conventional approaches where the focus was more on elevating the activity of those who yield the power. It is thus argued that conventional practice of architecture is often heavily embedded in existing power structures that serve to exclude and marginalise those located in lower social echelons (Dutton and Mann, 1996).

Social Architecture has therefore been identified as a mechanism through which the oppression and domination promoted in the built environment are replaced with a commitment towards inclusivity and dignity in design production. Another key differentiating factor related to Social Architecture is that end-users can access more agency by demanding greater accountability from government regarding how their residential space is planned and fabricated (Marschall, 1998). More broadly, the discourse extends beyond simply focussing on the nature of design practice and instead the emphasis is placed on the ideological imperatives attached to Social Architecture. To illustrate this assertion, Hatch (1984: 7) states that "at its best, Social Architecture aims to create and develop critical consciousness."

Previous attempts at developing spaces with design considerations for social and cultural practices is cited by Coetzee (1999) as Jo Noero's (1988: 11) Alexandra Township Community Housing Project. Coetzee (1999: 14) highlights that "the temperature and sunny climate of South Africa allows for such outdoor living. In sympathy with this cultural practice, Noero designed seating built into the house walls facing the external spaces, so that the occupants could live there in a dignified way." Such attempts at fostering tolerance within the design process may have been misplaced as the emphasis was mainly on the architect's perceptions and not fully inclusive of whether these sentiments were shared by community members. This further warranted the need to emerge with an approach, which was more inclusive of the views of observers and users of architectural design products

It is therefore important to reflect on whether the discourse ushered in by post-postmodernity has allowed for a greater commitment towards social responsibility from a critical perspective and how this then translates into strategies and practices within the architectural design space. McLaren and da Silva in Dutton and Mann state that "the task… is to provide the conditions for individuals to acquire a language that will enable them to reflect upon and shape their own experiences and in certain instances transform such experiences in the interest of a larger project of social responsibility" (Dutton and Mann, 1996: 160). The conditions within the environment also inform the type of decisions individuals would take and how they perceive their respective environment, which then relates to the agency of people. The juncture between identity and architectural design is deeply rooted within the socio-spatial and economic conditions of the place. It is proposed that architecture should be less imposing on existing socio-spatial practices and instead embrace and incorporate the existing nuances within a specific social context (Dutton and Mann, 1996).

2.3.3. Complexities in practicing (Social) Architecture

The change in relationships of the different role-players and the role of the architect with the built environment has resulted in several complexities in undertaking mainstream and Social Architecture projects across the globe. Different yet related issues need to be unpacked to fully comprehend the nature of these prevailing complexities.

Architect and Builder

The role of architects is said to have evolved and shifted with time and it remains a contested space. The architectural projects of the late twentieth century confined the role of the architect to mainly provide design sketches and additional technical aspects remained the responsibility of those constructing the project. However much earlier on in the nineteenth century the participation of architects appears to have been much more involved with functions relating to project planning and designing being included in their scope of work.

The nature of the relationship between role-players has changed over time where previously the architect was the first point of contact for clients, now many clients approach the developer for the overall project and construction expertise (Weder, 2016). The architect's role has been reduced, as there is less expectation for the architect to execute construction-related responsibilities. It is however argued that although the scope of responsibilities for the architect has changed there is further opportunity to venture into new ways of doing things and collaborating with professionals within and outside of the built environment (Berman, 2002). In the quest for

an improved quality of housing, the social role of architects is more apparent in the current times as the design interventions need to be responsive to the socio-spatial and urban environment to ensure that the tenets of sustainable and integrated development are realised.

Architect and the Building

An argument brought forward is that the lack of active collaboration and engagement during the creative process in architectural design often results in a lack of consideration for the potential role that could be played by those involved in the construction process and the needs of those who end up using the buildings. Caudill (1971) highlights the importance of advancing a collaborative approach to design projects and emphasizes that architects need to be more flexible if they want to remain relevant and not excluded from the building design process. Similarly, it is also stated that for architects to design buildings that are relevant there is a need to bridge the diverging goals between the design and construction professionals (Bryde et al. 2013).

Architect and Other Professionals

The barriers to collaboration in the architectural professions are grounded in the ideology of individualism and self-preservation. This is supported by assertions made by Succar (2009) who identified that there is a lack of inter-disciplinary collaboration, which has a direct impact on the quality and efficiency of a design. It is argued that the highly specialised nature of the architectural profession allows for a certain set of expertise on design projects but at the same time it could also serve to fragment the project delivery process (Yates, 2003). An assertion made is that there should be a reconsideration of the definition of the roles of those involved in a design

project to counter fragmentation and to ensure the ultimate success of the project (Conway and Roenisch, 2005 and Berman, 2002).

Architect and Society

Another point of criticism expressed by Richter et al. (2017) is that architects are viewed as being socially disengaged on key social challenges such as homelessness, poor supply of affordable tenure and poorly managed urban areas that could be assisted by their professional expertise. Possible reasons for the distance between architects and prevailing social issues is that participation is often limited to those who are economically affluent instead of marginalised groups. This is therefore said to represent a gap between "individual concern and professional indifference" (Ghirardo, 1991: 27).

2.3.4 Role of architects in design

The scope of architectural services is prescribed by the provisions of the South African Council for the Architectural Profession (SACAP) and are broadly classified as standard services and other partial services. The services are broken down into distinct stages where the architects' functions and outputs are described. The standard scope of service and the architect's functions in performing this service for each work stage are what is examined in this study to understand the degree of inclusivity of the end-user in the process (SACAP, 2000).

The standard service is also referred to as full services and the Architect is the Principle Consultant and Principle Agent for the client on the Project. A detailed analysis of the work stages based on the research findings and

interviews conducted as part of this study will be provided in Chapter 3. Standard service work stages are listed as follows (Duff, 1999):

- Stage 1 – Inception
- Stage 2 – Concept and Viability.
- Stage 4 – Technical Documentation and Procurement (of Contractors)
- Stage 5 – Construction Supervision/ Contract Administration over the building contract
- Stage 6 – Closeout of the project

Architects are expected to be involved from the point of conceptual design through to the closeout of the construction. Contractually, architects are expected to manage and coordinate these six stages in accordance with their professional role but stage 5 and 6 are sometimes excluded from the architectural services depending on the nature of the project.

2.4 Conceptual Framework

At a conceptual level, the adoption of socially inclusive architectural design processes will result in improved quality in the living conditions for end-users of public sector residential projects. In addition, it is also asserted that when end-users are more actively included in the design process and the implementation of residential projects, they exercise more ownership over the project. A review of existing literature on Social Architecture allows for the definition that it is a socially engaged architectural design approach which is inclusive of community inputs, utilises locally produced construction products intending to stimulate economic development, training of local community members, incorporates design aesthetics of the local identity and ultimately

resulting in a greater sense of community and cohesion (Gribat et al, 2017; Richter et al. 2017).

Key concepts that will be explored as part of this study relate to active community engagement, spatial integration, local economic development. The conceptual framework provides a framework for understanding how socially inclusive architectural design processes improves the quality of housing.

A brief description of how each concept has been conceptualised is presented below.

Active community engagement in the context of socially inclusive public sector residential projects can be understood as the process of engaging and including the affected community and identified end-users throughout all decision-making processes in the design and implementation of projects. End-users and practitioners collectively develop architectural designs that would address the needs and expectations of the majority of those who will be occupying the residential units (Sanders, 2002).

A socially inclusive architectural design approach facilitates *local economic development*. The provision of socio-economic opportunities in the form of work opportunities or the training of local community members forms part of ensuring that residential developments function as integrated residential communities (Breaking New Ground, 2004 and Gribat et al, 2017).

The development of context-specific housing options that improve the spatial environment of end-users based on the locality and identity of a residential development enables *spatial integration.* The marginalisation of people and

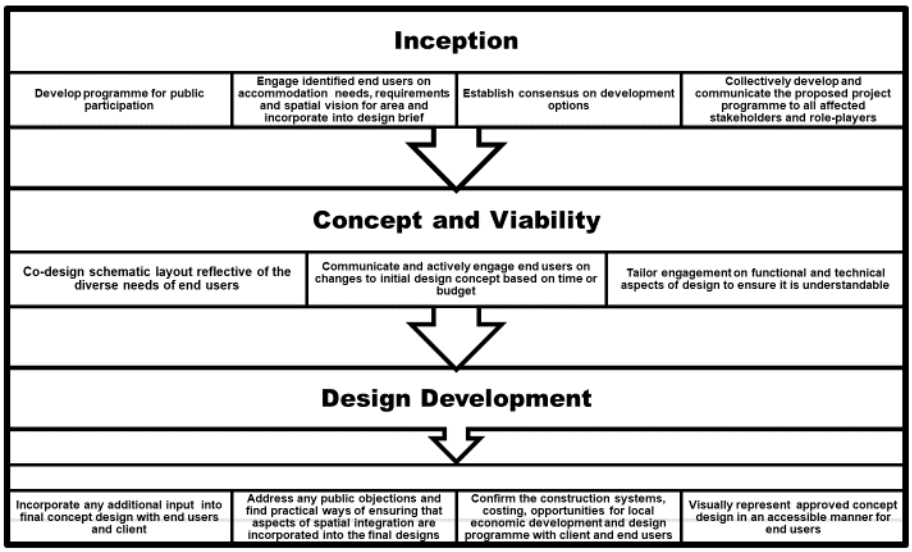
existing spatial inequalities based on locality can be redressed by improving access to various social, institutional, and economic amenities (Kothari, 2001).

A proposed reconfiguration of the specifications in the preliminary phases of the architectural design process when adopting a socially inclusive architectural design approach on public sector residential projects is a central component of this study. A diagram of the proposed specifications and an explanation of the various components will be further detailed in chapter 3 of the report.

The existing architectural work stages as prescribed by SACAP do not incorporate elements of social inclusivity according to what is required from architectural services rendered. Due to the lack of engagement with identified end-users in the design process, the quality of housing and living environments in some public sector residential projects in Johannesburg is poor. A modification of the existing work stages with a primary focus on architectural design will provide a new conceptualisation of the architectural work stages by allowing for the incorporation of principles of Social Architecture. The new proposed design process for public sector residential developments in the inner city of Johannesburg will lead to a more suitable housing tenure outcome, which would be beneficial for the implementation and design of current or planned projects.

A diagrammatical illustration of the conceptual framework is below. The diagram demonstrates a new proposed process flow for the socially inclusive architectural design process for public sector residential design projects:

Figure 2-6 Conceptual Framework for socially inclusive architectural design on public sector residential design projects



Source: Adaptation of SACAP Architectural work stages, 2000

2.5 Conclusion

In rethinking what architecture is there should be a consideration as to who residential projects are being designed for and used by. It emerged from the literature that this consideration should not be confined to the client-architect relationship but it provokes a wider debate on the idea that urban space is not the product of built environment practitioners but it is symbolic of the people who consume this space. It emerged from some earlier scholarly work that the concept of architecture is often preoccupied with the physical end products in the form of various types of tenure or buildings and how they function from a technical perspective.

However, in contemporary architecture, although the discourse on architecture still refers to space and the various technical understandings thereof, there is an emerging interest on how space is consumed and experienced. It was identified that although these emerging categories provide a structure in which architectural design practice can function in a more socially inclusive manner, there was a gap in the literature with regards to how public residential housing can implement socially inclusive principles. This brought forward that more still needs to be done to further advance ideas and conversations on the design of socially inclusive *public sector* residential space within the context it is being experienced.

3. ARCHITECTURAL WORK STAGES AND INCLUSIVITY OF SOCIAL HOUSING IN JOHANNESBURG's INNER CITY

3.1. Introduction

This chapter addresses how the incorporation of principles of Social Architecture in residential design practices improves the quality of housing in the inner city of Johannesburg. There will be a comparison of the empirical data and insights gathered in interviews with practitioners against the architectural work stages as provided for in the Architectural Profession Act No 44 of 2000. The South African Council for the Architectural Profession (SACAP) prescribes the six work stages on a standard approach for architectural services as a guideline for all projects to follow a sequence of activities. The chapter will discuss all requirements attached to the architectural design processes followed and whether there are principles of Social Architecture and inclusivity present in public sector residential development projects. There will be a comparison of all relevant work stages and processes applied during project planning against the insights gathered from built environment practitioners relating to the current practicalities of incorporating principles of Social Architecture in the inner city of Johannesburg.

3.2. Respondent profiles

There was a diverse compliment of respondents (also referred to as practitioners) interviewed for this study. Appendix B provides a basic description of the professional roles occupied by each of the respondents as a way of contextualising their insights based on their background within the built environment. Respondents' names and exact job titles were not included to ensure their anonymity.

3.3. Architectural practice and inclusivity

The practice of architecture and how it addresses the question of inclusivity can be best understood through the different tasks and responsibilities assigned to all the role players involved in a building design project as well as the processes involved. Some of these role-players include, but are not limited to architects, project managers, quantity surveyors, built environment specialists, consultants, engineers, and building contractors.

There are several outputs attached to the different stages of the work cycle, which require involvement and insights from various role-players. The incorporation of Social Architecture in the respective work stages of public sector residential projects in line with the SACAP regulations is an important point of analysis for this study. However, only work stages one to three remain relevant with regards to being able to test whether inclusivity and Social Architecture are prescribed by SACAP in the standard architectural services and functions for architectural professionals.

3.4. Stage 1: Inception

At the inception stage of a project, architects are expected to provide the client with advisory support on what is required as part of the project programme. The programmatic requirements for the project, the required budget investment and what steps need to be pursued to implement the project are key areas of consideration at this stage. The study identified that the guidelines for the inception work stage are not specified in a manner that accommodates engagement with end-users because the activities are only confined to the client and the appointed practitioner or contractor. Even though the specified activities are mainly confined to the client and the

architect, quite a few opportunities for participation exist at the inception of a project.

3.4.1. Client's brief

The participatory processes of engagement often associated with public sector projects emphasize the need for tailored engagement with identified end-users throughout the project cycle. Respondents from the public sector and some architects commented that engagement with communities before preparing the design brief is often overlooked in public residential projects. This is not consistent with a key tenet of Social Architecture, which advocates that the design approach adopted should be inclusive of community inputs from the inception of a project. Some scholars highlight that engagement throughout the project cycle presents an opportunity for the incorporation of social, economic, and cultural perspectives into the design which ultimately serves to realise the goal of social cohesion (Gribat et al, 2017; Richter et al. 2017). It, therefore, can be inferred that the inclusion of end-user inputs should occur at the beginning of the design process, which would serve to secure accountability in decision-making and ownership over the project.

Practitioners who have been part of briefing sessions for public sector projects stated that they rely on the brief provided by the clients, which in most cases are inadequate, and they often have to go back and rework aspects of the brief (Respondents 3C, 6B, 7B). The shortcomings in the brief provided by clients identified by respondents differed but broadly related to the fact that the actual process of the briefing was not structured properly and was not systematic in approach. When enquiring further in the interviews what the possible reasons are for this, it was mainly attributed to the perceived lack of technical expertise on the side of the client and as such, the

appointed professional/s often took the lead on the design processes. Respondent 6B indicated that often there is not sufficient time allocated to the briefing sessions due to specified deadlines or milestones and other project related constraints on the part of the public sector client.

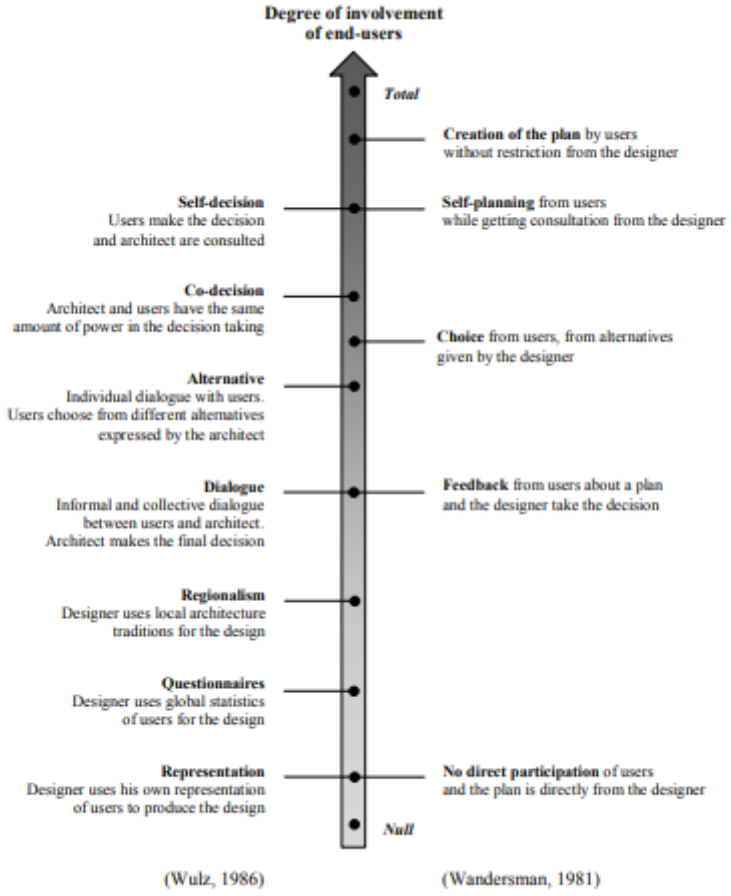
Respondent 1A shared that a common shortfall during the briefing process when initiating public sector projects was that often the key decision-makers with the requisite expertise and authority are not adequately represented at the briefing sessions. There was a common view amongst all respondents that the one aspect that is most neglected in public sector projects is the exclusion of end-users during the briefing process. The insights here highlight that there is a clear disjuncture between the clients' expectations related to driving an inclusive process and the capability to enforce and oversee what they require from the appointed professional. The correlation between how briefing sessions are undertaken and how client requirements are accommodated in delivering the final output was recognised in the study as a key factor in determining the ultimate success of a project.

Honing into the practicalities attached to whom to include in the design process from inception, a few respondents from different sectors asserted that in greenfield new build residential developments, end-users are not organised into a collective grouping. An additional potential limitation to engaging end-users when developing greenfield residential projects is a point highlighted by respondent 4C where it was emphasized that the end-user is often unknown in this context. The end-user being unknown implies that it might be impractical for engagement to occur with end-users during the crucial earlier stages.

In the context of a brownfield project which involves the upgrading of a building or informal settlement, it would be more practical to facilitate community workshops to engender a shared understanding of what is required for the use of the space (Respondents 1A, 2A, and 6B). However, with greenfield development, there are often no established community relations or existing programmes so how these end-users are engaged would take on a different format. However, when assessing the approach adopted for the identification of end-users it came forward in the interviews with public sector practitioners that the identification of applicants or potential end-users is done through a housing waiting list (Respondents 1A and 2A). The waiting list registers the demand for housing tenure within Johannesburg and categorizes beneficiaries in line with their economic profile (City of Johannesburg, 2018).

Therefore, although the end-users may not be an organised grouping, the economic profile of identified end-users is known. This brings forward that there is a further opportunity for targeted engagement by the public sector client with end-users, which will allow for a better understanding of the social and cultural expectations of the people they are building houses for. There are various considerations when engaging end-users in an architectural design project, Wandersman (1981) and Wulz (1986) (refer to Figure 3-1) proposed different ways in which end users can be engage at different stages of a project.

Figure 3-1 Wandersman (1981) and Wulz (1986) proposals for different degrees of involvement on architectural design projects



It is evident that from the representations made relating to the degree of involvement that the approach proposed by Wultz is more in line with the principles of Social Architecture. Practitioners alluded to the fact that it is sometimes challenging to decide on the degree of involvement of end-users and at which point to involve them in the design process (Respondents 5B, 3C and 1A). Based on the insights shared by practitioners this study therefore proposes additional considerations to be factored into socially inclusive design models for residential projects. The first consideration for both greenfield and brownfield developments is that there should be a comprehensive repository of available data on end-users targeted for a

residential project. However, to build a complete profile of end-users, the data and statistics need to be supplemented with face-to-face contact sessions with the identified end-users. The direct contact with end-users will provide context-specific information relating to the broader social, economic, and cultural considerations for the design process.

Additional proposals put forward by a practitioner to add further context to the considerations mentioned above was that on greenfield developments the model for engagement that could be useful would be face-to-face interviews where identified beneficiaries are contacted individually (Respondent 7B). After engaging end-users individually, they can be grouped into categories based on their required needs, which would allow for the establishment of public consultation forums and public briefing sessions. However, currently, the identification of beneficiaries for public sector greenfield projects only occurs after the design and implementation phases. Although this approach would be costly and time-consuming for public sector projects from a short-term perspective, over the long-term this may improve the social sustainability of projects.

Practitioners interviewed recognized the importance of including the end-user in the architectural design process yet the extent to which the client-end user is included or should be included varied. As a result, respondents almost all advocated for a clearly documented guide on how to keep clients and end-users informed and included in the design process. This could supplement current practices and contribute towards the overall success of the architectural design process. Strengthened communication between all stakeholders and role-players facilitates an inclusive design process that ensures the support of both the client and the end-user’s requirements in the

design process. A further deduction from this study was that an advantage of a Social Architecture project in contrast to a conventional public sector residential design project is that the creative vision driven by end-user insights are synthesized with the expertise of practitioners.

The study identified that design processes that exclude the expectations of identified end-users, runs the risk of compromising the social sustainability of residential projects. The Pennyville Housing Development located in the south of Johannesburg was cited (Respondent 2A) as an example of a project that has not managed to function socially as per what was envisioned or intended by the implementers. Considering the lack of ownership over the project, it is evident that public participation processes were not completely inclusive because the end-users expressed dissatisfaction with the housing tenure and typologies after taking occupation. Marschall (1998) asserts that design projects that encourages collaboration between practitioners and end-users increases the likelihood of developing a housing product that ensures a greater sense of pride and cohesion within communities.

An additional encounter of this study was that the SACAP guidelines are more applicable for projects where the architect or contractor only has one client. The definition of the client is primarily informed by the premise that they are dually authorised to be signatories to a contract or those funding the implementation of the project. However, most respondents (Respondents 1A, 2A, 5B, 7B) agreed that there is an opportunity to expand the scope of this definition for public sector residential projects because the end-user can also be seen as the client especially within the context of prioritising the requirements of end-users in the design process.

3.4.2 Site and rights and constraints

Part of the preliminary engagements with the client, the architect is expected to discuss key features about the site in terms of regulations from the local authority regarding the development of the project in the identified area. The process that unfolds at this point primarily involves interaction with the local authority planning department, the architect, and the client. Several respondents (Respondents 1A, 2A, 5B and 6B) pointed out that when deliberating the characteristics of the site there should be engagement with organised community structures who have tacit knowledge of the area and how it has evolved. This is a way of ensuring the integration of context-specific issues about the site into the final design of the project.

The study found that currently, there is no evidence in conventional architectural practice and relating to SACAP regulations that there is consultation with communities on the socio-spatial and economic aspects specific to the project site. During the planning and statutory phases, the consultation with affected communities is at a project level on the Environmental Impact Assessment (EIA) processes. Respondents differentiated the activities in a conventional architectural design project from socially inclusive projects by indicating that there should be an additional layer of participation at this point in the design process incorporated into the flow of activities. An architectural practitioner elaborated on some of the inclusive design processes that should be considered when pursuing upgrade projects in the inner city of Johannesburg:

"It would take the form of community workshops where we can ask [end-users] what they think of their current scenario [living environment] and what the relationship is with their surrounding environment as well as engaging

with specific stakeholders. In cases where the new building is arriving on-site at the same time as the facilitators, there would be a greater chance of it not being sustainable. There is an ill-informed perception that all these things can happen at once. It is important that you have a proven functioning programme beforehand" (Respondent 6B).

Some of the brownfield or residential upgrade projects in the inner city were cited for not having participation processes that were fully inclusive. Practitioners (Respondents 3C, 4C, 7B) shared that where public inputs were received from communities regarding the design of the project, they were often not incorporated in most cases because the expectations of identified end-users often conflict with the pre-determined outputs of the residential project. The study, therefore, found that the onus rests upon the client to determine whether the goals and objectives for inclusivity are not compromised by end-users not being able to exert actual influence over the decision making process in the design of the project. This study asserts that if the client is committed to driving a meaningful engagement process with the public then there should be clarity beforehand on which components of the project design, public input is preferred. It is also essential that the client should drive a clear statement on the objective of the public engagement process.

The Human Settlements Project Process Guide (2017) was developed in order to adopt participatory approaches for the planning and delivery of human settlements projects by government. In the guide, the process flow on activities for greenfield residential projects only prescribes that engagement occurs after the development of a layout plan. The engagement at this stage is mainly in adherence to the statutory requirement to advertise the

development application for community involvement and public participation. Since the feasibility stage is mainly concerned with determining whether a proposed residential project has any potential statutory, financial or physical faults, some respondents expressed that there should also be provision made for a social assessment at this phase in the project cycle (Respondents 3C, 4C, 7B). This would assist project implementers to gain more buy-in and fewer objections on the draft development plan proposed.

The provision for participatory planning sessions in the process guide is targeted at brownfield projects such as the Upgrading of Informal Settlements Programme (UISP) as part of ensuring an incremental approach to development. Notwithstanding attempts to facilitate a more inclusive approach on public sector new build projects, it was observed that on brownfield residential projects that involve the upgrading of older buildings the requirement for public participation during the earlier stages of inner-city upgrade projects is not specified or required. Practitioners (Respondents 7B, 6B, 3C) indicated that delays during the implementation phases of public sector projects were often due to a lack of community buy-in.

It emerged that some practitioners do not engage extensively during inception, as the practice is generally to share a concept proposal with communities for them to comment on what their views are on the proposal. An architect involved in socially inclusive design indicated that only some projects allow engagement to occur at the early stages of a project (Respondent 6B). Even though the ethos of the architectural firm, which Respondent 6B owns, is focused on being more inclusive in its design approach, the practices and processes adopted involved only engaging communities on design concepts that were already determined. The view

shared by the same respondent was that the client or project owner needs to ensure that there is a proven functioning community programme in place before investing in new infrastructure and bringing on board an architect.

One practitioner indicated end-users are sometimes presented with a few proposed designs aligned to the client's requirements but they are not necessarily actively involved in a manner that allows them to propose their design solutions for their living environments (Respondent 3C).

In pursuance of a socially inclusive participatory process, it was evident that although engagement at the early stages of the project cycle is not mandatory, practitioners who embraced such an approach expressed that there was value in allowing end-users to draw, represent and explain what the design solution should be (Respondent 1A, Respondent 2A). There were differing views from practitioners regarding the extent to which public sector clients attempt to engage end-users.

A perspective shared by a town planning specialist working in the public sector was that on some projects, identified end-users and stakeholders were included from the development of a precinct plan up until it is implemented (Respondent 2A). Even though the development of precinct plans entailed the participation of key stakeholders, there was an acknowledgment from a public sector specialist that it is often not financially feasible nor practical to accommodate most of the needs put forward by those being engaged (Respondent 1A). Additionally, an architect also shared that in most instances not all that is included in a precinct plan is incorporated into the actual design of the project (Respondent 6B). The insights shared by respondents allowed for the interpretation that the views and concerns raised during public

participation and the specifics incorporated into the final architectural decisions are often disparate.

3.4.3. Project programme and budgetary allocations

Embracing an approach to feedback that is reciprocal, which not only involves gathering input from communities but also sharing the project programme or plans with communities, remains central to the values of Social Architecture (Kendrick and Sullivan, 2009). Further complimenting the sentiment of the scholars, respondent 2A expressed that being responsive to the inputs received from communities allows practitioners the opportunity to rethink and possibly redesign their plans and then provide feedback on these to the community (Respondent 2A).

This study found that even though there was consensus that it is beneficial to involve communities on specifics relating to the project programme and other related matters, the practice adopted with regards to how this engagement should unfold and who should take on the responsibility differed. The practitioners interviewed for the study shared diverse views on what form the practice of engagement should take and whether or not it remains the responsibility of the design professional to share aspects of the project programme with end-users or not. Respondents 3C, 6B and 7B expressed that the client or contractor should employ an external consultant who has the expertise to engage communities on what their needs and requirements are relating to the proposed residential project.

Whereas respondents 1A, 2A, 4C and 5B indicated that architectural professionals should broaden their expertise and role by engaging with critical

social issues in the communities they are present in. Significantly, those practitioners who expressed that the responsibility to engage communities should be a function taken on by an external consultant are all architects by professions involved in socially inclusive public sector residential projects. The latter view indicates that the perceived role of the architect is separated from the architecture produced when in fact the roles should be reinforcing and complementary. To effect positive social change in communities through architectural design, architects themselves would be required to adopt and offer architectural services that are more socially inclusive.

Respondent 2A mentioned that the provisions for public participation are found in legislative frameworks such as the Spatial Planning and Land Use Management Act, 2013 (No. 16 of 2013), the National Development Plan (2012), and the City of Johannesburg Spatial Development Framework 2040 (2016). It was elaborated that the weaknesses identified in the public participation processes were not necessarily in the policies and the legal frameworks but the application and interpretation of the same. Practitioners attributed the shortcomings in public sector participation processes to the absence of concise rules for participation specifying the roles, expectations, and limits to inclusivity in the design of residential projects. It was also highlighted in the study that these agreements between implementers and end-users should be established at the onset of a project (Respondents 1A, 2A, and 7B).

Arguably, the prevalence of protests against public sector projects in Johannesburg is evidence of the fact that there is a mismatch between what end-users want and what the practitioners provide in terms of the end-product. There was a view that often there is not a clear differentiation

between end-user engagement at the precinct level in comparison to end-users in neighbourhoods and at the level of a building or facility (Respondent 6B). The clear articulation of the strategies and guidelines for engaging end-users is an important assertion of this study. It further highlights the need to develop a viable tool for anticipating and incorporating the needs of end-users into the decision-making and implementation of the design of architectural space.

Respondents from the public sector indicated that it would be important for the adequate interpretation of the client and end users' requirements into the design of the project. Based on the insights that came forth in the study, there is a proposal for an additional work stage before the inception of a project. The basis for such inclusion is to allow the client to undertake a thorough assessment of the social conditions and expectations of the identified end-users before briefing the design practitioner. Some respondents attested to the fact that they have to assume what the needs of the end-users would be and in doing, so they impose their interpretations, which often leads to a lack of ownership over the end-product by communities (Respondents 1A and 2A).

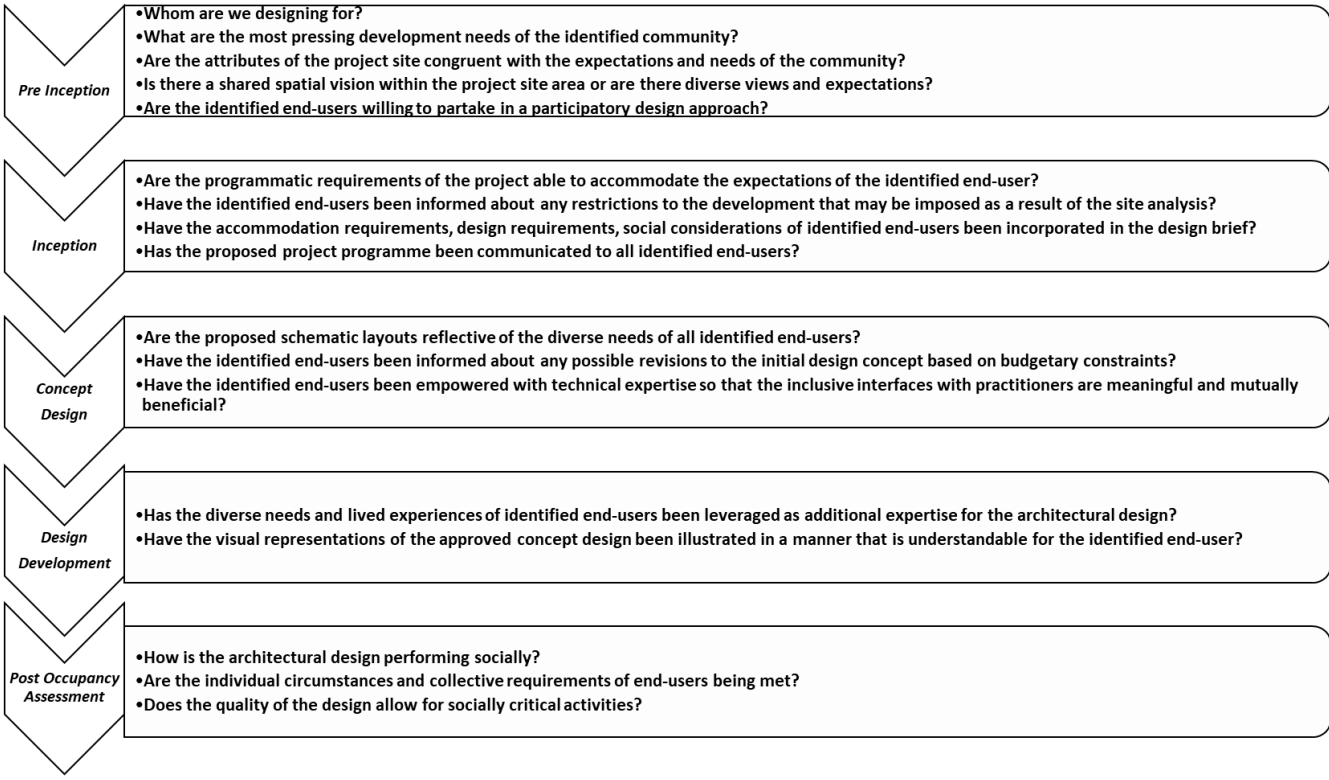
A key issue identified in discussion with Respondent 3C was that residential projects that make use of socially inclusive approaches as opposed to conventional approaches, place greater emphasis on attempting to understand the external impact a building has on the urban environment.

It was also emphasized that a central component of socially inclusive projects is that of ensuring that there was alignment to the local spatial practices of the people occupying the area (Respondent 3C). However, adapting the tools

and methods for architectural designs so that they are reflective of local spatial practices was not a method usually pursued when designing public sector projects. Although most respondents agreed that it was important to be aware of existing spatial practices in communities, it may prove to be impractical to accommodate this in public sector projects (Respondents 1A, 2A and 3C). The reason provided were due to the time constraints and limited budgets allocated for the design and development of public sector residential projects. The potential hindrances towards adopting a socially inclusive approach do not call for complete disbandment but instead compels practitioners to utilise aspects of Social Architecture in residential design that may be applicable within a specific context. Therefore, arguing for an approach that takes cognisance of the design of the entire development instead of individual housing units may be more practical for public sector residential projects.

Figure 3-2 below is a proposed reconfiguration of specifications for the architectural design stages. It highlights aspects that could be factored in during the preliminary phases of the architectural design process when implementing a socially inclusive residential design project:

Figure 3-2 Reconfiguration of specifications for assessing social inclusivity



Source: Author's Adaptation of SACAP work stages

The reconfiguration of specifications for assessing the social performance of public sector residential projects provides all stakeholders with an opportunity to proactively identify problems and suggest solutions to practitioners during and after the design process. The proposed guidelines also provide an alternative argument to the sentiments expressed by an architect interviewed where it is stated that:

"End-users being involved in the actual implementation of projects might be considered [idealistic] or 'wishful thinking.' Architectural design plays a

reasonably small part of the success and sustainability of a community centre or project" (Respondent 6B).

There were, however, contradictions observed in the views shared by Respondent 6B in the statement above. Although the question posed was specific to the involvement of end-users in the architectural design of public sector residential projects the response provided ventured into the *actual implementation* of projects. Although this study acknowledges that involvement in all stages of project implementation may be impractical, there are ways in which end-users can form part of the preliminary decision-making on the design of residential projects. The proposed approach as part of the research conducted draws inspiration from the principles of Social Architecture and affords special focus on the role of the architect in transferring knowledge to the end-users throughout the preliminary stages of public sector residential projects.

There is an expectation that practitioners willing to take on a new set of responsibilities will have to go outside the normal engagement practices. This would involve recognizing that there is value in the diverse lived experiences of end-users, which should be harnessed as a unique set of expertise for the architectural design process. Public sector practitioners and one architectural professional added to this narrative by asserting that the end-product emanating from an inclusive interface with end-users should be representative of the diverse needs of the people who will end up using the space (Respondents 1A, 2A, and 3C). The quality of architectural design plays a substantial role in addressing existing social issues in communities and the built environment. The ultimate satisfaction of the client and the end-user is dependent upon how the architectural professional elicits and

accommodates the design requirements. The adoption of a socially inclusive design approach depends on reconsideration, and perhaps a reconstruction, of the role of practitioners in the practice of architecture.

An additional perspective that emanated from the study was that there are often conflicting visions between the appointed contractor and that of the local authority with regards to the shape the development trajectory of a project programme should take. The respondent remarked the following:

"They (developers) would go to great lengths to change the policy to ensure that they can proceed with a development and that is in contradiction to what we trying to do which is compaction and densification and that is quite a big problem for us at the moment. We have found that sometimes [it is] not necessarily a blatant disregard but more a level of ignorance or not understanding the policy…." (Respondent 2A).

The statement by Respondent 2A highlights the need to develop platforms for engagement with built environment practitioners so that they fully comprehend the objectives and processes attached to public policies on spatial development. However, potential competing interests between the contractor and the client could hinder the adoption of inclusive design processes. On the one hand, the appointed contractor has certain financial objectives to achieve such as remaining a viable business entity. To the contrary, the public sector client has the responsibility or mandate to ensure that the approved developmental imperatives on sustainable human settlements are realised.

Most respondents highlighted the mismatch between addressing the demand for housing in terms of delivering physical outputs and at the same time trying to maintain the social aspect of the residential design project. The objectives of the appointed contractor in contrast to that of the client were also cited as being heavily focused on outputs by way of ensuring that the project is profitable. One respondent advised that the only way of ensuring that the social imperatives are met throughout the trajectory of a project is to adopt an approach that is reflective of people over profit. A further explanation was that designing a project by prioritising the needs of the end-users does not necessarily reduce the profitability of a project (Respondent 6B).

The latter assertion assumes that contractors appointed by the client have a socially inclusive ethos embedded in their design approaches. However, the primary focus of most of the more established turnkey development companies is on undertaking medium to large-scale residential projects to secure a return on investment. In the city of Johannesburg, three of the public sector driven integrated residential developments (Cosmo City, Fleurhof Housing Development, Riverside View Housing Development) are all being implemented by developers who are major players in the industry. Although all these developers are compliant in terms of Black Economic Empowerment (BEE) quotas there is no specific emphasis placed on incorporating principles of Social Architecture in their design approach. Therefore, even though the public sector client may identify social inclusivity in the design approach as a priority, there are no explicit measures or requirements to assess potential contractors on whether or not they are socially inclusive in how they approach design projects.

3.5. Stage 2: Concept and Viability

The concept and viability stage entails the development of the initial concept design with schematic layouts, which include the technical and functional aspects of the design.

3.5.1 Initial conceptual design

The development of the proposed concept design in a standard architectural design approach mainly involves interaction between the client and the architect. Some of the practitioners explained that at this stage in the cycle of activities there is a focus on translating the design brief into a proposed model for the structure (Respondents 6B, 7B and 3C). Architectural professionals make representations of the concept to the client in the form of schematic layouts, actual drawings of the floor plans or the building structure and three-dimensional models of the design concept (SACAP, 2000). Respondents 4C and 6B mentioned that it would be possible to collaborate with end-users on the concept design and come up with a design that is both practical and representative of everyone's expectations. However, various dynamics need to be considered when tailoring methods for engaging end-users on their different needs.

A respondent illustrated the following point:

> *"There is a lot of confusion around the appropriate method. If we are co-producing with end-users how does that, look and feel. [Considerations that need to be considered by practitioners] is whether they will use a model that is movable or use Lego blocks [to engage end users on possible designs]. As a professional involved in co-production, you must be*

comfortable with those various inputs and treat them as just as valid. It does not mean that the person who can draw needs to be taken more seriously than the gogo [Zulu for grandmother] who can describe to you exactly what will or will not work for her in an environment" (Respondent 1A).

This study highlights that meaningful engagement is largely dependent on the approach employed by the individual practitioner. A significant point of observation from the quotation above is the use of the term co-production. Most of the respondents referred to co-production methodologies instead of Social Architecture when discussing projects that integrated aspects of socially inclusive design (Respondents 1A, 2A, 6B and 5B). Interestingly, none of the respondents used the term Social Architecture, and some expressed that they had not come across the term before. The definition of co-production is that it is a strategy that involves a collaborative effort between the citizen and the state to come up with a product or solution that addresses a problem in the delivery of services (Mitlin, 2008).

The descriptions provided for in the literature and descriptions used by respondents on co-production appears to have most of the elements of Social Architecture as it also focuses on driving an inclusive participatory design approach. In most of the interviews conducted, respondents referred to promoting a shared vision with end-users, meaningful engagement sessions, empowering the locals with training and engendering a sense of social cohesion as well as ownership over the project. It was found that most aspects present in Social Architecture are present in co-production. The use of different terminology depends on the locality in which a socially inclusive architectural approach is been undertaken.

A public sector practitioner familiar with co-production methodologies in residential projects indicated that it involves embracing development solutions with communities rather than for them (Respondent 1A). The insights that emerged from the study allow for an understanding that this type of design approach is said to be a way ensuring that end-users are not passive recipients of design but instead co-producers of their solutions. Some respondents emphasized that the success of co-production is largely determined by adopting an appropriate method to facilitate the process of co-production (Respondents 1A and 5B).

When observing some of the differences between concepts used by practitioners and those used by scholars, factors that are considered to facilitate inclusivity are common. Therefore, although practitioners refer to socially inclusive architectural design practices by using different terminologies, the principles behind Social Architecture and co-production are similar.

From the viewpoints expressed in the interviews, it came forward that involvement in socially inclusive projects is highly dependent on the attitude held by the appointed practitioners towards the approach. Taking on a project that embraces a socially inclusive architectural design approach requires that practitioners move out of their comfort zones and do things a bit different to what would be considered a safe, tried and tested process of delivery (Respondent 1A). Part of this adjustment would include the addition of social requirements to the functional and operational aspects of architectural design during the concept design stage.

The insights that emerged from this study further accentuated existing conceptions amongst practitioners regarding the potential threat to the legitimacy of the architect as the expert. There was agreement by most respondents that increasing the decision-making power of end-users should not necessarily hamper the practitioner's creative authority over the design process but it should instead present an opportunity to empower end-users on the design process. Even though some respondents attested to the fact that public consultative processes are often rather contentious, there was agreement that there is still a need to find ways of accommodating the inputs of identified end-users.

Respondent 2A indicated that in some public sector projects the stance applied was to acknowledge and consider all suggestions made by finding a way of incorporating it into the design. There most certainly is value in countering the existing reluctance towards engaging end-users regarding their expectations around architecture and the spatial vision of their respective communities. It emerged from the study that instead of seeing end-user engagement as a threat or impediment towards architectural design, the diverse views and lived experiences could be leveraged as an additional source of inspiration for the practitioner.

3.5.2. Space provisions and planning relationships

Determining the space efficiency of a project forms part of the concept and viability work stage. The SACAP guidelines require that the review of the technical and functional requirements of the design after receipt of inputs from the client. Some respondents clarified that there is an expectation for the architect to inform the client on the specified regulations and restrictions by the local authority and the provision for this in the design concept.

A general expression amongst architectural practitioners was that there are often not many changes made by the public sector client to the concept design because each time the architect is consulted to make a change there is a cost attached to it (Respondents 6B, 4C and 7B). It can be further argued that even though these components of this work stage require inputs and consensus from all affected stakeholders, no rule specifies engagement with identified end-users. Due to the absence of a formal expectation of end-user engagement during this work stage, the observation was that it is not common practice to engage end-users on what needs to be included in the conceptual or detailed designs of public residential projects (Respondents 2A, 3C, and 7B).

3.5.3. Technical and functional characteristics

While there may be a degree of apprehension by practitioners to engage broadly on the functional and technical requirements of their design, it should be emphasized that fostering a more inclusive approach involves communicating how the architectural concept fits in with the design process. Although end-users may not have the technical expertise to comprehend the technical drawings and concepts presented by the architect, there can be a concerted effort towards making it more understandable (Crawford, 1991). The study recognised that there is an opportunity to allow identified end-users to prepare, review and agree upon the draft concept plan. This would ensure that end-user expectations are included, and the concept plan is reflective of the diverse inputs received from stakeholders. Although there was general agreement amongst practitioners interviewed that the scope to solicit public input should be expanded, the potential conflicts and differences regarding the methods for facilitating a participatory process were identified as a possible limitation.

3.5.4. Review anticipated costs and project programme

At the second stage in the design process, there is provision made for engagement with consultants within the built environment sector. Input from other consultants is sought internally based on the costing of activities in line with the sketch plans provided by the architect (Duff, 1999). The proposed budget is taken into consideration against the scope of work that is put forward in the concept design. Respondents confirmed that there is a reliance on the expertise of Quantity Surveyors or other professionals within the built environment fraternity in this work stage (Respondents 1A, 2A, and 3C). The requirement to engage a community participation specialist or social facilitator who would act as a bridge between the community and practitioner in the public engagement process is also not specifically prescribed in the SACAP work stages but there is provision for it in the Project Process Guide for Human Settlements (2017).

The need to incorporate specific skills in the design process in the form of social facilitation was identified as something that could be advantageous for all public sector residential projects provided that the appointed specialist has a full understanding of the existing dynamics within the community and the requirements of the end-users.

An examination of the roles and responsibilities of a social facilitator revealed that it should ideally involve practitioners with a social science background who understand and work with communities. A public sector practitioner suggested that whenever adopting a socially inclusive design approach, there needs to be a fundamental field of enquiry to support the specific type of design being explored (Respondent 2A). The same respondent advanced the following statement, “we as urban designers, planners and architects think

that we can get it right but in reality we are not trained in that way" (Respondent 2A). This statement reveals that architects do not necessarily receive training on issues pertinent to an ever-changing developmental context as found in cities like Johannesburg. Perhaps then, this identified gap in architectural practice puts forward the need for an architectural curriculum focused on the socio-spatial dynamics that prevail in society. This would allow for requisite reforms in the architectural profession by allowing for a better understanding of the needs of society within the context of the built environment.

Professionals who have substantial knowledge of public engagement, as well as being genuinely interested in engaging people on their views were recognised as an important prerequisite for socially inclusive design. Further engagements with respondents revealed that the role of the social facilitator was not only confined to experienced professionals but also community members who have the practical experience and can make valuable contributions towards how architectural design is conceptualised (Respondents 5B, 2A, 7B).

Viewpoints that came forward were that architects have an inherent responsibility to effect social change and as such, the focus should not be on making a profit but rather towards exercising more accountability towards society (Respondents 5B and 2A). Alternative perspectives that emerged amongst other practitioners involved in socially conscious design was that it is not common to find an architectural firm of this nature in Johannesburg due to the structure of the industry. The two types of commercial practices that dominate the industry are mainly focused on the development of high-end office space and commercial residential units. The general view was that

although socially inclusive design should be standard in all projects, it is often difficult to sustain such a practice at the beginning because the merits of a project being proposed by a client or developer may not serve to improve the lives of people (Respondents 6B, 3C and 7B).

The stages that follow inception and concept design become more technical and as such, opportunities to engage end-users are more limited.

3.6. Stage 3: Design Development

Design development commences once the concept design is approved by the client and all input received from professionals has been factored into the revised designs. The project specifications including project costing and strategies for design are confirmed.

Stage three to five are comprised of design development, documentation and procurement, and contract administration, which are technical, and involve engaging other practitioners on obtaining the requisite approvals. Like the observations identified with stage two, most of the practitioners that are interfaced with on residential housing projects like Brickfields and Elangeni are from within the built environment or related fields. In the literature it was highlighted that confining the processes of engagement within the built environment limits the understanding of space to the physical end-product (Gribat et al, 2017). Building on the assertions of Gribat et al (2017) an additional aspect that came forth as part of this study was that limiting the process of engagement to practitioners within the built environment sector does not allow for an understanding of the social experience of the quality of the design from the perspective of the end-users.

3.6.1. Review the design and consult with local and statutory authorities

During the design development stage, there is a specification to develop plans based on the client approved concept design and accompanying budgets (Duff, 1999). There is also an expectation that the accommodation of any additional requirements put forward by the client in the building design. However, one respondent indicated that in public sector-led projects, the requirements of the client are often overlooked, as the focus by contractors is more on the project timeframes and allocated budgets (Respondent 2A). An additional view was that there is often a mismatch between the design and layout of residential projects, which ultimately compromises the client's requirements and the individual needs of end-users (Respondents 4C and 5B).

3.7. Conclusion

This chapter has highlighted some of the existing complexities when adopting a socially inclusive approach on public sector residential design projects. It also proposes areas for improvement when including end-users in the design process. The basis for the selection of built environment practitioners for this study related to their involvement in the implementation and design of public sector residential projects. There was also a focus on practitioners with experience in adopting principles of social inclusivity in architectural design processes. The methods for inclusion and the adoption of universal principles that facilitate the proactive participation of end-users in the preliminary stages of the design cycle was identified as issues that practitioners grappled with. Despite the overall acknowledgement of the importance of engaging end-users, the identification of conflicting priorities in the study by client/s and appointed practitioner/s hinder fully inclusive interfaces with end-users. It was

also found that a further impediment to the adoption of socially inclusive architectural design practices is the widespread social inequality and associated complexities, which often makes it difficult to design spaces that accommodate the needs of all end-users.

A key assertion brought forward by this study is public engagement should not only be confined to one-way communication with communities. It should also be a way of understanding the impact of a specific design intervention has on the surrounding communities but more importantly the external impact it has on the space and how well it relates to the identity of the people in the area. One way of fostering greater inclusivity in architectural design processes would be to expand the current curricula by honing into prevailing social issues within society.

A significant observation from the study was that there should be provision towards engaging all people connected to the project by presenting the design visualizations in a more accessible format such as simple drawings or innovative visual media. It was found that in most residential projects, there is no provision made for user-centric ways of presenting architectural designs and communities are not engaged regarding what their requirements for the use of the space would be.

A process tool of the preliminary design stages is proposed as part of this study to guide built environment practitioners and include communities in the implementation of architectural residential projects. An additional contribution emanating from interviews with practitioners was the proposal for the client to include an additional work stage before the inception and after the close-out of a residential project. This proposed adjustment to the existing work stages

is based on the observation that the client often does not have a holistic understanding of the needs and expectations of identified end-users prior to initiating and after completion of a public sector residential project.

The empirical data that emanated from the research conducted was unpacked in this chapter to highlight the common threads and areas of difference in the insights shared by the respondents, which allowed for the development of a few preliminary conclusions. The SACAP architectural work stages were used to test whether the prescriptions that guide conventional architectural approaches accommodate the principles of Social Architecture. In the assessment for inclusivity, there was also a discussion on how the architectural profession is organised and whether there are inclusive interfaces between key role-players and end-users. The interviews with respondents also allowed for an understanding of whether inclusivity is a feature in current architectural design practices.

4. Practicalities of incorporating principles of Social Architecture in residential projects

4.1. Introduction

Developing an understanding of the application of Social Architecture within the context of residential developments in the inner city allows for a view into whether current practices accommodate social inclusivity in architectural designs. This chapter includes a case study assessment and analysis of two public residential housing projects. Each case study provided an assessment and analysis of the relationship between end-users living environments and the application of principles of social inclusivity. The argument that unfolds in this chapter also gauged some of the critical success factors attached to socially inclusive residential projects and how this can be improved and replicated in future public sector residential projects.

As part of the interviews conducted with practitioners, three key themes featured prominently concerning socially inclusive design, namely *active community engagement, local economic development, and spatial integration.* A conceptualisation of these themes was provided as part of the literature review chapter.

4.2 Case Studies

The Brickfields Social Housing Precinct and Elangeni Social Housing Development are the case studies assessed to advance a general understanding of the presence of Social Architecture against the above-mentioned themes.

4.2.1 Case of Brickfields Social Housing Precinct

Brickfields was selected as a case study because it was initiated as the first high-rise public sector social housing project developed in the inner city of Johannesburg. The development is representative of a project at scale in the inner city that was meant to address the apartheid spatial planning legacy, which located people far from urban centres and access to services and economic opportunities (Chipkin, 1998). Brickfields is in Newtown, which is an area that has formed part of several urban regeneration initiatives to attract capital investment. The character of this area is mainly made of cultural activities and live arts or theatre productions as well as some commercial and light manufacturing industries (ICHIP, 2015).

4.2.1.1 Active community engagement

Inception

The project was a public-private partnership between the National Department of Housing (now known as National Department of Human Settlements), Gauteng Provincial Government, City of Johannesburg Municipality, and private sector partners. The development of the project occurred during the adoption of the Breaking New Ground (BNG) strategy in 2004 and at that time there was a shift in focus by the National Department of Human Settlements from product based housing delivery towards the development of sustainable and integrated human settlements (NDoHS, 2004).

The architectural practitioners appointed for this project were Savage+Dodd, Fee and Challis Architecture and Makhene and Associates. On the website of Savage+Dodd, they highlighted that their specialty remains at scale public

sector projects and the ethos of the practice is based on fostering lasting relationships with clients. They also emphasize that as practitioners they attach importance towards interpreting design briefs in a manner that responds to the existing social dynamics of the project area. Details of the ethos and philosophy of the other two architectural firms (Fee and Challis and Makhene and Associates) could not be obtained online or via other forms of communication. The Urban Development Framework (UDF) for Newtown was developed by Gapp Architects and their design ethos is based on principles of integration and spatial planning that is cognisant of the social, environmental, economic and heritage factors of a specific area. For the development of Brickfields, Gapp Architects adapted their design approach based on the requirements of the specific precinct (Harrison, 2008). In line with the Newtown UDF, the architectural design principles for Brickfields were underpinned by the integration of a diverse range of tenure options aimed at improving the overall aesthetic appeal of the precinct.

In an interview with a public sector practitioner there was an indication that the effectiveness of spatial planning frameworks such as the Newtown UDF are often not supported by tangible evidence to determine whether principles of spatial integration are incorporated into planning processes (Respondent 1A). Further expanding on this insight by Respondent 1A, it was noted that although there was substantial capital investment as part of the broader Brickfields precinct development there has been limited progress regarding the social, spatial and economic integration of marginalised groups.

Du Plessis (2013) attributes the limited improvement in the urban spatial planning environment to the absence of tangible indicators and measurable plans that are overseen at regular intervals by implementers.

The Johannesburg Housing Company (JHC) was appointed for the construction phase of the project. On most of the marketing material of the JHC, emphasis is placed on being a functional and accredited social housing company that seeks to provide affordable well-located rental tenure. The appointment of a project manager like the JHC implied that there was an expectation by the client that there would be an existing understanding and experience of the social housing environment. Respondents shared that appointed professionals who have specialised knowledge and a proven track record in implementing public sector projects are more successful in completing projects. A large and complex residential project like Brickfields required solid coordination and management by the appointed professionals of the various components of the project. According to Duff et al (1999) this level of synergy and coordination between professionals working on a project requires consistent communication to ultimately ensure the success of the project.

This study affirms that communication with end-users when developing the project programme at inception should also be prioritised to build a functional and beneficial relationship between practitioners and end-users. Although the design and construction philosophies of the appointed architects and the contractor were aligned, the focus should also be on whether these ideas are aligned to the requirements of the end-user as part of driving an inclusive design process.

Concept and viability

The Brickfields project received several commendations for the quality of the building design. The quality of the end-product is defined by both the characteristics of the physical design and the extent to which it

accommodates the expectations of end-users (Brkanić, 2017). The ultimate success factor would be how end-users experience their living environments and whether their daily needs are being met. A study undertaken by the Council for Scientific and Industrial Research (CSIR) in 2010 looked at the sustainability of the design of social housing and it was revealed that Brickfields scored relatively high concerning the accessibility of the development to key amenities. There were, however, some concerns highlighted by end-users about the layout and design of Brickfields, which include issues around insufficient parking space, size of units and play areas for kids. This brings to the fore that although the development incorporated design principles that are generally assumed to improve the living environments of end-users, the degree to which the requirements of end-users are met are best informed by a feedback process by those who occupy these living environments.

Another component of the initial concepts and designs was the plan to develop open space areas, social and recreational facilities. In a comparison of local and global social housing precedents and testing it was revealed that the design of Brickfields did not enable the formation of communities (Gloeck, 2011). At the development there is a games room and kids play area (refer to Figure 4-1) which is indicative that allowances were made for recreational spaces to socialise and gather. Part of the design also includes an open courtyard which is mainly used for parking because the inclusion of basement parking was not feasible when the initial concept designs were considered. The kids play area at Brickfields is for all ages unlike Elangeni where only younger kids are provided for. On site, casual encounters between residents were observed with people gathering randomly throughout the development and on the open balconies attached to each unit. Social facilities like the creche are well provided for however more spaces for outside gathering or

seating areas would allow for more opportunities for residents to interact with one another for longer periods. The technical and functional aspects of the design of Brickfields made provision for spaces for social interaction however this process could have been more inclusive by soliciting input from end-users on what their requirements for communal spaces are.

At Elangeni, residents have complained about the lack of recreational spaces for them to access. This highlights that in both projects there is a disconnect between what has been provided as a design solution for the end-user and how the end-user experiences the design environment. Spaces for social interaction allow for the formation of communities that are more socially cohesive and foster a sense of pride and ownership over their residential environment (Gloeck, 2011).

Figure 4-1 Kids play area and games room at Brickfields designed as recreational areas for residents



Source: JHC Website (https://www.jhc.co.za/about/buildings/brickfields-gardens)

As one of the first public-private partnership residential projects in the inner city of Johannesburg, the appointed practitioners for Brickfields would have

had to contend with several complexities in the social housing environment for which there was no prior precedence or practice in South Africa. In conversation with practitioners it was identified that the following challenges are commonly encountered by practitioners when designing public residential projects like Brickfields, these include the requirement to accommodate public policy, inadequate funding allocations, accommodating broader objectives attached to inner-city rejuvenation, redevelopment of derelict areas and managing the expectations of beneficiary communities or identified end-users (Respondents 1A, 5B and 6B).

The projected yield was for the development of 742 social housing units with a mix of high-rise and low-rise buildings, which are mainly targeted at lower to middle-income individuals who are employed (refer to figure 4-2). There are two-and three-bedroom units with four storey high walk-ups and two tower blocks that are nine storeys high-rise flats. One of the architects (Respondent 6B) interviewed cited Brickfields for some of the best practices adopted in the concept and design phases of the project. Another respondent shared that the concept and design phase of the project involved understanding how people use buildings, this served as a design informant for future projects that the same architects were involved in (Respondent 7B). The modification of the live-work units at Brickfields occurred because of the observations made after designing housing solutions at the Elangeni Social Housing Project. For the development of Brickfields, the engagement with end-users involved actively observing the functionality of existing design interventions of previous similar projects and then transferring the lessons learned into current approaches.

Figure 4-2 High density Brickfields housing typologies with four storey walk-ups and two tower blocks



Source: Inner City Eastern-Gateway UDF, 2016 and JHC Website (https://www.jhc.co.za/about/buildings/brickfields-gardens)

Although there were considerations for the ways in which the design solutions were responsive to the needs of end-users, the actual process of developing the initial concepts designs was confined to consultation between the client, project managers and the architects. It was also observed that the level of consideration by the client and appointed practitioners for existing socio-economic dynamics and ways of accommodating the public sector strategic outcomes on poverty alleviation, could have been more wide-ranging. A case in point observed as part of this study with the prevalence of informal dwellers some of whom are waste pickers settled in unsafe places surrounding the residential precinct (refer to figure 4-3).

Figure 4-3 On site pictures of Brickfields development and the surrounding precinct

a. Informal occupation and degradation of areas surrounding the Brickfields development



b. Front façade and immediate external environment surrounding Brickfields



Source: Site photos by Author

The observations relating to the presence of informal dwellers is indicative that although the project aimed to accommodate a broad spectrum of tenure needs some urban dwellers remain excluded from accessing housing tenure based on their economic status. In addition, the methods and platforms of engagement could have been further adapted to ensure that the immediate needs of marginalised local inhabitants are accommodated.

A practitioner interviewed stated that it is important to contract professionals that have sufficient knowledge of having engaged communities because there are many architects' only encounter end-users after their developments are completed and handed-over (Respondent 5B). It can however be argued that in the case of Brickfields there was a public consultation process followed and it is evident that the appointed practitioners went beyond the conventional methods of ascertaining what the potential needs of the end-user community might be.

However, although there is, evidence of Social Architecture embedded in the design approach of Brickfields there are aspects of the decision-making processes that may have excluded marginalised groups from the design of the development. Social inclusivity should form part of all stages of the project lifecycle and integrated into the overall design strategy of the project.

4.2.1.2 Stimulating local economic development

Design development

Having observed the quality of the design of the Brickfields development, at face value the broader economic development objectives of the client were met as the typologies constructed allowed for housing delivery at a high

density. The project vision for Brickfields attempted to put social housing at scale into the inner city, and this, is articulated in various planning frameworks such as the Urban Development Framework (UDF), Spatial Development Framework (SDF), and Business Plan of the Johannesburg Development Agency (JDA). A key feature of Brickfields at the time it was initiated was that the design included commercial units (refer to figure 4-4) on the ground floor for residents to live and run small businesses. Much like the live-work typologies developed at Elangeni, the occupants often use the upstairs two-bedroom unit that was initially designed for accommodation for storage. The downstairs component is street facing and used for business as it is accessible to the public.

Figure 4-4 Commercial units on ground floor at Brickfields Development



Source: Site photo by Author

Another component of local economic development entails the provision of short-term work opportunities during the implementation of public sector projects. The employment of local labour is provided for in various economic development frameworks and public sector procurement policies aimed at empowering Small Medium and Micro Enterprises (SMMEs). As a public sector partnership housing project, it is an expectation that labourers and emerging contractors in the construction and property management sectors were provided with work packages.

However, the study was unable to determine whether these work opportunities that were provided were confined to people from the local community. However, in the interviews with practitioners they indicated that on most public residential projects the sourcing of local labour is dependent on the dynamics in the local environment and the willingness of the appointed contractor (Respondents 1A and 3C).

There are contractors who adhere to the requirement to source a percentage of the workforce from the local community but there are other contractors that do not adhere to these requirements. A public sector practitioner indicated that some contractors do not source local labour because sometimes people from the local community do not have the requisite skills and there is often limited time to train and skill local inhabitants with the requisite skills. (Respondent 1A). It has been widely publicised that local communities often protest projects when people from the local area are not given work opportunities. All the respondents indicated that the work opportunities that are made available are mainly directed at construction related activities and not design work.

Respondent 1A indicated that the growth and support mechanisms for smaller contractors are often absent and it is the main contractor that secures large scale returns. The sourcing of local labour is intended to stimulate the local economy and empower community members with skills for the implementation of future projects and the social sustainability of existing developments. Subsequent, to the implementation of the Brickfields and Elangeni there have been some private sector residential developments but there is an absence of community-driven affordable housing projects where locals have utilised their skills to initiate their own projects. In the Marshalltown precinct there however some resident funded corporates but they mainly focus on urban management initiatives for the area.

The implementation of the Brickfields project formed part of one of the commitments from the Presidential Job Summit Programme in 1998 which was aimed at creating jobs within the inner city of Johannesburg. The delivery of housing as a strategy for poverty alleviation have been embedded in most strategies for integrated housing projects like Brickfields and Elangeni. It is however difficult to determine whether these economic empowerment initiatives have had a tangible impact on the local community over a sustained period. The unemployment and poverty levels remain high in the inner city even though there have been a series of urban regeneration projects.

4.2.1.3 Spatial integration

The Brickfields Development aimed to create a mixed-use precinct with social and institutional amenities accommodated within the precinct. According to the description of the project provided on the website of the project managers and owners, the Johannesburg Housing Company (JHC), the project

intended to provide an affordable housing offering without compromising the quality of the living environment and the end-product.

The portion of land, which Brickfields is currently located on, was in a derelict state before the development of the residential project. An architect involved in public sector projects cited the approach used for Brickfields and stated that the intention was that the residential development precinct would attract further investment in the area and ultimately function as an internal neighbourhood (Respondent 7B).

The location of Brickfields was an attempt at using housing to advance spatial restructuring through the development of an integrated residential development. Part of the design development of the residential precinct was directed towards improving the accessibility of residential tenure for urban dwellers. However, there is the potential risk of creating an internal neighbourhood that could potentially lead to the separation and detachment of residents from the surrounding community.

Brickfields as a housing initiative formed part of a broader urban regeneration initiative and although there has been an improvement in some of the surrounding buildings there are others in a poor state and the general urban management of the surrounding area requires improvement (refer to figure 4-3). This brought forward that the social integration of residential projects extends beyond the internal space of a development and a socially inclusive residential projects should facilitate spatial transformation and integration into the prevailing urban environment (Turok, 2014).

Post occupancy assessment

An interesting component attached to the design process was that the appointed practitioners incorporated a type of post-assessment on the quality of housing after end-users took occupancy. A comparative examination of the architectural design after occupancy has taken place is a useful way of gaining insight into the experiences and perceptions of end-users in the spaces they are occupying. The practitioners also used a combination of interviews and on-site observations to engage both the end-user and the client. The appointed practitioners identified how end-users experience space, which is often highly dependent on their individual interests and understandings. Therefore, accommodating the specific requirements of individual end-users may prove to be a bit cumbersome especially within the context of larger-scale public sector residential housing projects.

Although there is merit in adopting an inclusive approach, it was recognised that identifying who to include in the design phases, the form the decision making process will and who will coordinate the flow of information between all the stakeholders involved. In managing the complexities attached to socially inclusive design approaches on public sector residential projects there should be a balance between the individual needs of the end-users and the architectural design vision of a project. The design approach adopted for Brickfields was aimed at being socially inclusive. However, some architects and public sector specialists interviewed for this study indicated that when the project was launched many applicants enquired whether they could buy the units even though the offering was social housing tenure (Respondents 1A, 2A, 5B and 6B). This brings forward a mismatch between what the broader community required and what the practitioners implemented as a housing solution.

The study found that although there was an effort made by the appointed practitioners to understand the functional aspects of the design, the broader socio-economic dynamics of the surrounding community were neglected to some extent. Brickfields only provides lower-middle-income tenure options and according to the profile of households in the Inner City Housing Implementation Plan (ICHIP, 2015), a large portion of households are poor and unemployed. Most of the housing accommodation available in the inner city is rental tenure, which is often overcrowded with the number of households (92 000 households) exceeding the housing tenure available (Census, 2011). To redress existing spatial disparities, there is a need to better integrate urban dwellers by providing suitable housing options that accommodate not only the needs of middle-income earners but also those from the much lower income categories and those without a source of income. The demand for very affordable housing (R900 and below) as cited in ICHIP is high and as such it would have been prudent for a public residential project such as Brickfields to provide for this segment of the market in the design of the project.

4.2.2 Case of Elangeni Social Housing

The Elangeni Social Housing project is an area-based residential intervention in the inner city of Johannesburg, which was aimed at providing affordable rental tenure in an area that was experiencing degradation. The project is located in Johannesburg's inner city in an area called Marshalltown within the inner city south-western precinct, which is on the mining belt and close to other industrial areas and is primarily characterised by its commercial, and business uses (refer to figure 4-5). In the Inner-City Transformation Roadmap (2016), the areas broader precinct is defined, as a strategic location due to it is proximity to public transportation, which serves to facilitate the development of more social and institutional amenities. During the apartheid era, the site

was used as an office where black people obtained their passbooks from Johannesburg's Non-European Affairs Department (JNEAD).

Figure 4-5 On site pictures of Elangeni development and the surrounding the precinct



Source: Site photos by Author

The redevelopment of this site had socio-historical and political significance in that it was symbolic of an end of an era that served to exclude black South Africans from moving around freely and residing in certain parts of the City. Elangeni also formed part of the Inner City Eastern Gateway (ICEG) study area where it was found that the broader precinct has the capability of providing housing tenure for large numbers of marginalised urban dwellers who are in dire need of secure tenure. However, it was observed that the tenure options available in this precinct are not responsive to the needs of unemployed or very low-income earners. This was particularly disappointing especially since the redevelopment of this site carried socio-historical significance and the development was not only about providing housing options but also about a means of redressing spatial inequalities of the past by developing an integrated and inclusive neighbourhood.

4.2.2.1 Active community engagement

Inception

The Johannesburg Housing Company (JHC) is focused on developing sustainable neighbourhoods within the rental market sector. JHC developed the project and the architects appointed were Savage and Dodd. The brief provided to the appointed practitioners was informed by the need to service the *gap income* market where people either do not qualify for fully subsidized tenure or are unable to be eligible for financial assistance from banks because they do not earn enough. However even though there is a sizeable demand for tenure in this category, a large majority of inner-city dwellers are unemployed or involved in running micro-enterprises in the informal economy.

Social housing implemented more recently in the inner city by the Johannesburg Social Housing Company (JOSHCO) has targeted lower-

income earners with rentals below R1000 per month. However, there is still a large majority of inhabitants that are only in the inner city temporarily and it came forth in the study that the demand for short stay accommodation remains a relatively underserviced rental accommodation category (Respondent 5B). Therefore, as with the Brickfields development, had the implementers of the project adequately consulted the community, a broader range of much lower rental tenure options would have been designed.

Concept and Viability

The development of public sector residential units has been criticised for focussing more on meeting the demand for secure tenure instead of consideration for the varied needs and requirements end users may have regarding their accommodation (Crawford, 1991). Contrary to this criticism, the design of the units at Elangeni did, however, attempt to provide a mixed-use design with residential and commercial housing units. However, much like the approach at Brickfields, the appointed practitioners innovated a modular design but there was limited consultation on the individual design of fixtures within the units. According to Osman et al (2010) consultation on the technical and functional aspects of concept designs serves to improve the general sense of ownership amongst end users over their living spaces.

4.2.2.2 Stimulating local economic development

Design development

The development of the work-live units at Elangeni was a first of a kind at the time to be developed in the inner city. The appointed practitioners indicate on their website that the idea behind this housing typology was that it would stimulate economic development for the end-users of this project. The

prevailing socio-economic conditionalities necessitated a housing typology that complimented the urban characteristics of the area. However, when perusing the rental tariffs charged for the live-work units they are higher than the average rental for residential units. The occupation of the units is also not confined to the residents of Elangeni but external people are also allowed to utilise the units purely for commercial use. Therefore, although the design of the work-live units was an attempt to advance the economic development of end-users, the leasing of the units to people outside of the development worked against end-users of Elangeni leveraging economic and social opportunities.

Prior consultation with identified end-users or the surrounding community would have allowed for a collective approach to deciding upon what rental tariffs would be most feasible and the identification of possible other suitable economic development initiatives. To further highlight the impact of the shortfalls in driving an inclusive approach design approach during the inception phase, the Annual Report for JHC for the 2019/20 financial year also indicates that the company is challenged by a high turnover in tenants. The reasons attributed to the increasing turnover was found to be as a result of the rental tariffs charged not being affordable for some tenants due to rising cost of living and the average rental arrears amount has also increased.

4.2.2.3 Spatial Integration

Design development

There are 168 units inclusive of one and two-bedroom units, live-work units, loft units, and commercial units. The scale of the development is lower than that of Brickfields with four-storey walk-ups located around the site.

The initial design for this project was speculative based on what the practitioner thought the end-user would require and further informed by the objectives held by the client. The concept designs for Brickfields was also informed by what the appointed practitioners thought would be appropriate for a social housing intervention in that area and in line with the allocated budget. A practitioner shared that most public sector housing is reflective of mass housing production. It was further elaborated that these types of developments often rely on preconceived notions held by developers or architects on who the end-user might be and as a result, there is a design intervention in response to these assumptions (Respondent 4C).

As a medium-density mixed housing project, the development of Elangeni sought to facilitate spatial transformation by providing higher densities than the usual individual plot housing developed for public sector housing. Comparatively the character of the precincts in which Brickfields and Elangeni are located are different in their uses but they are both well located in terms of accessibility to transport nodes and economic opportunities. The accessible location of both developments ensures that these communities are better integrated, and it challenges the notion that only up-market residential developments are well-located and reserved for higher income earners.

The three to four storey walk-up housing typology such as Elangeni with a variety of uses and usages has become common for public sector developments in line with the BNG strategy in a bid to maximise the available land. Respondent 1A highlighted that medium to high-rise buildings are characteristic of inner-city districts across the globe and there is an opportunity to co-produce design solutions for end-users when beneficiaries

are being targeted for accommodation. Identified end-users therefore need to assume an active role in expressing the requirements to architects as part of the design development work stage.

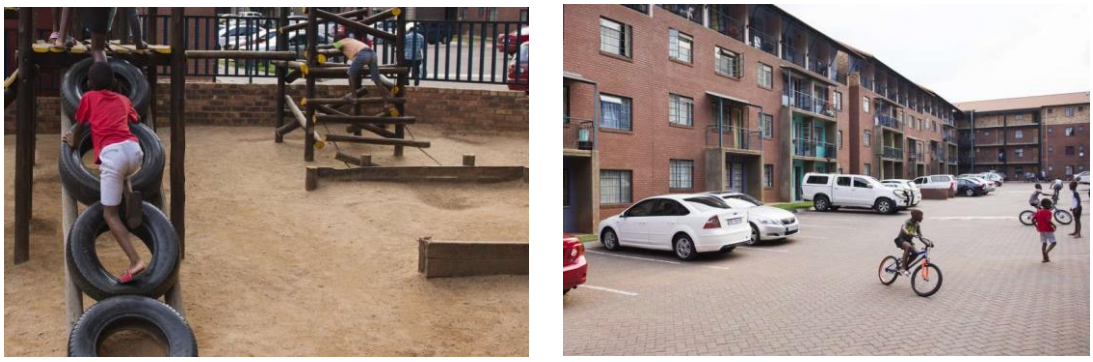
The integration of live-work units at Elangeni was considered a progressive solution to providing living space and economic opportunity within one residential development. The units were developed to be adaptable to the changing needs of the end-users over time with the option to use the workspace for accommodation based on the changing needs of the end-users. The design of the work-live units was offered as a solution for adaptable living space. Although the design of these units was perceived by practitioners as a functional solution for end-users, these designs were later modified for other projects such as Brickfields implemented by the same project managers. This highlights the importance of engaging end-users during the earlier design work stages to allow for their requirements to be adequately represented. An architect that incorporates principles of inclusivity provided practical examples of how people no longer use living rooms because their lifestyle needs, and requirements have changed. The following perspective was shared:

Issues that upset bourgeois architects the most was that the end-user had put the fridge in the living room. The fridge might be the biggest status symbol and is indicative that certain notions need to be suspended on how people choose to live" (Respondent 7B).

An additional consideration relating to the spatial integration of end-users at Elangeni was that the initial brief to the architects involved a focus on the need for open space and then more practical considerations such as

designated parking areas for residents emerged after occupancy. There are not enough spaces for recreation or social engagement because the internal courtyard doubles as a parking space for residents. There is a play area for younger children but there is no consideration for the needs of children older than seven. In figure 4-6 children can be seen using the courtyard as a play area which poses a safety hazard considering the movement of motor vehicles in the parking lot.

Figure 4-6 Children's' play area and internal courtyard used as parking lot at Elangeni



Source: JHC Website (https://www.jhc.co.za/about/buildings/elangeni-gardens)

The lack of public open spaces for children and other residents reduces opportunities for social cohesion amongst end-users, ultimately resulting in a fragmented sense of attachment to the development. The duality at play here emphasizes that to sustain the principles of social inclusivity within a residential housing project throughout its lifespan; there must be an ongoing interface between the architectural professional, the client and the end-user. The study found that developments should be socially responsive to the

needs and spatial practices of end-users by creating dynamic multi-functional living environments for the people occupying these spaces.

The target market for the project was lower-middle-income households, as such, the client and the architect may have speculated that not all end-users would require parking space or that there would not be more than one parking bay required per unit. The engagement on end-users requirements for parking space should have been more inclusive because the provision for parking bays in the original design (refer to figure 4-7) was inadequate which led to some people parking on the pavement outside the building. It came forth in the study that the lack of parking space has exposed end-users over time to criminal activity in the vicinity surrounding the project and ultimately this impeded the quality of the living environment.

In Johannesburg, crime is a serious consideration for both built environment professionals and communities. As such, perceived safety plays an important role in what is considered a good architectural design. As a result, the safety aspect can influence what succeeds as good quality design (Harrison, 2008). A respondent supported this view where it was expressed that a design project should use the architecture to contribute towards the overall public safety of an area (Respondent 2A).

Although there have been many attempts at reducing the crime rate in the inner city, according to the crime statistics for 2019, it still ranks as one of the precincts with the highest crime rates (CrimeStatssa). The current design of Elangeni (refer to Figure 4-8) allows for an outward view of the surrounding environment providing a sense of security through visual connections or *eye on the streets*, but the narrow pavements and lack of efficient street lighting impedes on the overall feeling of safety for end-users. The current internal

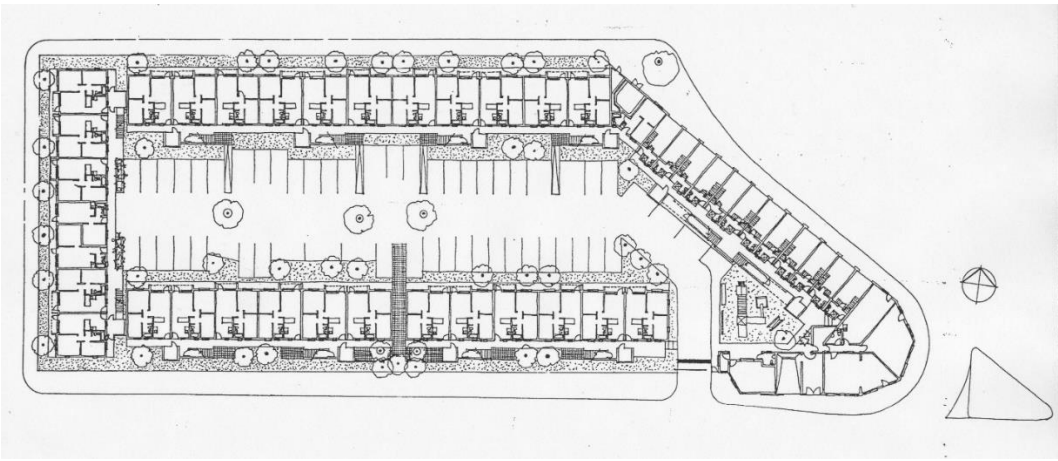
design and layout of Elangeni can be considered a safe environment, with access control at the main gates for both pedestrians and vehicles. Residents encounter decreased safety in the external surrounding environment due to prevailing social issues. A respondent pointed out that people first need to feel safe enough to interact in a space before it can function as an inclusive environment. However, the respondent further expressed that creating safe urban environments is often characterised by spaces that are “highly barricaded, fenced with barbed wire and big high walls. [Practitioners] instinct[s] is [to] close everything up” (Respondent 1A). It is important to provide accurately when developing spatial solutions for end user requirements and this shortfall is remedied by ensuring that there is no gap in the communication between project owners, architects, and end-users.

Figure 4-7 Courtyard parking area at Elangeni



Source: JHC Website (https://www.jhc.co.za/about/buildings/elangeni-gardens)

Figure 4-8 Architectural layout Elangeni



Source: Savagedodd Website

Post occupancy assessment

The design of residential space needs to respond to the changes in end users' lifestyles over a period and how they use the space. The project managers for Elangeni and Brickfields include post-occupancy assessments into their design approach which allows them to go back to some of their developments and take photos of how people are using space and whether the design is responsive to the needs of the end-users. This is a practice that usually does not occur on residential projects and could be useful for practitioners to gauge whether their designs need to be modified based on what they have observed.

A respondent endorsed the practice of post-occupancy assessment by sharing that practically observing end-users is a more functional way of advancing the adaptability of living spaces (Respondent 7B). Due to the speculative nature of public sector residential design, built environment practitioners often design space by imagining that the person they are designing for are like them. To ensure that residential developments are both

adaptable and spatially inclusive, practitioners need to be more responsive to how people choose to live by designing in ways that accommodate different lifestyles.

4.4 Conclusion

The variances and complexities in the application of the principles of socially inclusive design do not negate the positive impact that Social Architecture residential projects can have on improving the quality of living environments for end-users. The ever-changing housing context increases the need to adapt and advance a more inclusive approach to the development of design solutions. Within the context of residential developments, the active involvement of end-users in decision-making allows for a greater sense of spatial integration.

There are, however, signs within the public sector housing space of the growing recognition of the importance of actively including end-users in the designing of their own housing solutions for their respective communities. The public sector agenda directed at spatial integration and transformation requires an amplified focus on recognizing the pivotal role architectural design can assume by integrating socio-economic opportunities and contributing towards the development of sustainable communities.

5.0. CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

Social Architecture as a focus of this study allowed for an opportunity to better understand how implementing aspects of Social Architecture principles in public sector residential projects in the inner city of Johannesburg can improve the quality of housing for end-users. Therefore, there is a need to identify the ways in which public sector residential projects are designed and whether it plays a role in building inclusive communities.

The insights shared by respondents interviewed, case studies of public residential housing developments and a review of secondary and primary data allowed for the conclusion that that the incorporation of Social Architecture principles in residential projects does have the potential to improve the quality of housing for end users. Residential projects in the public sector can meet the needs and expectations of end-users through a context-specific application of socially inclusive design practices. The implementation of Social Architecture projects is not without challenges but remains an aspect of ensuring the social sustainability of public sector residential projects. The concluding chapter provides a summary of key findings, an overview of research questions and recommendations for further research.

5.2. Summary of key findings

This study has pointed to the exclusion and the inadequate engagement of identified end-users during the preliminary architectural work stages. The ability of the public sector to strive towards being more inclusive and responsive in its architectural design practices could ensure that the housing solutions are responsive to the complex and ever-evolving housing context.

The study also noted that, the application of Social Architecture principles or architectural practices in residential projects allowed for the desired impact of improved quality of the living environment. Some successes that were shared by practitioners relating to socially inclusive architectural approaches at residential developments involved understanding the needs of end users in a more holistic manner. Residential developments such as Elangeni and Brickfields that provided amenities such as crèches, games rooms or other simple outdoor recreational space which enabled more face-to-face engagements and opportunities for social cohesion. Public sector projects that utilise socially inclusive methodologies allow for an exchange of knowledge between the end-user and practitioner on the spatial requirements for a project. This facilitates a process where the expertise of the practitioner synthesizes with the insights of the local environment from the end-user.

The findings from the study highlight that this assists practitioners to reevaluate their designs through the lens of end-users and avoid imposing their own design solutions. A post occupancy assessment was also found to be a useful way of gauging whether the everyday spatial practices of end-users are provided for in the design of residential projects.

It was also evident that although the practice of Social Architecture still remains uncommon there are a growing number of architectural professionals who are adopting inclusive design practices that are aimed at addressing aspects of design that are not usually met in conventional architectural practice. All the practitioners interviewed for this study have been involved in some form of socially inclusive architectural practice. There are also active platforms for engagement on critical issues affecting the built environment convened amongst socially conscious practitioners. The study revealed that

there is a lack of certainty regarding the perceived social role architects need to assume to be drivers of social change. This can partly be addressed through a reevaluation of current architectural curricula to include a specific focus and improved understanding on the synergies between design and socio-spatial dynamics within society.

Many complexities emerge on public residential projects when adopting socially inclusive design principles. Practitioners who have experience in developing socially inclusive design solutions grapple with tools for implementation. The type of methods used by practitioners to engage end-users impacts on whether the process of interpreting and implementing the spatial requirements of end-users is effective.

The capacity to accommodate diversity amongst end-users requires an in-depth understanding and willingness to develop design solutions that are responsive to the living requirements of the identified end-users. Responding to these needs requires innovative and accessible platforms for engagement supported by user-centric representations of design concepts. The study identified the following ways in which principles of Social Architecture are being employed:

1. Socially inclusive community engagement
2. Training and empowerment of end-users
3. Utilisation of locally produced construction products
4. Incorporation of spatial practices

5.2.1. Socially inclusive community engagement

The provisions of the SACAP Act guide the practice of Architecture. The study made use of the Act to determine to what extent Social Architecture has been addressed in the legislation. The practices and prescriptions that guide conventional architectural approaches do not accommodate the principles of Social Architecture. The guidelines for standard architectural design practice provided for as part of the SACAP work stages confine engagement to professionals within the built environment. There is no explicit reference to the engagement or inclusion of end-users as part of the design of architectural projects in the case of public sector projects. This is particularly problematic in projects with a mass end-user who beyond socio-economic status are not known.

The SACAP work stages seem to respond more to end-users who are known and most likely are also the client. To improve the implementation capability of existing public sector policy aimed at integrated housing and improving the quality of housing, there is a need to incorporate within existing SACAP guidelines the engagement of potential mass end-users in early design stages. In the first three phases of the design of architectural projects, there is an opportunity to engage end-users in the design process.

On some of the residential projects cited by practitioners where end-users were engaged during the preliminary design stages, there was a lack of understanding of employing appropriate methods for engaging end-users on the technical aspects of the design. The study found that it is common practice to expect communities to engage on draft concept plans for projects with predetermined objectives. Therefore, it remains the responsibility of the individual practitioner to drive a meaningful process of engagement tailored to

the requirements of the specific context. This would take the form of coproducing solutions that ultimately improve the quality of living environments for end-users.

It was established that even before exploring different platforms for engaging end-users the client wishing to adopt a socially inclusive process should before the inception of the project, clarify which components of the project design, public input is required. Thereafter, there should be a consideration to actively involve end-users in the development of concept designs, accommodate the diverse requirements of end-users in the schematic layouts and collectively identify functional solutions that include the accommodation and social requirements of end-users

The opportunity for engagement becomes less feasible as the documentation becomes more technical, from the technical documentation through to the closeout of the project. Work stages four to six are often technical and soliciting inputs from end-users at this point in the design process may prove counterproductive.

The practices shared in the interviews as part of this study revealed that there is a lack of consistency in the manner in which end-users are engaged and the level of inclusion in decision-making processes at various intervals within the work stages. Practitioners in the built environment and other disciplines need to seek ways in which the design of urban space can be more socially inclusive. Practitioners need to have a better understanding and interest in urban challenges within the built environment so that they can design responsive and sustainable solutions. As such, in-depth engagement with communities remains an important way of ensuring that the process of

engagement is meaningful. With public sector projects where a larger group of end-users are involved and only known by their economic status, innovative platforms for engagement need to be established. Once end-users are identified based on the predetermined qualification criteria, a call for engagement can be communicated and based on the feedback received they can be grouped according to their shared accommodation requirements.

5.2.2. Training and empowerment of through engagement

Even though it is not prescribed by SACAP that practitioners, must adopt socially inclusive design approaches there is growing recognition in the public sector of the value of supporting design solutions with communities. The study highlights that there are practitioners who are expanding their scope of involvement in architectural projects. This is done by allowing for an inclusive interface with end-users and an exchange of knowledge on what is required to be responsive to the local conditions. Socially inclusive design approaches challenge existing normative approaches and calls for a reevaluation of the role of architects in addressing social challenges within communities.

Although there was consensus on the value of empowering end-users with knowledge on the design process, there was uncertainty regarding what form this should take and who should take ultimate responsibility for this. Scholars who support Social Architecture view the economic empowerment of local inhabitants as a key outcome of socially inclusive design approaches. There was a perspective that emerged from the study that through promoting a shared vision and facilitating meaningful engagement sessions, the end-user and the practitioner are mutually empowered.

The empowerment of communities also includes the sourcing of local labour, which facilitates the transfer of knowledge from those leading the design process to the local community members. Although there were, projects cited where local labour was sourced, the nature of the work opportunities were construction-related activities and did not include architecture related work. The process of skills transfer needs to be embedded in the design process to ensure that in follow up phases of a project or new projects, the local community, local contractors can take greater ownership over the design and implementation of projects.

5.2.3. Incorporation of local spatial practices in design

Most practitioners agreed that there is value in relying on the insights of end-users regarding the local environment in which a project is located. In this way, the design solutions that are coproduced are informed by the diverse perspectives and lived experiences of those currently occupying or are identified to occupy spaces that are being designed. Public sector projects where there have been active attempts to include end-users in the design process support the notion that the only way to drive an effective engagement process with communities was to accept their inputs as valid and not to discount their contributions or insights.

Understanding how to design space so that it is responsive to the lifestyles and spatial practices of end-users are important. However, it was found that practitioners find it challenging to design residential projects in line with the socio-spatial requirements of end-users. Although, the incorporation of spatial practices in the design of projects remains a central component of social architectural approaches, in the case of public sector projects there is a need to better accommodate the localised practices of end-users.

5.2.4 Utilisation of locally produced construction products or materials

The sourcing of locally produced construction materials is a key component of advancing a socially inclusive design approach. The fact that most respondents did not attach importance to supporting the local economy, which is cited by scholars as one of the key desired outcomes of Social Architecture, brings forward an obvious mismatch between the theory and what happens in practice. The local environment and what is achievable with the available resources and skills are factors that have not been fully considered by scholars. Specific factors such as the availability of local materials at the scale required for public sector projects can be impediments towards attaining economic empowerment within a given context. There was however an indication from practitioners that sometimes there is a trade-off between using some local materials and then sourcing other construction material outside of the project area.

5.3 Recommendations

This study brought to the fore the need to drive a socially inclusive design process as a means of improving the quality of living environments for end-users occupying public sector residential projects. It also emphasized the importance of implementing principles of Social Architecture in residential design by exploring more than one design solution as a means of accommodating the diverse requirements of end-users. It further highlighted the role Social Architecture design is able to play in building inclusive communities that are beneficial for everyone. The recommendations for this study are:

5.3.1. Socially inclusive architectural work stages

The standard approach for the delivery of architectural work stages as prescribed by SACAP does not accommodate inclusive design principles. There is a need to understand how the architectural work stages as provided for in the Architectural Profession Act No 44 of 2000 can be adapted to address projects with mass end-user clients and provide guidelines for the incorporation of Social Architecture. Unlike existing normative methodologies, which mainly focus on how certain technical features of the design of a building, address the needs of end-users. The new approach and architectural work stages should focus on the critical socio-spatial requirements of end-users, capable of emerging with architectural design practices and processes that are more socially inclusive. Different methods and innovative platforms for engaging mass end-users on architectural design should be an important area of further research.

5.3.2. Multidisciplinary engagement between professionals

Research to develop approaches and assess the value of driving multidisciplinary design approaches. A social understanding of how to foster and sustain meaningful relationships across disciplines would be a way of ensuring that architects can progressively adapt their practices to respond to emerging trends and changes in the environment. Engaging communities on their accommodation needs and requirements often require specialised skills or a nuanced understanding of the socio-economic context and prevailing cultural dynamics. Further research should explore how collaboration with professionals outside of the built environment will provide an opportunity to advance an architectural professional service that goes beyond just being involved in the design and development of projects but providing solutions to social problems.

5.3.3. Approaches for accommodating spatial practices

More research is required concerning practical ways of including aspects of local spatial practices into the design of public sector residential design projects. In-depth exploration from the perspective of end-users as to ‘how they consume space and their daily living practices forms part of the design of residential space. The consideration of the needs and expectations of end-users can be articulated through a socially inclusive design process where all role-players are invited to contribute towards the way space is designed.
A study of this nature would unearth what end-users consider as key success factors relating to both the social components and the physical characteristics of the design of residential projects.

5.3.4 Post-occupancy assessments of public residential projects

There should be further inquiry into adding a stage after the close-out of a project, which allows for a post-occupancy or project assessment on how the architectural design is functioning. More research into whether a post-occupancy stage would be advantageous with regards to providing greater insight into how people are using their living spaces and whether architectural designs can be modified in anyway to match the requirements of end-users. It would also provide for an evaluation of the quality of a building by its inhabitants.

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Appendices

Appendix A: Ethics clearance certificate



SCHOOL OF ARCHITECTURE AND PLANNING
HUMAN RESERCH ETHICS COMMITTEE

SCHOOL OF ARCHITECTURE PLANNING

CLEARANCE CERTIFICATE
PROTOCOL NUMBER: SOAP059/07/2018

PROJECT TITLE:	An exploration of the role of social architectural design process in the implementation of public and private housing developments in the inner city of Johannesburg
INVESTIGATOR/S:	Limeze Suleman (Student No: 1108149)
SCHOOL:	Architecture and Planning
DEGREE PROGRAMME:	Masters of Built Environment (MBE)
DATE CONSIDERED:	31 October 2018
EXPIRY DATE:	31 October 2019
DECISION OF THE COMMITTEE:	Approved

CHAIRPERSON
(Professor Daniel Irurah)

DATE: 31-10-2018

cc: Supervisor/s: Gerald Chungu

DECLARATION OF INVESTIGATORS

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to endure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

Signature **Date**

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Appendix B: Consent Form

FORMAL (SIGNED) CONSENT FORM

I hereby confirm that I have been informed by the student researcher of the purpose, procedures, and my rights as a participant. I have received, read and understand the written respondent information sheet. I have also been informed of:

- ☐ the nature of my participation in the form of a semi-structured interview
- ☐ the place and duration of the study
- ☐ the reasons for why I was selected to participate in the study
- ☐ the voluntary nature, refusal to answer, and withdrawing from the study
- ☐ no payment or incentives
- ☐ no loss of benefits or risks
- ☐ anonymity
- ☐ confidentiality
- ☐ how the research findings will be disseminated

I therefore agree to participate in the interview for the study.

I AGREE / DO NOT AGREE to audio recording during interviews.

PARTICIPANT:

_____

Printed name

_____ _____

Signature Date

Appendix C: Interview question guide

Limeze Suleman (1108149)
MBE (Housing), School of Architecture and Planning
University of Witwatersrand
Research Title: Exploring the role of social architectural design in the implementation of public housing developments in the inner city of Johannesburg

Semi-structured interview guide for built environment practitioners

M/F

Official/Architect/Planner

Organisation

1. **Qualitative interview introduction**

Length: 45-60 minutes

Main purpose: To gain insight into how you view things through an open-ended discussion on your experiences, your perceptions and what your thoughts are relating to the areas of enquiry in the interview.

2. **Written consent**

Would you like to sign the consent form?

Verbal Consent **was** obtained from the study participant

Verbal Consent **was NOT** obtained from the study participant

3. **Professional background**

Overview: Ask interviewee to tell me about her/his professional background. Information about prior work experience and involvement in the design and implementation of housing projects.

4. **Socially inclusive architectural design**

Can you tell me about your experiences relating to the design and development housing projects that you have been involved in?

What differentiates your design approach from traditional architectural design practices?

Can you walk me through how the design process unfolds (steps followed)?

At which point and to what extent are stakeholders engaged on the design plans of a project?

What form does the systems/practices or civic engagement take?

What role do governance policies play in your decisions around design?

- (If they answer in a broad manner) What are the principles of public participation/democratic inclusions that are taken into account in architectural design?
- Did the architectural design of any of the projects invite future users/identified beneficiaries to contribute towards the design process?
- Do you believe that this was/could be beneficial?
- Do you believe that the needs and requirements put forward by end users are incorporated into the design plans of private and public sector developments?

During the design of the project were there considerations for the sourcing of local material and manpower?

How was local labour/manpower recruited? What sort of work are they involved in?

- How was the sourcing of construction done? What sort of material was sourced locally?
- Do you believe that this consideration is well placed at the design phase of a project?

Was there a transfer of knowledge/training undertaken for any of the future users/identified beneficiaries during the design phase of any of the projects?

- Do you believe that there was any benefit derived for the beneficiaries of such training?
- What are your views pertaining to incorporating design aesthetics in housing projects that are reflective of the cultural/social identities of end users?

5. Relations between practitioners in the built environment

What is the nature of interface between yourself and other practitioners (designers, architects, planners, regulators, public sector officials) in the design of housing developments?

- What are your views regarding the implementation of/adherence to the proposed design plans by architects?
- In your experience, to what extent are architects involved in the post design phases of the development of projects?

Do you believe that practitioners in the built environment have a social obligation to the future users/identified beneficiaries that they are developing designs for?

- What form should the nature of this obligation be?
- Do you think that practitioners have a role to play in advancing the spatial agency of communities?

Do you think that there is sufficient collaboration amongst practitioners in the built environment at the various stages of the development process?

- Do you think that there is room for more collaboration with practitioners, scholars or experts outside of the built environment?
- Do you think that this type of inter-disciplinary collaboration will add value to the current architectural design environment/practice?
- Is the knowledge from other fields utilised to understand current socio-structural, and economic complexities in the built environment?

6. Inner City design projects

- What do you think are key architectural design features that distinguish the architectural landscape of the inner city of Johannesburg?
- Do you think that housing design interventions and practices in the inner city of Johannesburg are different to other areas/projects in the city?
- Do you think the architecture of place can enhance/reduce human interaction and social connectivity?

7. Future outlook for architectural design

- What have you identified as shortfalls/challenges in the current practice of architectural design?
- What do you foresee as the future for architectural design practice in Johannesburg?
- Do you think that current design plans from private and public sector are aligned to the spatial development strategies developed by government?
- What do you think will be suitable design interventions to ensure sustainability and inclusivity in the built environment?

Thank You for your cooperation

Appendix D: Profiles of interview respondents

	Respondent Reference	Professional Role/s and Experience
1	**Respondent 1A**	Public and private sector urban planning specialist
2	**Respondent 2A**	Public sector town planning specialist and urban design academic
3	**Respondent 3C**	Architect, scholar and owner of youth based architectural firm with a focus on socially conscious architecture. Worked on both private and public sector housing projects
4	**Respondent 4C**	Architect and urban designer and worked in academia as a lecturer
5	**Respondent 5B**	Public sector specialist, academic, practitioner coordinating area-based projects. Urban planning academic and involved in repurposing derelict buildings for the purpose of developing low rental accommodation
6	**Respondent 6B**	Architect and Urban Designer involved in public and private sector socially inclusive architectural design projects

7	**Respondent 7B**	Architect involved in the implementation and design of social housing projects in the inner city of Johannesburg